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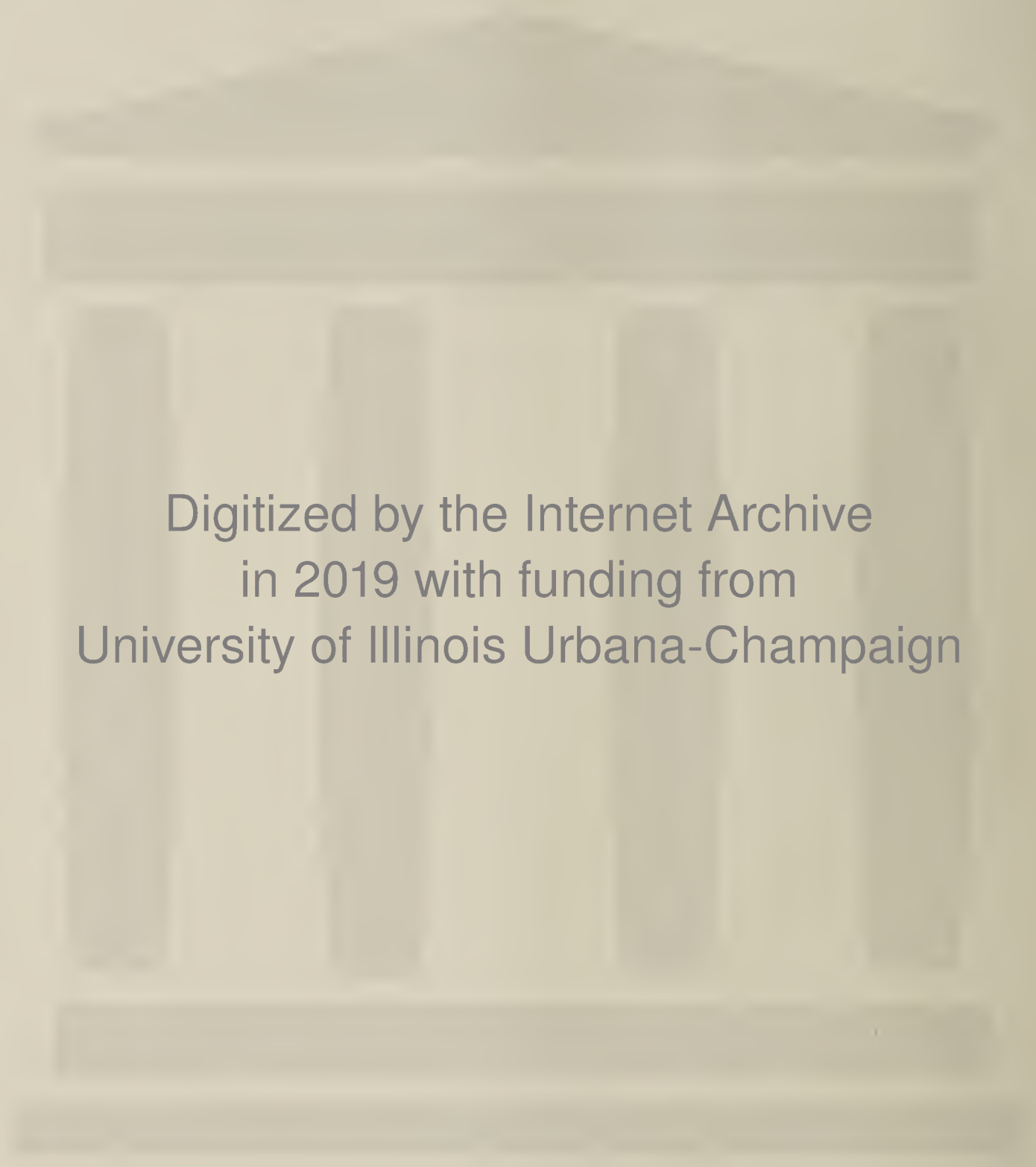












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## Address

### THE RESPONSIBILITIES OF SURGERY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON SURGERY  
AND ANATOMY, AT THE FIFTY-SIXTH ANNUAL SESSION  
OF THE AMERICAN MEDICAL ASSOCIATION,  
PORTLAND, ORE., JULY 11-14, 1905.  
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BOSTON.

In this communication I wish, in the first place, to pay a warm tribute to the splendid work that is being done in this country by the surgical profession; and I wish to emphasize particularly the value of the contributions from the country surgeon as distinguished from the metropolitan surgeon. That a populous community is not indispensable for the development of the best and the highest the little town of Rochester, Minn., has most brilliantly demonstrated. The educated, well-balanced, conservative man, considerate of others and of himself, will find in every community abundant opportunities for the highest professional attainments; and he will there make himself a power for good and an honor to his profession.

It has seemed to me, especially in the past few years, as I have been brought in contact with physicians and patients in widely separated communities, that the time has come when we must consider very seriously certain questions concerning the practice of surgery: Who shall practice surgery and who shall not? What preparation shall be required of those who propose to stand before the community as properly qualified surgeons?

The burden of the following remarks is that those only should practice surgery who, by education in the laboratory, in the dissecting room, by the bedside and at the operating table, are qualified, first, to make reasonably correct deductions from subjective and objective signs; secondly, to give sound advice for or against operations; thirdly, to perform operations skillfully and quickly, and, fourthly, to conduct wisely the after-treatment.

As a rule, the community does not appreciate the value of services, whether medical or surgical, because it fails to realize in the least degree the burden of care placed on the physician and on the surgeon. The layman does not always understand that a mistake in diagnosis, an error in judgment, a fault in technic, may mean life or death, health or sickness, strength or disability, joy or sorrow. He can not in the least comprehend the difficulty of avoiding these errors; he does not realize that the *vis medicatrix naturæ*, too little relied on in the past, too much in the present, receives to-day credit which belongs almost wholly to the educated and skillful practitioners of medicine and surgery.

The community is, perhaps, not to be criticized if it fails to estimate properly the value of professional services when it sees problems demanding exercise of the highest skill undertaken by men but little trained to

solve them. That the community is sincere can not be denied when the lives and health of its nearest and dearest are submitted to the ignorant, the inexperienced, the unskillful. This shows, perhaps, more than anything else the contempt for thorough education and long training which makes possible the evils of which I speak. On the part of the laity, sound opinion is much to be desired; on the part of the profession, a candid admission of certain serious defects. In matters surgical, however, public opinion is hard to mould, for the reason that the results, on the whole, are good, whatever the operation and whoever the operator. An amputation results in recovery of the patient; the surgeon's skill is manifest to the family and friends, who fail to see that the amputation was, perhaps, unnecessary. A patient dies after a hysterectomy; the community—realizing that the operation is a dangerous one and believing that patients seldom recover from it, unaware that the mortality in skillful hands is not greater than that of childbirth—looks on the result as inevitable.

The consulting surgeon can not but be impressed by the frequency of useless or worse than useless operations. He sees too often the unfortunate results of hastening the patient into operative procedures based on errors in diagnosis and in prognosis. On the other hand, he sometimes sees a patient refused an operation which is called for in the most positive tones.

Perhaps the most common error, as observed by the consulting surgeon, is the failure to detect at the earliest possible moment those internal lesions which demand, as the only chance of recovery, instant operation. The mortality in these cases is the mortality of acute abdominal surgery to-day. Excluding acute abdominal emergencies and cerebral hemorrhage of traumatic origin, the mortality of surgery is trifling. The responsibility of deciding to call the surgeon must rest, of course, first on the family and then on the physician. Too often, however, the necessity of intervention is not recognized even by the surgeon. One seldom sees a newspaper that does not contain an account of the loss of a life which might have been saved by prompt and skillful surgery.

The task before me is a serious criticism of what is going on in every community. I do not single out any community or any man. There is, in my mind, no doubt whatever that surgery is being practiced by those who are incompetent to practice it—by those whose education is imperfect, who lack natural aptitude, whose environment is such that they never can gain that personal experience which alone will really fit them for what surgery means to-day. They are unable to make correct deductions from histories; to predict probable events; to perform operations skillfully; or to manage after-treatment.

The chief source of trouble lies in the ambition—perfectly laudable—which so large a proportion of medical men possess, to become surgeons. The hos-



pitals in many small communities have on their staffs every medical man of prominence in town, all of whom take alike the medical and the surgical services. The reason for this is that the co-operation of every physician is necessary in order that the hospital may be built. A place on the staff becomes a *sine qua non*.

The truth is that in small places the two or three men best fitted for surgery should be made the surgeons of the place, and to them should be referred all surgical work. With the great development of surgery to-day, it is, indeed, a sparse community which can not support two surgeons. It is, I think, incumbent on these men to give up to the others their medical practice. In this way alone may surgeons become fitted for the responsibilities of surgery in the less populous areas; and in this way they will receive an education and experience which may make them of national or even international reputation.

But may we not depend on a process of natural selection in the development of the surgeon—a survival of the fittest? This process will, no doubt, prove in time effectual, but in the meanwhile hospital positions and other opportunities will remain in the hands of those unable properly to utilize them. We have time and again seen positions held to the age limit by those on whom the great opportunities of a large clinic were almost wholly wasted.

The man who by nature is endowed with the gifts which make him a good practitioner of surgery will not fail to make the best use of those gifts, whatever his environment.

Though the task of criticism that I have before me is a disagreeable one, the time has come when the attention of a representative body like this should be called to what is going on in every community.

Perhaps the least offensive way in which to treat this part of my subject would be by limiting my illustrations, as far as possible, to things which I have seen and done during many years of surgical practice. For if one of ordinary intelligence and education, who has had unusual opportunities to gain experience, is liable to err, how much more liable is he to whom opportunities for study and practice have been wanting. As human frailty precludes the absolute prevention of errors, even in the hands of the experienced, it must follow that in the hands of the inexperienced they will occur in a much larger proportion of cases. Some operators show, in the very beginning of their practice, a skill which can never be attained by others, even after years of operating; but, other things being equal, the better the training the better the results.

As far as my observation goes, the most serious errors have resulted from treating as benign those tumors which were, in reality, malignant. The most costly have resulted from giving too favorable prognoses in acute abdominal diseases. Most of these cases I have reported as they have occurred. Several tumors of the breast I have regarded as simple retention cysts or as fibromata; and the patient, relying on this opinion, has gone away, only to return at the end of a few years with extensive cancer. Cases of this kind have convinced me that the only safe rule in the treatment of tumors of the breast is to regard them all as malignant or as likely to become so. I have at least learned my own fallibility in the diagnosis of lesions of this kind.

On the other hand, there have been many cases that I regarded as malignant which were in reality benign. In one case I agreed with the operator in the diagnosis

of a malignant tumor of the femur, only to find after amputation at the hip joint that the growth was not in reality malignant, but a disease of the bone which made it extremely fragile. During the manipulations of the operation the other femur, which was over the end of the table, broke; and the patient was left with but one leg, and that a broken one.

In following up the malignant cases at the Massachusetts General Hospital for ten years I found not a few instances in which the disease had been diagnosed as hopeless cancer, but in which the patient had recovered entirely either spontaneously or under medical treatment.

In abdominal surgery, the errors in diagnosis have been numerous, and in some instances costly. One frequent source of error is in the diagnosis of pregnancy. The inability to distinguish between a pregnant uterus and other tumors of the abdomen would seem to be inexcusable. As a matter of fact, however, it is at times extremely difficult, if not impossible, to make a distinction. In some cases I have failed to recognize pregnancy, even with the tumor in my hands. Once, after the removal of a large right ovarian tumor, I found what I supposed to be a left ovarian tumor. In trying to tap it—the custom in those days—I discovered that it was a pregnant uterus. The Fates in this case, however, were propitious, for the woman lived and was delivered at full term of a healthy child.

The most prolific source of error in acute disease will be found in the prognosis of acute abdominal infections and other acute abdominal emergencies in which the patient's life depends on the promptness of applying the remedy. I have referred to these errors as costly ones, not because they are in the long run any more fatal than errors of diagnosis, but because they are likely to be so quickly fatal. The postponement of surgical remedies in acute abdominal infections like appendicitis and cholecystitis; in perforations of the alimentary canal; in twists, intussusceptions, hemorrhages and rupture of abscesses—the putting off of explorations on the strength of a faulty prognosis—has been the most disastrous of all.

In the actual performance of the operation, a rigid self-criticism always reveals errors of technic more or less important. Fortunately, technical errors—unless they are essentially irremediable—do not seriously affect the prognosis. From time to time, however, errors purely technical—errors in anatomy or in asepsis—have compromised fatally the result of the procedure. I recall instances in which operations progressing in the most satisfactory manner have suddenly—by the surgeon's failure to recognize and avoid such structures as the ureter, the intestine, the facial nerve or the recurrent laryngeal—placed on him a burden of chagrin, or even remorse, which was, indeed, hard to bear.

To these errors of diagnosis, prognosis, indications, technic and after-treatment, one must add such things as fatal capillary hemorrhage in cases of jaundice; wound infections in which the most rigid review of the case fails to show any technical error; sudden deaths from pulmonary embolism, from intestinal obstruction, from ileus. I have had, too, in my experience, such unusual disasters as the suicide of a patient convalescing from appendicitis, a suicide after gastrostomy for dilatation of the esophagus.

These calamities—which are only a few of the many that beset the patient from the moment the anesthetic is begun until he has fully recovered from the operation,



and even to his dying day—make a list of possibilities so long that in the simplest case one can not but feel the heavy load of responsibility. Even after a perfect convalescence patients have died suddenly. The death may have apparently no connection with the operation. I recall the case of a patient who died four weeks after hysterectomy while being fitted with an abdominal supporter. At the autopsy nothing abnormal could be discovered.

All surgeons are liable to error not only in diagnosis, but in the performance of operations based on the diagnosis. Such errors must always be expected and be included in the contingencies of the practice of medicine and surgery. Doubtless many of my hearers can recall cases of their own in which useless—or worse than useless—operations have been performed. If, however, serious operations are in the hands of men of large experience, such errors will be reduced to a minimum.

In the beginning of abdominal surgery the mortality of the great operations was high, as we all can remember. The individual surgeon, however, soon acquired a skill in technic which rapidly reduced his mortality. The deaths in hysterectomy, for instance, have been reduced from 30 or 40 per cent. to about the mortality of ordinary childbirth. One who has operated in a large number of cases of this kind can predict with considerable certainty the outcome of his case. If, however, we could get the general mortality of hysterectomy to-day, we should find, I fear, that in the community as a whole the mortality is no less than it was in the beginning. This is because men who are not fitted for the responsibilities of this grave operation are willing to accept them. Not only do inexperienced men undertake without hesitation this often formidable procedure, but they advise the operation when it is unnecessary. So it is in many other abdominal operations. I have known a man to open the abdomen for some simple cause, to do damage to the intestine which he could not repair, to close the wound and send the patient to bed, knowing perfectly well that she must die. Such things are hardly conceivable, but they are nevertheless true.

In Europe I once saw a brilliant operator of worldwide reputation remove, with the Fallopian tube, a section of the sigmoid flexure. The blunder was not discovered until the specimen had been removed, but the surgeon knew enough to see his error and to repair it. I once was in such a tangle of adherent and obstructed intestines that I was unable to recognize the distal loop, after separation of the proximal. I was able, however, to extricate my patient from an apparently hopeless situation. Every proposed abdominal operation presents possibilities of error and disaster which are appreciated, feared and provided against in proportion to the operator's experience. *Facilis descensus Averno . . . sed revocare gradum . . . hic labor est.*

In fractures, especially, one sees the evil results of ignorance and inexperience. The expert surgeon devotes much of his time to the correction of deformities and delayed unions. He is pestered by appeals to testify in court in the defense of physicians, even when the treatment of fractures has been good. He can not but feel, however, that much is asked of him when he views some of the cases the treatment of which he is requested to defend. I am not sure that suits for damages against physicians—like suits against corporations—unjust as most of them are, do not tend in the long run to work out problems such as that which I am considering: a strict pecuniary accountability for bad results is often the only argument to which inexperience and overconfi-

dence will yield. The trouble is that the dissatisfied layman, the unscrupulous lawyer, the malignant witness, and the ignorant jury make a combination sufficient to blast the best reputation and wreck the fairest cause.<sup>1</sup>

Surgeons of the greatest skill and experience feel more anxiety in the treatment of fractures than in almost any other form of injury. Few can without humiliation review their results.

The tendency at the present time is and should be toward specialization in the treatment of fractures. In cities, and, in fact, in all communities, it would, I am sure, be an advantage if the treatment of fractures were placed in the hands of men who have a special aptitude for this branch of surgery. The orthopedic surgeon is by his training accustomed to the making and the fitting of apparatus; and the results in fractures depend very largely on the way in which bones are held by apparatus in proper position after once they have been put there. At the Massachusetts General Hospital fractures of the jaws have for many years been referred to the dental school, and fractures of the nose to the department for the nose and throat—much to the advantage of the patient. Would it not therefore be wise if fractures in general were regarded as a branch of orthopedics?

With the great increase in the number of surgical operations, the discontented are beginning to bring actions against physicians for bad results in fields of surgery other than that of fractures. Hence, although malpractice suits are, as I say, not common, yet the number of complaints is greater every year. I have known suits to be brought for various reasons—for alleged negligence in leaving gauze in the wound, for operation without the patient's understanding or consent, for abdominal fistulæ, for burns, for postoperative hernias and the like. In one instance a surgeon was actually sued because he advised against the removal of a uterine fibroid; in another case damages were claimed because a surgeon overlooked a splinter of wood in a boy's neck; in still another, because amputation was performed on a minor without the consent of the father. Suit was brought in one case for pressure sores following the application of plaster of paris.

The cases that come to trial are the ones that we hear of: doubtless many claims for damages are settled out of court. Whether the recent introduction of insurance against claims for damages will increase the number of suits or not, is thus far a matter of opinion. When it becomes generally known that corporations stand by physicians, malpractice suits will, I think, increase, especially if the insurance companies make settlements favorable to themselves, without the consent of the physician. On the other hand, a determined and obstinate defense seems a real protection.

As I have said, the responsibilities of surgery are being brought home to the physician more forcibly by claims for damages than by anything else. Possibly this holding of the physician liable will increase his sense of responsibility to such an extent that he will hesitate to undertake operations for which his educa-

1. Almost as I am writing these words, I am asked to defend a physician of whose treatment of a Colles's fracture only two criticisms can be made: one, that the fracture was not reduced under ether; the other, that the arm (in the case of a woman of sixty) was kept in splints too long. Nevertheless, there are permanent deformity, impairment of wrist motion, and stiff fingers. The physician felt confident that he could treat a little thing like a Colles's fracture as well as anybody else, even in a large community, where the standard of skill was high. In consequence, the patient is dissatisfied, the physician worried, and the surgeon annoyed.



tion has not fitted him; but until some such restraining influence shall have made itself felt, we shall continue to meet with inexperienced men who think themselves competent to treat not only fractures, but all surgical lesions, including those of the abdominal cavity.

Many physicians send patients for diagnosis and opinion as to the advisability of operation without telling the consultant that they themselves are to perform the operation. The diagnosis is made and the operation perhaps recommended, when it appears that the operation is to be in incompetent hands. A disagreeable duty devolves on the consultant. His advice should be conditional that it be carried out only by the competent. Many operations, like the removal of the vermiform appendix in the period of health, the removal of fibroids which are not seriously offending, the removal of gallstones that are not causing symptoms, are operations of choice rather than of necessity; they are operations which should never be advised unless they are to be performed by men of the greatest skill. Furthermore, many emergency operations, such as the removal of an inflamed appendix and other operations for lesions which are not necessarily fatal—should be forbidden and the patient left to the chances of spontaneous recovery, if the operation proposed is to be performed by the incompetent.

Then, too, many physicians are so inexperienced in the after-treatment of patients that the result is, from this fact, likely to be less favorable. Unless, for example, the after-treatment of difficult gall-bladder operations is to be in the hands of competent men, the surgeon should be unwilling to operate. In such cases he should insist that the patients put themselves under his personal supervision.

The responsibilities of making the diagnosis, of advising the operation and of performing it, and of the after-treatment are great—much greater than even those who practice surgery exclusively, and who therefore understand the difficulties, realize. Even less impressed by these responsibilities are the patients themselves and their friends. Let us consider the operation of appendectomy in the "interval," for example. How common it is for the lay journals to say that the operation is a simple one—so simple that any physician can easily perform it! The needlessness, the simplicity, the feces of the operation are frequently the subject of their jokes. The operation for appendicitis usually is, as we all know, an operation that is easily and quickly performed, and it is almost always successful. At times, however, it is extremely difficult and dangerous, and at rare intervals fatal. The success may depend on some trivial thing, the importance of which can be realized only by men of the greatest experience. In many mechanical things the ultimate results depend on slight causes acting through a long period of time. The winning crew at the end of four miles succeeds in crossing the line a few feet ahead of the defeated crew because of some trivial thing in which that winning boat is superior to the defeated boat. A record of a thousand successful operations for appendicitis surpasses a record of nine hundred and ninety successful operations because of some slight superiority in technic. It would be practically impossible to say that one method is superior to another, and yet it would be absurd to deny that superior results are owing to the best judgment and the best technic. The time chosen for the operation, the kind of incision, the method of treating the stump, the establishing of drainage, are things apparently of little

importance; and yet they make the difference of the ten cases in a thousand; they may determine in the particular case whether the patient will or will not die.

Many years ago, before the days of aseptic surgery, a surgeon well known for his painstaking work and good results, said to me, when I was his surgical house pupil at the Massachusetts General Hospital, that the life of a surgeon was one of great anxiety and occasionally of much chagrin and unhappiness. He was at this time depressed by the death of a patient, a young woman with everything to live for—husband, children, riches—on whom he had operated for the repair of a lacerated perineum. If such things happened frequently, he said, the life of a surgeon would be unendurable. I have always remembered this remark, but I did not at that time realize its full significance. In estimating the weight of the responsibilities which rest on the surgeon, I have often recalled this case. "We must remember," Dr. Hodges used to say whenever there occurred an unexpected disaster which could be neither explained nor provided against, "that this is one of the contingencies of surgery." A death under the anesthetic, an uncontrollable hemorrhage, a pulmonary embolism, a fatal wound infection, not to mention such rare occurrences as homicidal and suicidal manias, and omitting entirely the disasters peculiar to each surgical procedure, these things will occur in spite of every precaution, and they are the contingencies of surgery—possibilities which attend even the most trivial surgical procedures.

With the advance of modern surgery, many of the horrors of the old days have been obviated, it is true, and the occurrence of others has been rendered infrequent; but there still remain, in all surgical cases, possibilities of disaster which the largest experience and the greatest care can not prevent; and we must not in any case, even the simplest, forget these possibilities. With the rare and unavoidable disasters, and with the common and avoidable ones—any of which, through errors in human judgment, may unexpectedly occur—the modern surgeon, who has under his care so many cases, is indeed fortunate if he has not at every moment some disturbing case and in every year some deplorable calamity. The surgeon reviewing his years of active practice can not but be impressed by the responsibilities of his profession. He recalls the frequent misgivings with which, on the strength of his fallible opinion, he has advised and performed operations; the excitement of a critical operation and the deep breath of thankfulness when he has succeeded in averting some grave complication; his forebodings—so frequently instinctive—of impending disaster, and the sinking of the heart as his forebodings become realities; the too often useless struggle against overwhelming odds; the distressful death; the severe self-criticism and biting regrets. And is not the surgeon, appreciating his own unfitness in spite of years of devotion, in the position to condemn those who lightly take up such burdens without preparation and too often without conscience?

The responsibilities of surgery are not, however, always appreciated even by those who are by education and experience qualified to bear them. I have heard such men say that the removal of an appendix in the so-called "interval" is a perfectly safe operation; that no surgeon ought ever to have a death after removal of the appendix in health or after any similar operation. It seems to me that one is indeed fortunate if he can look on the operation of appendectomy in the period of health with perfect equanimity, for it is in just such cases as



these that I find the responsibility heaviest. When a patient has acute appendicitis with general peritonitis, the responsibility in operating is slight: the operation must be performed. There is no greater responsibility in this decision than there is in the decision of going to rescue a drowning child. When, however, the surgeon takes a patient who is in comparatively good health, makes him unconscious, opens his abdomen and removes his appendix, then the feeling of responsibility is to be compared only to that which one would feel if he were to throw a child into the sea and afterward jump overboard to save him!

From the moment the anesthesia is begun, to the time when the convalescence is complete, the surgeon will be held responsible for every complication and for every disaster—for acts of anesthetist, assistants and nurses.

In view of these facts, who should perform surgery? How shall the surgeon be best fitted for these grave duties? As a matter of right and wrong, who shall, in the opinion of the medical profession, advise and perform these responsible acts, and who shall not?

Surgical operations should be performed only by those who are educated for that special purpose. What, then, is the education that will fit a man to become a competent surgeon, and what are the qualities that go to make a good surgeon? Some men have good judgment in the advising of operations, with but little skill in performing them; others have bad judgment in the advising of operations, but splendid technic in performing them; still others are not only poor diagnosticians and men of bad judgment, but they are clumsy operators.

In considering these questions, I shall ask and try to answer another: What should be the education of the surgeon?

Important, if not essential qualifications for the surgeon, are strength, endurance and hopefulness. The surgeon should have the power of being cheerful under the most discouraging conditions; a persistence—it might almost be called an obstinacy—which will under no circumstances fail; a determination never to give up so long as the breath of life is in the patient. No matter what the diagnosis may be, no matter what the outlook may be, the only excuse for giving up the fight in surgery is either the death of the patient or the discharge of the surgeon. Human fallibility is great; and if the surgeon carries out this general rule of never giving up, he will see occasionally a surprising—even incredible—recovery.

Manual skill is of great help to the surgeon, especially in diseases which require the use of apparatus, as in orthopedics and fractures. The mechanical training of candidates is not sufficiently insisted on; yet the surgeon's reputation very largely depends on the actual performance of an operation. Mechanical skill in operating is not, however, to be compared with intellectual skill; but in the case of an intelligent young man the decision between surgery and some other profession might be dependent on mechanical ability.

The student should be thoroughly trained in mechanical work, he should learn the use of tools of all kinds—machinists', carpenters' and forging. On the rapid and skillful use of needle and thread many an operative reputation has been founded. Mechanical skill alone, however, is of little value in the equipment of the surgeon without those finer mental qualities which enable him to make, from intelligent observations, accurate decisions.

Some men are remarkably keen in this respect. A man may be able to see things and to describe them, but may not be able to tell the difference between two things which are very nearly alike. In the case of twins a man might not be able to describe the difference, no matter how careful an observer he might be (barring some such distinguishing mark as a scar), but he might be able always to tell them apart. So it is in distinguishing between certain crystals—for instance, between the crystals of beryl and the crystals of quartz—when perhaps the characteristic angles of crystallization are not to be seen. A crystal of beryl which could not by a written description be made distinguishable to the ordinary observer from a crystal of quartz could be instantly told by an experienced mineralogist. Between two affections which are nearly alike the superficial observer would see little if any difference. It would be hard for a beginner or for a superficial observer to tell the difference between the tumor of an acute appendicitis and the tumor of a new growth at the ileocecal valve, if no history of the case were given; or to distinguish a uterine fibroid and a solid tumor of the ovary, a salpingitis and an appendicitis, a sarcoma of the breast and a cystic tumor of the breast, smallpox, chicken pox, smallpox and measles, and so on. Probably very few men could describe the difference between these affections, and yet an experienced observer would be able to tell at a glance which was which.

I have been interested in noting how the minds of students work, as shown at examinations and in the study of clinical cases. One is almost able to say: "This student will make a successful diagnostician, and his advice will always be good; that student will never amount to much as a diagnostician." In a recent examination at the Harvard Medical School the advanced students were asked to give the diagnosis, the prognosis, and the treatment in eight carefully described cases taken from my note-books. In some of these cases there had been a great difference of opinion among physicians of the largest experience; yet some of the students, interpreting the histories properly and drawing the correct conclusions, gave the right answer in every case. Many of these students did not show the learning of others who drew wrong conclusions in every case. The students whose deductions were in every case correct will without question make more successful practitioners than the students who, though exhibiting much more learning, picked out the unimportant features in the histories of the cases, and on these unimportant features based correct deductions, which were, as to the real lesion, always wrong. This examination in clinical surgery brought out in strong light the qualities necessary for the best equipment of the surgeon—namely, the power of grasping the essential features of a case and of basing on such evidence conclusions almost invariably correct.

Before studying medicine the student should be well grounded in botany, chemistry and physics. His education in the medical school, however, should be principally in what might be called the A B C's of medicine: anatomy, physiology and pathology. Most of his time should be devoted to the study of the human body in normal action (physiology), in abnormal action (living pathology); and to the study of the dead body (normal anatomy), and of the diseased dead body (pathologic anatomy). The most important thing is the study of pathology on the living. This branch of education, however, can not be extensively studied at the medical school or in the hospital. The surgeon begins it in the med-



ical school, but he must continue it later at every possible opportunity. The allied sciences—chemistry, bacteriology and the specialties of medicine and surgery—should be a part of his education; but, as I have said, most of his time in practice should be devoted to the study of the healthy living body, the healthy dead body; the pathologic living and the pathologic dead.

In my recent teaching I have made use of the autopsy for the education of the students' touch, especially in abdominal diseases in which the surgeon is frequently obliged to depend on the evidences of his fingers to decide for continuance or abandonment of his operation. The history is read and the case is discussed. The abdominal incision is next made as if for operation. The student is then required to explore the abdominal cavity with his hand, and to record his opinion as to the lesion present and as to the condition of all the abdominal organs. If no disease is diagnosticated beforehand, he is required to give his opinion as to the condition of each organ. To some extent the diagnosis may be made on the pathologic appearances seen at autopsy; but the pathologic appearances during life are so different from those after death that the surgeon who depends exclusively on experience gained at the autopsy table is liable to err.

A thorough knowledge of practical anatomy, such as was insisted on in the preanesthetic days when the success of the operation was largely a matter of speed, should still be insisted on as the first and most important equipment of the operating surgeon. Not that the extraordinary skill and rapidity of some of the operators of those days is essential when anesthesia and asepsis make deliberate and careful dissections possible, yet there is, in my judgment, among even the experienced operators, a deplorable ignorance of normal anatomy. The freedom and rapidity with which cuts are made in close proximity to important structures is to the anatomist appalling. It explains, however, the frequency of the so-called "accidents" of surgery: urinary and fecal fistulæ, paralyzes and hemorrhages. I would advise the surgeon, both in preparation and in active practice, to make use of every opportunity for dissection; to become so familiar with the human body that he can not fail to recognize every structure the moment the smallest portion of it is uncovered; to be able to proceed directly on his operative route without being obliged to halt for a moment to study his landmarks. Normal anatomy is quite as important in operative surgery as pathologic anatomy is in the understanding of disease. Anatomy should be, if not first, a strong second in the education of the surgeon.

The chief preparation of the surgeon, after the acquisition of the knowledge given him in his medical school courses, must be in direct contact with patients. The medical school will have qualified him to observe the normal working of the human body (physiology), the structure of the body (anatomy), the results of disease (pathology as illustrated on the dead). The courses will have given him an opportunity to see, in a very limited number of cases, the pathology of the living (symptoms as expressed at the bedside). He will have learned the theory of repair of wounds—inflammation, suppurations and all the processes which are erroneously spoken of as surgical pathology. In the ordinary courses of study during his four years at the medical school he will have a very limited experience. In order to become a surgeon qualified to bear the responsibilities of our profession, he will require an additional training.

and that training must be thorough and prolonged. He must be brought into contact every day with surgical diseases in their clinical manifestations; and he must learn, by the observation of an enormous number of cases, to distinguish between diseases so closely resembling each other that he could only with the greatest difficulty describe the differences in words. It is first on this clinical experience that he must rely, and secondly on the observation during operations of the connection between symptoms previously noted and the lesion actually found. It follows that the best preparation that a man can have for becoming a practical surgeon is in the position of assistant. As a medical student his opportunity for observation is at the clinical work. At a distance, perhaps, or near at hand, as the case may be, he observes the examination of the case and the operation on the patient. In as many instances as possible he is required to take his own history and to make his own examination. If he gets an appointment as assistant in a hospital he has an opportunity of observing patients and studying them as carefully as his time permits, of assisting at operations and there seeing the lesions, of seeing in the autopsy room—in cases in which the result is fatal—the pathologic appearances. This is the best preparation that the medical schools and the hospitals offer. After this a course of study in Europe broadens the student's view and increases his experience.

Is this enough to round out a man's education so that he may assume the responsibility of surgery? This is so much better than the education of most men who practice surgery that one is inclined to answer in the affirmative; but I am considering the best education for the surgeon. I have no hesitation in saying that the proper fitting of a man for surgical practice requires a much longer experience as student and assistant than the most exacting schools demand. A man should serve four, five or six years as assistant to an active surgeon. During this period of preparation, as it were, as much time as possible should be given to observing the work of the masters of surgery throughout the world. Nothing broadens a man like observing the work of others. One should never give up visiting the clinics of the masters, no matter how experienced he may be. A man can not but become narrow in his views and limited in his resources, especially in emergencies, if his work has been confined to his own special clinic. Yet, on the other hand, is there not a danger that one may become a chronic student, an imitator of others, without originality or initiative? I believe that there is. I have seen a man hesitate between the teachings of Paris, Berlin, Vienna and London until he had to be prompted by his house surgeon into an American—at home—every-day successful procedure!

The importance of laboratory work—the so-called research work—in preparing a man to become a surgeon, is great. The necessity or the advisability of continuing in the work of active laboratory research admits of doubt. Certain qualities are essential to make a man a good worker in research. It requires quite different qualities to make a good surgeon. The fields are both infinitely broad; and I doubt whether a man can contribute much of value in the field of original research—in the sense of scientific research in the laboratory—and at the same time accomplish much in the field of practical surgery. The clinical man sees every day opportunities for research; problems arise which are of the greatest interest. It is for him to suggest lines for ex-



perimental work, but it is not for him to carry out the actual work itself.

In the larger sense, however, the surgeon is engaged in the work of original research. In the clinical manifestations of disease he alone sees the connection between cause and effect. Suggestions as to treatment, symptomatology, prognosis and operative methods occur to him in the course of his daily work; and practical advance in the treatment of disease comes mainly from the results of his observations at the bedside and at the operating table.

How may it best be brought about that surgery shall be in the hands of those only who are by education and experience best equipped to practice it?

Is it better to limit surgery to those who are given courses of instruction and degrees designed especially for the education of the surgeon, or would it be preferable so to educate public opinion that only those could be called on to practice surgery who were known to be well fitted for it?

The trouble with the latter question is that the public is easily deceived in medical matters. Nevertheless there is, I think, a strong public opinion in favor of the practitioners who are known to be surgeons of skill and experience. It is on this power of discrimination between the evil results and the good, and on the dependence of these results on skill, that we must chiefly rely in creating a sound public and professional opinion in favor of special experience and skill in the advising and in the performance of surgical operations, and in the practice of surgery in general.

## Original Articles

### A CASE OF SYSTEMIC BLASTOMYCOSIS, WITH BLASTOMYCETES IN THE SPUTUM.

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AND

OLIVER S. ORMSBY, M.D.

CHICAGO.

Through the efforts of Drs. James Nevins Hyde and Frank Hugh Montgomery and other observers, cutaneous blastomycosis is now generally recognized as an entity. The number of reported cases of systemic blastomycosis being few, it seems justifiable to report more or less fully new cases as they occur, so that by a study of the entire group it will be possible definitely to place the disorder in its proper position in medicine. There are now on record four cases of systemic blastomycosis, in which the causative organism appears identical. These were recorded by Busse and Buschke,<sup>1</sup> Montgomery and Walker,<sup>2</sup> Ormsby and Miller<sup>3</sup> and Cleary.<sup>4</sup> Three of the cases were in Chicago, and two of these occurred in the practice of Drs. Hyde and Montgomery. Another case which closely conforms, and which by some observers is classed here, was that reported by Ophüls and Moffitt<sup>5</sup> of Cali-

fornia. In these various cases, similar symptoms were presented before death and similar findings were made postmortem, yet marked differences also occurred. In the various cases, the larynx, trachea, lungs, pleura, myocardium, liver, spleen, pancreas, kidneys, adrenals, mesentery, lymph glands, bones, joints, subcutaneous and cutaneous tissues were the seat of the lesions, the organism being found in all these localities. The microscopic findings in all of these cases were similar, differing chiefly in extent of distribution or destruction. The process often resembled pyemia, multiple abscesses occurring in various organs and tissues of the body. In one case (that of Ormsby and Miller), the usual picture presented in the skin by the chronic, purely cutaneous cases was almost entirely absent, only one lesion possessing this resemblance. In another (that of Cleary), no cutaneous lesions were present. These cases resemble tuberculosis, both clinically and pathologically. This is evident from the findings in the past. The miliary tubercles found in the lungs, liver and elsewhere have a close resemblance to the miliary tubercles of tuberculosis in the same situations; and the chief responsibility of those recording cases in the future will be to eliminate the presence of tuberculosis.

We are indebted to Dr. M. L. Blatt for aid in procuring material for histologic study, and to Dr. H. L. Wolf, house surgeon at Cook County Hospital, for assistance in the work in this case.

*Patient.*—Polish laborer, aged 33, married and has two healthy children.

*History.*—His illness began in February, 1904. He was admitted to Cook County Hospital in February, 1905, and assigned to the service of Dr. Eisendrath. He speaks no English, so a satisfactory history through an interpreter was hard to obtain. It is probable that he has had the usual diseases of childhood. He denies venereal infection; he has been a moderate smoker of cigarettes, and drinks occasionally. His surroundings at home were most insanitary.

*Present Illness.*—The present disease began in February, 1904. He has given two versions of the beginning. The following was the last and seems most reliable: He states that the first noticeable departure from his usual good health consisted in a feeling of discomfort involving the chest on the right side, extending through from front to back. This lasted for a time, and, in fact, is still present, being better and worse at intervals. In June, four months from the beginning, his first cutaneous lesion appeared. This was located below the left ankle and extended down to the heel, and eventually became a little larger than a dollar. Shortly afterward the other lesions appeared, but it is impossible to tell their exact mode of development. In addition to this area on the left leg, the right leg had several large lesions, also the right and left forearm, and the face, chin and neck, especially on the right side (Fig. 1). About November, 1904, he suffered great muscular weakness, and marked swelling of the feet and ankles occurred. This gradually increased until he was wholly unable to work. He stopped work in December. He stated that with the onset of the original pain he employed a physician for two months and was benefited by the treatment. Something was applied to the skin by the physician which made the skin sore, but this soon healed, and was entirely different from the cutaneous lesions present on his admission to the hospital.

*Examination.*—On his admission to the hospital in February, 1905, he presented lesions on all the above-mentioned areas, and was very much emaciated, pale, anemic, exceedingly weak and had some elevation of temperature. Marked edema was present in the ankles, feet, face and arms. His nails were clubbed, and moderate inguinal adenopathy was noted.

*Cutaneous Lesions:* There was present on the left leg, below the ankle, a lesion about the size of a silver dollar. One on the right leg (Fig. 2.), on the lower third, occupying the outer and posterior surface, measured about four by two and one-

1. Busse-Buschke: Virchow's Arch., 1895, vol. cxi, p. 23; Verhandl. der Deutschen Dermatologischen Gesellschaft; Sechster Congress, 1899, p. 181.

2. Walker, James W., Montgomery, Frank Hugh: "Further Report of a Previously Recorded Case of Blastomycosis of the Skin; Systemic Infection with Blastomyces; Death; Autopsy." THE JOURNAL A. M. A., April 5, 1902.

3. Ormsby, Oliver S., Miller, H. M.: "Report of a Case of Systemic Blastomycosis, with Multiple Cutaneous and Subcutaneous Lesions." Jour. of Cut. Dis., March, 1903.

4. Cleary, J. H.: "A Case of Generalized Blastomycosis." Trans. Chicago Patho. Soc., vol. vi, No. 5, May 9, 1904, and Medicine, November, 1904.

5. Ophüls, W., Moffitt, H. C.: "A New Pathologic Mould." Philadelphia Med. Jour., 1900, v. 1471. Proc. of the Chicago Med. Soc., Illinois Med. Jour., vol. vii, May, 1905, p. 454.



half inches. This was oval in shape, and was joined below by a similar lesion, of about the same size, situated over the external malleolus. Two or three similar but smaller lesions were in the neighborhood. All these lesions were quite superficial, the larger part of each being an ulcer, crust covered in places, open in others. There was little induration, but considerable sanguinopurulent discharge. The edge of the ulcer was slightly elevated and presented a bluish-red halo, in which there were located a few miliary abscesses. In some parts of the area a papillomatous condition was present. The lesion on the arm was a subcutaneous nodule, which later softened and was incised, and from the sinus left after this procedure, and from both the lesions on the legs, the organism of blastomycosis was demonstrated by us in pus before the Chicago Medical Society,<sup>6</sup> March 8, 1905. There was also present a large swelling on the left forearm, which apparently involved the whole circumference. It began about two and one-half inches below the elbow joint and extended down the forearm about four inches. It involved both sides of the forearm, and suggested the possibility of bone involvement. In a skiagraph of this lesion the bone appeared normal. This swelling was later incised and the same characteristic discharge released. Material from this swelling was inoculated into two guinea-pigs on April 26. There is still involvement in this area. The lesions on the face (Fig. 1), on account of the different anatomic site, presented a slightly different picture. Here they protruded more extensively above the level of the skin and were papillomatous; some were even verrucous. There was much discharge and marked crusting. The part chiefly involved was the right side of the face, the right side of the neck and the lower lip, extending to the vermilion border.

**Bacteriologic Examination.**—On March 22 pus was removed from a subcutaneous unruptured abscess situated on the left forearm and inoculated on various media and later in animals. Pure cultures of blastomycetes grew on all the tubes. This pus was stained for tubercle bacilli with negative results. Blood cultures have been negative, as has also examination of the urine relative to blastomycetes. Albumin and casts were present in the urine, however. On March 22 tuberculin was given with negative results. No tubercle bacilli have been demonstrated in sections or pus.

**Course of the Disease.**—Although the patient constantly denied having a cough or expectoration of any moment, and although his attendants at the hospital had not noticed these symptoms, on April 26 we were able to collect a large amount of blood-stained, mucopurulent sputum, in which the organism was plentifully found, as is well shown in Figure 3. On May 1 the following physical findings were recorded by the house physician, Dr. Morrell:

"Liver and spleen not palpable. Abdomen tympanic. Lungs: Right apex and upper lobe on right side dull posteriorly. Bronchophony and bronchial breathing present. Lung expansion practically absent. A few râles present in the right lower lobe near the axillary line. The left lung hyper-resonant except at apex."

During his four months' sojourn at the hospital, his temperature ranged from 98.6 to 102.8; his pulse from 88 to 116; his respiration from 20 to 28. The latter half of the time the temperature was considerably lower. As a rule, there was an exacerbation each evening. Under large doses of potassium iodid internally, with radiotherapy, antiseptic dressings and surgical interference locally, marked improvement occurred.

On July 7, when the patient left the hospital, he was much improved in every way. The cutaneous lesions were nearly all healed, he had gained in weight, and had but little fever. On leaving the hospital he passed from our observation for a few weeks. He had stopped the treatment, and when seen by us at his home, five weeks later, he had suffered a relapse. He was suffering with marked pain in the right chest, several cutaneous lesions were active again, and the

sinuses leading from the deep lesions on the forearm had reopened.<sup>7</sup>

#### HISTOPATHOLOGY OF A CUTANEOUS LESION.

As this case presented the histologic picture common to this disease, a detailed description is not given here. Outside of the chief area of involvement there is vascular dilatation and perivascular cellular infiltration, scattered irregularly through the entire depth of the corium. Over this region the epidermis is unaltered, except for slight hyperpigmentation here and there. There is also slight edema of the collagen. Approaching the diseased area, the cellular infiltration increases until in the center there is a large, fairly well-defined area of intense infiltration. The epidermis over this region shows marked hypertrophy, which is very characteristic of this disorder. With low power (Fig. 4) one is struck with the marked resemblance this picture presents to lupus vulgaris—the marked epidermal hypertrophy; the intense cellular infiltration, containing groups of giant-cells; the comparative absence of collagen and elastin, etc. Scattered all throughout, however, is the double-contoured organism of blastomycosis, occurring chiefly in budding forms, and practically every giant cell contains two or more of these organisms (Fig. 5). In addition to giant cells, there are some polynuclear cells, very many polymorphonuclear leucocytes, some mononuclear leucocytes, some plasma cells, and many connective tissue cells. No tubercle bacilli have been found.

#### CULTURES AND ANIMAL EXPERIMENTS.

The first cultures taken at Cook County Hospital on March 8 were made from open ulcers and a sinus on the forearm, and although the organism was fairly abundant in smears made from this pus, it failed to grow on the media. On March 22 pus was removed from a subcutaneous abscess on the left forearm, which was inoculated on various media. On March 28, six days after this inoculation, growth was plainly visible, and after this time the cultures grew rapidly. These proved to be pure cultures of blastomycetes. The organism both in the tissues and pus and on media differed in no essential particular from those described by Montgomery<sup>8</sup> in his report of three years ago, so only a brief description is given here. In the pus they occurred as circular and budding forms, having a double contour and the usual refractile capsule. On media the growth varied. It presented a moist, pasty surface on glycerin-agar (Fig. 6), with at times a wormy appearance, or else presenting large folds and depressions. Microscopically, these cultures showed many oval and circular organisms, some budding ones and much mycelial formation, the latter being both coarse and fine and containing sporules (Figs. 7 and 8). Lateral conidia occurred. On glucose-agar (Fig. 9\*) the growth was more dry, white, and presented aerial hyphæ; and microscopically, there were fewer circular and budding organisms and more fine mycelia. On both glucose and glycerin agar the media were penetrated to a considerable depth in a semicircular manner.

On blood serum the growth was also moist and pasty,

7. Sept. 15, 1905. The patient re-entered the hospital a few days ago with symptoms of a dorsal spondylitis which is undoubtedly another manifestation of the blastomycetic infection.

8. Hyde, James Nevins, Montgomery, Frank Hugh: "Cutaneous Blastomycosis: A Summary of the Observations of James Nevins Hyde, A.M., M.D., and Frank Hugh Montgomery, M.D." Rush Medical College, Chicago. THE JOURNAL A. M. A., June 7, 1902.

EDITOR'S NOTE.—By error on the plate of illustrations, Figure 9 is called a microphotograph instead of a photograph.

6. Chicago Med. Soc., Illinois Med. Jour., vol. viii, May, 1905, p. 454.



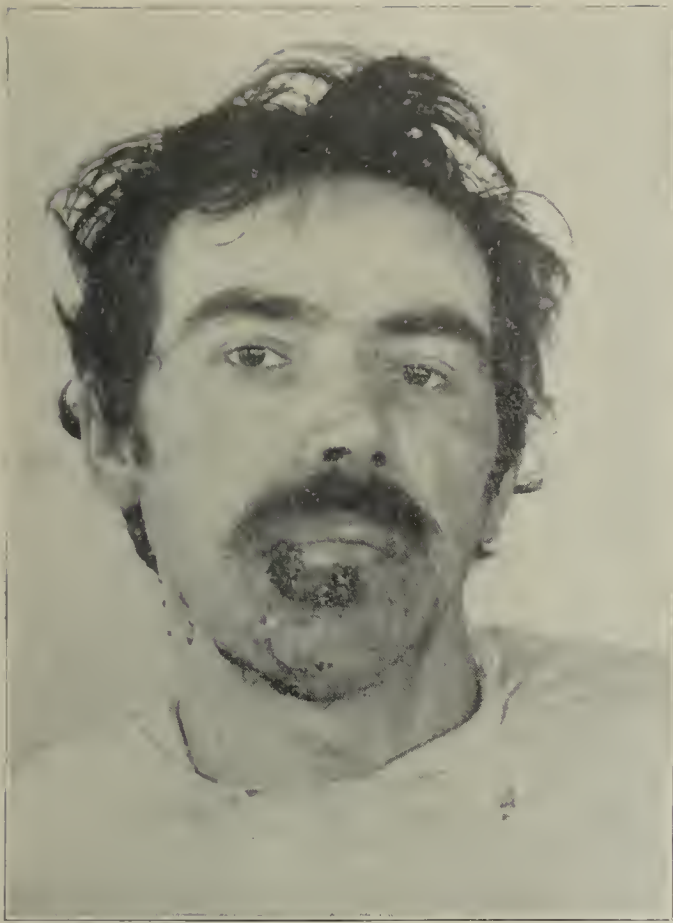


Fig. 1.—Cutaneous lesions on lower lip, chin and neck.



Fig. 2.—Cutaneous lesions on leg and ankle.



Fig. 4.—Microphotograph. Cutaneous section showing marked epidermal hypertrophy and giant-cells (low power).

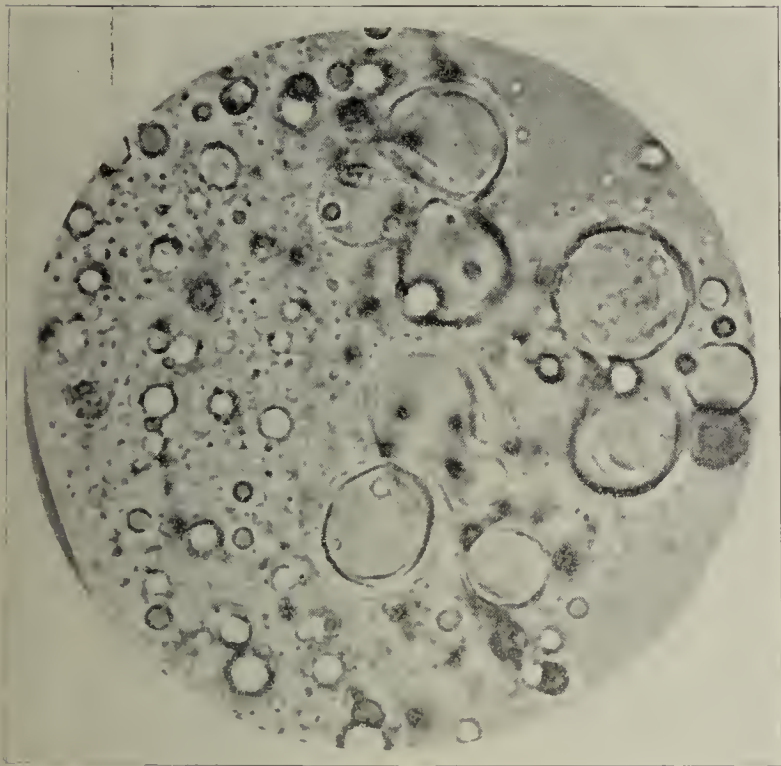


Fig. 3.—Microphotograph. Smear from sputum mounted in 1 per cent. potassium hydrate solution, showing circular and budding organism ( $\times 1200$ ).

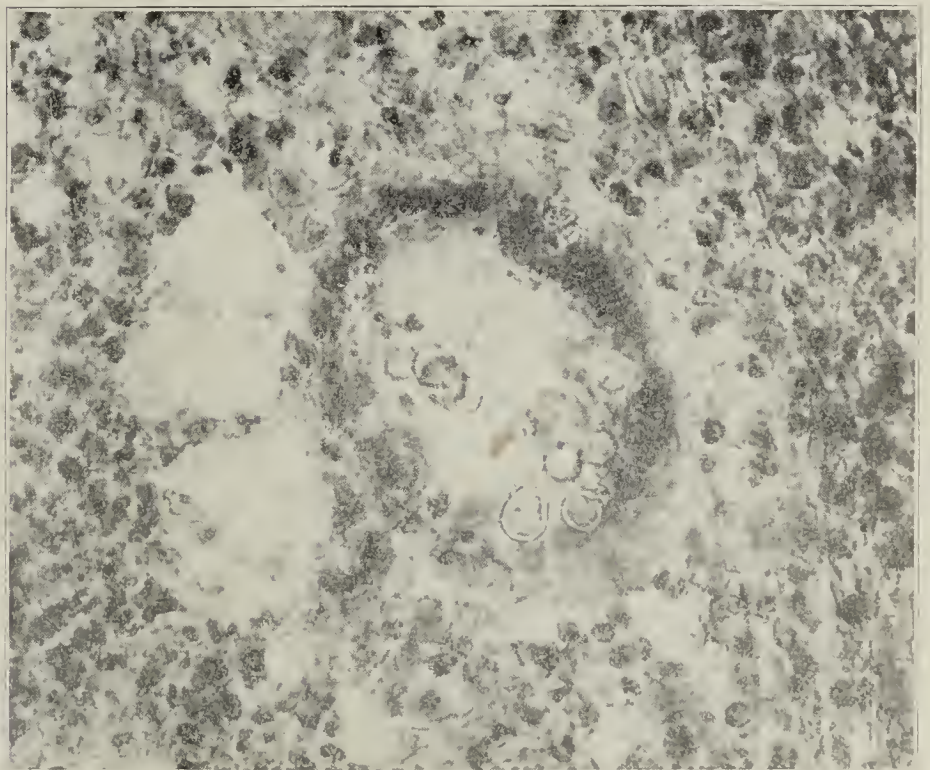


Fig. 5.—Microphotograph. Higher magnification of Fig. 4, showing the organism in a giant-cell ( $\times 600$ ).





Fig. 6.—Photograph. Growth of organism on glycerin-agar, five weeks old, obtained from pus from an unruptured subcutaneous abscess on forearm.



Fig. 7.—Microphotograph. Smear from growth on media five weeks old in 1 per cent. potassium hydrate solution (low power).



Fig. 8.—Microphotograph. Higher magnification of Fig. 7 ( $\times 1200$ ).

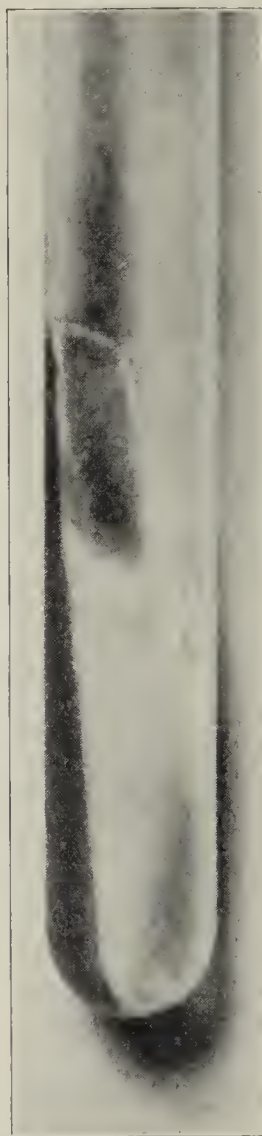


Fig. 9.—Microphotograph. Same as Fig. 6, except growth here is on glucose-agar.

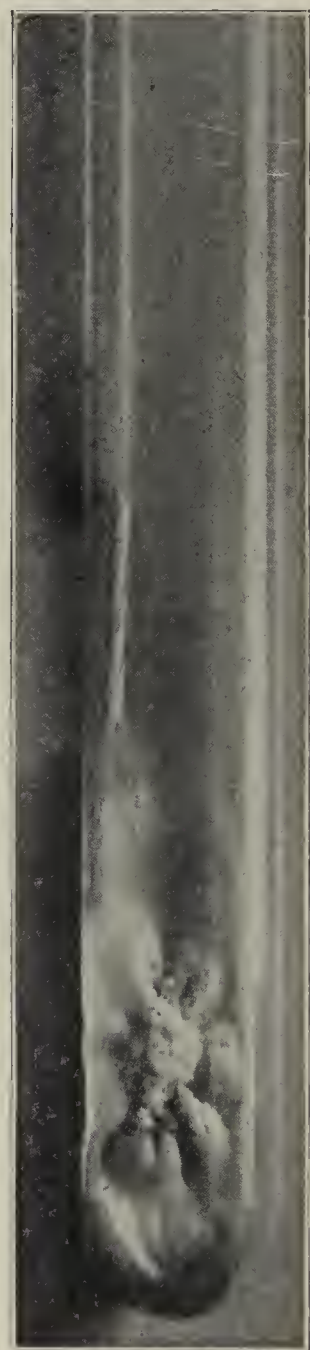


Fig. 10.—Subculture of organism on glycerin-agar, originally from sputum.



and presented a greater proportion of the circular and oval organisms. The cultures taken from the cutaneous lesions, the subcutaneous abscesses and the sputum (Fig. 10) all appeared similar. Subcultures had to be made to obtain pure cultures from the sputum. On April 26, two guinea-pigs were inoculated subcutaneously with an emulsion of pus and granulation tissue, removed from the forearm by incision into an unruptured, deep-seated abscess. Both these animals developed a local lesion of blastomycetic infection at the point of inoculation and surrounding it for half an inch in each direction. These lesions remained for a few weeks, then healed, leaving only a slight atrophic area. On August 12, one of these animals was chloroformed and a thorough postmortem examination made. The subcutaneous fat was intact, the glandular system negative and all the internal organs healthy. There was some local change where the inoculation was made, but no disease or organisms were present. As the other animal inoculated at the same time was healthy and fat, and as more than three months had elapsed since the inoculation, this work in these two animals was negative as to tuberculosis. On May 14, three guinea-pigs were inoculated, one with 15 mm. of the hemorrhagic mucopurulent sputum. This animal was accidentally killed three weeks later by a rat. The postmortem was made by Dr. Adolph Gehrman, who reported negative findings. Had tubercle bacilli been present in the sputum, some evidence of their development would have been evident in the three weeks. A second animal was inoculated subcutaneously with pus previously removed from a subcutaneous abscess in the left forearm. This animal, after three months, is perfectly healthy and is being kept. The third animal received 15 mm. of an emulsion of sterile water and a pure culture of the blastomycetes obtained March 22 from an unruptured abscess on the forearm. This animal was posted August 14, and apparently had overcome the attack, as it was perfectly healthy and no organisms were found in any of the tissues or organs. With negative results from four susceptible animals, such as guinea-pigs inoculated with such likely material as mucopurulent sputum, pus and granulation tissue from an abscess wall, it is probable that no tubercle bacilli were present in this case. The negative findings with the inoculation of the pure culture of the blastomycetic organism is not especially significant, as the guinea-pig is not very susceptible to general infection with this organism, though general infection has occurred several times.

#### A BRIEF REVIEW OF OTHER RECORDED CASES.

In the first case, that of Busse and Buschke,<sup>1</sup> cutaneous, subcutaneous, visceral and bone lesions were present. Early there formed an abscess on the tibia, from which situation the disease spread to the knee joint. There is uncertainty as to which appeared first, the tibial abscess or the cutaneous lesions. The patient succumbed in from thirteen to eighteen months from the beginning of the disease, having as general symptoms marasmus, irregular pulse and temperature. The organism, which was found abundantly in the pus and tissues, was round or oval and developed by budding. In the second case, that of Walker and Montgomery,<sup>2</sup> cutaneous blastomycosis of several years' duration was followed by systemic involvement. This patient was operated on, curettage and cauterization being employed. Nine days after the operation there occurred elevation of temperature, increased pulse rate and rapid respiration; the appetite failed, emaciation occurred, with dyspnea, the patient dying in forty-three days.

It is interesting to note that this case was under Dr. Montgomery's observation several years before cutaneous blastomycosis was recognized, and was classed by him as an unusual tuberculosis. At the postmortem, Dr. Walker considered the patient had died of acute miliary tuberculosis. Later, both gentlemen, having their attention called to the subject of blastomycosis, recalled this case and investigated their old slides, and independently recognized it as an example of cutaneous and visceral blastomycosis. The organism as seen in the sections was circular or oval and developed by budding. In the third case, that of Ormsby and Miller,<sup>3</sup> the patient's history was suggestive of tuberculosis. It was briefly thus: The patient caught cold, which settled in his chest. He coughed and had some blood-streaked expectoration and became very weak. Two months later the first cutaneous lesion appeared. For a time, improvement in his general condition occurred, then he became pale, emaciated, anemic, had loss of appetite, coated tongue and a foul breath. The urine was negative. The temperature was elevated, pulse rapid and respiration increased. Large numbers of subcutaneous nodules and abscesses and cutaneous ulcers occurred. Physical examination of the lung showed bronchial breathing and other evidences of involvement. Laryngitis was present. This latter proved to be due to ulceration induced by the organism of blastomycosis. Repeated examinations of the sputum were negative as to tubercle bacilli. Tuberculin reaction repeated was negative. In this case, special effort was devoted to excluding tuberculosis. Thorough examination of smears made from pus from the various organs and tissues of the body all failed to reveal tubercle bacilli. Animal inoculation and culture experiments were all negative as to tuberculosis. In all situations large numbers of blastomycetes were always demonstrated. Cultures were readily obtained and animal experiments were successful with the blastomycetes. Drs. Otis and Evans<sup>4</sup> did thorough pathologic and bacteriologic work on this case, and later reported in detail the biology of the organism. From their findings they ruled out tuberculosis. It is a point of scientific interest to note that one of the operators at the autopsy in this case was inoculated with and shortly afterward developed blastomycosis. This organism was found always in the budding form in the tissue and pus, but on media mycelia formed. In the fourth case, that of Cleary,<sup>4</sup> it is interesting to note that special symptoms masked the general infection, so that the diagnosis of blastomycosis was made postmortem. The patient's general symptoms were a cold, cough, mucopurulent expectoration, loss of weight, anorexia, hoarseness and edema of the feet and legs. The urine contained albumin and granular and hyalin casts. The temperature was always subnormal and there were no cutaneous lesions. No tubercle bacilli were found in the sputum. At the autopsy, the usual budding organism was found in the lungs, kidneys, liver, spleen, adrenals and myocardium.

This group of cases resembles closely those cases reported in California and elsewhere under the title of protozoic dermatitis, both clinically and pathologically, one of the main differences being the fact that in the protozoic cases the organism does not reproduce by budding in pus and tissues, but develops by endogenous spore formation. In the case of Ophüls and Moffitt<sup>5</sup> which is

3. Otis, F. J., Evans, Newton: "The Morphology and Biology of the Parasite from a Case of Systemic Blastomycosis." *THE JOURNAL A. M. A.*, vol. xii. No. 18, p. 1075.



classified by some as blastomycosis and by others as protozoic disease, the organism closely resembles in culture the blastomycetes, but in the tissue these develop only by spore formation and not by budding. The clinical and pathologic findings in this case are very similar to the blastomycosis cases.

#### INFECTION ATRIUM.

In two of the foregoing cases, the lungs seemed to have been the first point infected. In one other the skin was first attacked, general infection following. In the other the question is open as to which was first, the skin lesion or the tibial abscess. In our present case the lungs were apparently attacked first.

#### REVIEW OF PRESENT CASE.

First. This patient is suffering with a constitutional disease, as evidenced by the clinical symptoms, which show involvement of the lungs, kidneys, skin and subcutaneous tissues.

Second. It seems probable that the lungs were the first point of attack, and they are still markedly involved.

Third. Although tuberculosis in this case is simulated, no tubercle bacilli could be demonstrated, microscopically, culturally or experimentally, and tuberculin reaction proved negative.

Fourth. The organism of blastomycosis has been demonstrated abundantly in cutaneous lesions, subcutaneous unruptured abscesses (in pure culture), and in the sputum.

Fifth. Although the disease responded to, and greatly improved under, potassium iodid, the patient is far from well and future developments will be noted.

Sixth. With the organism from this patient, we have produced only local lesions of blastomycosis, our efforts being directed chiefly to the elimination of a possible tubercle bacillus infection.

### PENETRATING WOUNDS OF THE ABDOMEN.\*

RANDOLPH WINSLOW, M.D.

BALTIMORE.

Penetrating wounds of the abdomen occur with considerable frequency in civil as well as in military practice, and until recently have been the most uniformly fatal of all injuries. As much of our knowledge of this class of injuries has been derived from the experience of the civil war, in preantiseptic times, so we may expect to revise or to confirm our views on this subject by the experience of the surgeons now engaged with the armies in the far East, when they shall have the opportunity to collate their experiences. My experience in these cases is confined entirely to those injuries occurring in civil life, in which the wounds have been inflicted by pistol or rifle balls or with knives and scissors. The larger number of these injuries are inflicted by bullets, while a large minority are due to stabs. As a rule, the traumatism resulting from gunshot wounds are much greater than those dependent on cutting, and the mortality is higher. This is due to the fact that an incised wound heals more readily than a contused wound, and that the injuries are more localized when caused by a stab than when caused by bullets.

#### SYMPTOMS.

The symptoms of a penetrating wound are by no means always well defined, and there may be serious and even fatal lesions of the solid or hollow viscera,

with very slight external manifestations. The most obvious symptom is the location of the wound of entrance; when this is on the anterior abdominal wall, it is fair to presume that the peritoneal cavity has been entered, and the track of the missile or stab should be explored in such cases. The exploration should not be the old haphazard method of probing with an unclean finger or probe, but the abdomen should be thoroughly cleansed and the track incised carefully, and if it is found to lead into the peritoneal cavity laparotomy should be done at once and injuries of the viscera and vessels sought for. This procedure should not be undertaken until the patient has been conveyed to the place at which he is to remain, which should be a well-equipped hospital when possible; neither should it be performed by an inexperienced and ill-equipped surgeon if it is possible to obtain the services of one who has the requisite qualifications. Sometimes the omentum will protrude from the wound, but it is very seldom that fecal contents or gas will escape externally. There may be a wound of exit as well as of entrance, but the bullets are retained usually in civil practice, and even when there are multiple wounds they may not indicate that the missiles have passed through the body, but that the patient has been shot in opposite directions. No special significance can be placed on the symptom of shock; in many cases it is entirely absent, but when present generally indicates hemorrhage. It is somewhat difficult to determine whether gunshot or stab wounds of the posterior abdominal or lower thoracic walls have entered the peritoneal cavity, and they also should be explored by incising the track of the ball or knife or in doubtful cases by making an exploratory laparotomy.

Wounds of the thorax as high as the fifth and sixth ribs frequently penetrate the peritoneal cavity and inflict serious injuries to the abdominal viscera. Such wounds must always be regarded as possible penetrating traumatism of the belly. It is quite true in military practice that a person shot in the head, neck, thorax or extremities may have penetration of the peritoneum, but in civil life this is not generally the case. Vomiting of blood is a sign of injury to the stomach or upper intestine, and when associated with a wound suitably located makes the diagnosis reasonably sure. The bladder should be catheterized, and if it contains bloody urine a lesion of this viscus or of the kidneys or ureters is suggested. The escape of blood from the anus is not frequent, but when it does occur would indicate injury to the lower part of the intestinal tract.

The diagnosis of extent of injury done can only be determined by an operation or by postmortem examination.

#### PROGNOSIS.

The prognosis of penetrating wounds of the abdomen is exceedingly grave, and depends on the organs and structures injured, on the nature of the traumatism, on the degree of emptiness or fullness of the hollow viscera when injured, and on the presence or absence of serious hemorrhage. Wounds of the upper part of the abdomen are not so fatal as are those below the umbilicus, and small perforations of the stomach may not leak. Injuries of the liver, spleen and kidneys, if not extensive, are frequently recovered from. Gunshot wounds of the intestines in civil practice are usually fatal when unoperated on. In the civil war the mortality of gunshot wounds of both intestines was 80.3 per cent., while the same injuries to the small intestines

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



were followed by practically 100 per cent. of fatality. A bullet traversing the abdomen from before backward usually produces fewer lesions than one crossing the same cavity transversely or obliquely.

Stab wounds are probably followed by more hemorrhage than gunshot wounds, but the visceral lesions are not usually so extensive and can be repaired more readily and with less handling of the intestines, hence with less danger to the patient. Gunshot wounds of the pelvis are likely to pass into the pelvic cavity and to injure the organs and vessels situated therein either intraperitoneally or extraperitoneally, and with a high mortality.

#### TREATMENT.

The treatment of penetrating wounds of the abdomen is not yet definitely settled. Under an expectant treatment the mortality is enormous, and it was due to this fact that the elder Gross, in 1843, after a series of elaborate experiments on animals, advocated suturing the intestinal wounds; but his views were far in advance of his day, and his suggestions went unheeded. The frightful mortality of the civil war did not serve to impress the lesson any better, and it was not until 1881 that J. Marion Sims, as a last legacy to the medical profession, which he had already enriched in so many ways, insisted that these injuries should be treated by operation. The lesson was now learned, and soon successful operations were being performed for the relief of perforating wounds of the hollow viscera. It was supposed that the question of the proper treatment of penetrating wounds had been permanently settled in favor of laparotomy and suture of the lesions, but the faith of the profession has been somewhat shaken by the experience of the surgeons during the Spanish-American and Boer wars. According to the surgeon-general's report for 1899, there occurred 44 penetrating wounds of the abdomen in the U. S. Army, of which 30 died, a mortality of 68.2 per cent. In those cases where laparotomy was performed; the mortality was nearly 100 per cent.; hence a doubt is cast on the advisability of operating on such cases in military practice. In the South African war, the British surgeons also had to modify their views in regard to the propriety of operation, as many patients recovered without laparotomy and but few when it was performed. The essential difference between the mortality of these injuries at the present time in military practice from that of earlier wars is due to the small caliber projectile, steel or nickel jacketed, and the great velocity of the missiles propelled by modern firearms. The long, narrow bullet, projected with great speed, penetrates the tissues cleanly, does not become deflected, and is usually aseptic; hence, many serious wounds heal in a typical manner. In South Africa the wounded usually reached the operating hospital only after quite a long delay, and, as the climate is dry, water scarce, dust storms frequent and flies abundant, infection occurred very readily and operations were unsuccessful; hence, it was the part of wisdom to trust these cases to Nature rather than to perform laparotomy.

These conditions do not obtain in civil practice; the bullets are usually round or conical in shape, moving with a low velocity and extensively lacerating the intestines and other organs; the balls are not aseptic, and infection is of frequent occurrence, and death follows in a vast majority of cases when laparotomy is not done. I wish, therefore, to insist that penetrating stab and gunshot wounds of the abdomen occurring in civil life should be subjected to operation. In this class of cases,

at least, the principle of operative interference has been fully established, and one is no longer obliged to apologize for the performance of laparotomy, but is under the necessity of defending himself if he fails to give his patient the benefit of an operation. The operation should be done at the earliest practicable moment before there is extensive fecal extravasation, which will certainly occur if the intestines are perforated, and peristalsis is set up. Do not wait for symptoms of intestinal injury, but operate at once. Every hour's delay adds very materially to the mortality; after the lapse of 24 hours nearly every case of intestinal perforation terminates fatally from suppurative peritonitis. As shock is usually due to bleeding, it is no contraindication for operation, and laparotomy should be done at once, and the bleeding vessels secured by clamp or ligature or controlled by pressure. Stimulation, however, by strychnia, digitalis or salt solution should also be employed. While the median incision is usually the best, as it affords greater access for the systematic exploration of the abdominal viscera, it may be preferable in some cases to make the laparotomy at the site of the external wound if only a small portion of the cavity has been traversed. The first duty of the operator will be to search for and to control bleeding vessels if active hemorrhage has taken place. After the arrest of bleeding, a careful search should be made for lesions of the hollow viscera, stomach, intestines, gall bladder and urinary bladder. I wish especially to emphasize the importance of a careful search of all parts of the intestinal tube, as the instances are not a few in which perforations have been overlooked.

#### WOUNDS OF THE STOMACH.

The stomach, being a large and fixed organ in the upper part of the abdominal cavity, is especially likely to be penetrated by wounds of the lower thoracic and upper abdominal regions. The penetration may involve the anterior wall alone or both surfaces may be perforated. It is necessary, therefore, to explore both surfaces of this viscus unless it is certain that only one penetration has occurred. At times the bullet is lodged in the stomach, in which case there will only be one hole in the viscus. The exploration of the posterior surface of the stomach is accomplished by tearing through the great omentum, when by sight and touch perforations may be discovered. Ordinarily it will not be difficult to suture the lesions on the anterior wall of the stomach, but when these are situated high up toward the cardiac orifice or at the extreme fundus it may be necessary to make an additional incision in order to do so, or to divide one or more ribs. It may be impossible to reach some perforations on the posterior wall. Often the stomach is full when wounded, and there is a free escape of its contents into the greater or lesser peritoneal cavities, rendering a careful cleansing of these parts essential. The contamination of the lesser peritoneal cavity is especially serious, as it is difficult to cleanse it properly, and efficient gauze drainage ought to be employed. It may be best to drain through the back, as well as anteriorly.

Gunshot wounds of the stomach are frequently complicated with injuries of the lungs, diaphragm, liver, gall bladder, spleen, kidneys, pancreas, intestines and large vessels; hence, a high mortality follows, with or without operation. In the civil war four incised and punctured wounds of the stomach were observed, all of which terminated fatally. "One incontestable recovery from a shot perforation, a few recoveries from shot



wounds in the gastric region, in which the diagnoses were not determined unequivocally, and nearly 60 fatal cases of more or less complicated shot wounds of the stomach" were observed. In no case was suture employed. At my clinic, three patients with perforating stab and one with gunshot wound of the stomach have been operated on successfully, while two patients with gunshot wounds of the stomach, complicated with injuries to the spleen in one instance and perforation of the chest, lung, diaphragm and liver in another, died from shock and hemorrhage.

#### WOUNDS OF THE INTESTINES.

Owing to the large area occupied by the intestines, injuries to this part of the alimentary tract occur very frequently. It is difficult to understand how a bullet passing through the abdomen from before backward below the umbilicus can fail to perforate the intestines, yet this is sometimes the case. More often the bowels are perforated in a number of places. As has been said, the oblique and transverse passage of a missile through the abdominal cavity is attended with the greatest damage to the viscera. A careful search should be made for intestinal perforations; if the course of the bullet is known, only those parts in the immediate vicinity of the wound may require to be examined; if the course is unknown or is doubtful, the whole intestinal tube may have to be carefully searched. When the perforations are found, they should be closed with silk or catgut sutures; if the wound is small, it may be inverted by a purse-string suture; if large, it must be closed by some of the various forms of intestinal sutures. When there is much loss of substance, the rent should be sutured transversely to the lumen of the gut in order not to narrow unduly the lumen of the tube. When there are several openings in close proximity to each other, a resection of the intestine may be required. Care should be taken to prevent undue exposure of the viscera. The peritoneal cavity is usually more or less contaminated with fecal discharges, but this does not always occur if the operation is not too long delayed. In every case a careful toilet of the peritoneum should be made, the exposed parts washed off with salt solution, and, in my opinion, gauze drainage employed. Injuries of the large intestine are attended with a lower death rate than those of the small. A number of cases of undoubted gunshot wounds of the large intestines recovered during the civil war, while few, if any, such lesions of the small gut were survived. Of twelve patients with gunshot perforations of the small intestines, many of them complicated with other injuries, operated on in my service, 50 per cent. recovered. One patient with stab of the ascending colon recovered, and one with gunshot wound of the rectum and bladder died. I have had no case of perforation of the gall bladder, but I imagine the proper treatment would be cholecystectomy. Of 20 cases occurring in my service, in which the hollow viscera were perforated, 55 per cent. of the patients recovered after laparotomy and suture.

#### WOUNDS OF THE SOLID ORGANS.

Injuries to the liver and spleen occur occasionally without lesions of other organs, but usually in conjunction with traumatism of neighboring structures. The danger in these cases is chiefly from hemorrhage, which is frequently very great. Bleeding may be controlled by suture in some cases or by packing the wound with gauze; or, in the event of the spleen being disorganized, it may be removed. The pancreas is seldom injured, but when it is lacerated the danger is great.

The kidneys may be injured by gunshot or stab, either without peritoneal penetration or with it. Lesions of these organs require exploration, packing, suture or nephrectomy, in accordance with the nature and extent of the injury found.

#### WOUNDS OF THE PELVIS.

Wounds of the pelvis, like those of the chest, are liable to involve the peritoneal cavity and to produce lesions of the pelvic viscera, notably of the bladder. The examples of gunshot wounds of the bladder, with retention of the bullet, are quite frequent, and require removal of the foreign body and the repair of the visceral damage. Extraperitoneal lesions of the bladder appear to be as fatal as those opening the peritoneal cavity.

#### HEMORRHAGE.

Hemorrhage is one of the most serious complications of intra-abdominal injuries and one of the most frequent. In gunshot wounds it does not occur so frequently as in cutting lesions, unless some of the great vessels are lacerated. In a case of stab of the ascending colon herewith reported, the bleeding could not be arrested until the aorta was compressed. The report of a remarkable double perforation of the aorta, in which the patient survived five days and two hours, I also append to this paper.

#### SUMMARY OF CASES.

The following summary includes all patients treated by me and my assistants, but does not include patients treated by my surgical colleagues at the University Hospital:

Total number of undoubted penetrating wounds of the abdomen treated, 29. Cases in which laparotomy was not done, 5; of which, one patient recovered, 20 per cent., and four patients died, 80 per cent.

Penetrating wounds of the abdomen, in which laparotomy was done, 24; of these, 15 patients recovered, 62.5 per cent., and 9 died, 37.5 per cent.

Penetrating wounds of the abdomen, with perforations of the hollow viscera, 20; 11 patients recovered, 55 per cent., 9 died, 45 per cent.

Gunshot wounds with perforation of the hollow viscera, 16; 7 patients recovered, 43.75 per cent., 9 died, 56.25 per cent.

Stab wounds with perforations of the hollow viscera, 4; 4 patients recovered, 100 per cent.

Penetrating wounds in which various lesions were found, but without actual perforations of the hollow viscera, in which laparotomy was done, 4 patients, all of whom recovered.

While the cases here enumerated are too few to prove much, they are nevertheless suggestive—without operation 80 per cent. of the patients died; with operation, 62.5 per cent. recovered.

#### CASES OF PENETRATING WOUNDS OF THE ABDOMEN IN WHICH LAPAROTOMY WAS DONE.

##### GUNSHOT WOUNDS.

CASE 1.—Pistol wound of the small intestines, suture of four perforations, subsequently traumatic aneurism of circumflex iliac artery. Recovery.

*Patient.*—P. D., white, aged 60, was admitted to the University Hospital, Dec. 22, 1893.

*Examination.*—He was not seen by me until eighteen hours after he was shot. The ball entered the abdomen four inches above Poupart's ligament, and about the same distance to the inner side of the anterior superior spine of the ilium, and passing through the ilium, was found under the integument of the right buttock. He was not shocked, temperature 101, pulse 104.

*Operation.*—An incision was made through the track of the bullet. Considerable liquid blood and blood clots were found in the peritoneal cavity, and some feces and foreign bodies. These were removed, and the exposed parts flushed with hot



water. There were four perforations of the ileum, near the ileocecal valve, three being small, while the fourth was an inch in length, horizontal in direction and with widely everted edges. All the openings were sutured, the largest opening being closed transversely, to avoid any undue narrowing of the gut. Gauze was packed into the incision.

*Result.*—The patient did well for nearly three weeks, when a pulsating lump, which proved to be a traumatic aneurism, of the deep circumflex iliac artery, was discovered in the right iliac fossa. An incision above Poupart's ligament exposed the vessel in its continuity; it was ligated, and the man made an uneventful recovery.

CASE 2.—Pistol wound of abdomen, four perforations of ileum. Death.

*Patient.*—A white man, aged 30, living in Virginia, was shot about 6 p. m. on Nov. 20, 1894. He was placed on a steamboat and brought to Baltimore, reaching the hospital about 8:30 the next morning, or fourteen hours after receiving the injury.

*Examination.*—At this time he was suffering from general peritonitis, the abdomen being distended, and rigid, with pain, tenderness and regurgitant vomiting present, pulse 160, and temperature 103. The bullet had entered the right side of the abdomen between the umbilicus and the anterior superior spine of the ilium.

*Operation.*—In the absence of Dr. Winslow, Dr. Spruill performed laparotomy at the site of the bullet wound, finding blood, feces and lymph extravasated in the peritoneal cavity, with agglutination of the intestines. Four holes were found in the ileum, which were closed, the belly flushed out and the incisions sutured. He died sixteen hours later.

*Autopsy.*—At the autopsy, the bullet was found embedded in the psoas muscle, and all the perforations closed and water tight. The intestinal canal was full, which doubtless was the cause of the rapid peritonitis.

CASE 3.—Gunshot wound of the stomach. Recovery.

*Patient.*—S. W. R., white, aged 58, was admitted to the University Hospital on July 4, 1895. He was shot with buck-shot fired from a small cannon by some boys who were on an elevation. A shot struck him in the left side, just below the apex of the heart, and passed into the peritoneal cavity. He vomited blood with clots.

*Operation.*—He was operated on probably within two hours. The perforation was found on the anterior surface of the stomach, from which gas escaped, but no extravasation of food had occurred. The opening was closed, and after the excision of the discolored edges of the bullet wound, the incision was sutured. He made a good recovery in one month.

CASE 4.—Pistol wound of the abdomen; six perforations of the small intestine. Death.

*Patient.*—E. J., colored, aged 25, was admitted to the University Hospital on September 8, 1895. He was shot about 10 p. m., and reached the hospital an hour later.

*Examination.*—There was a bullet wound of the abdomen, four inches above Poupart's ligament, and two inches to the left of the median line. The skin was blackened with powder, showing that the pistol had been held almost in contact with the body.

*Operation.*—At midnight laparotomy was done. The incision was made in the middle line, extending from the umbilicus to the pubes. Five perforations of the ileum were found and three of the mesentery, and there had been but little hemorrhage and no escape of intestinal contents. The perforations were closed and the cavity flushed out. The abdominal walls were very rigid. The patient took the anesthetic badly, and went into a condition of collapse, hence the operation was hurried.

*Result.*—The patient died of peritonitis four days later, and an undiscovered perforation was found in the angle of junction of the ileum with the cecum. The other perforations had healed firmly. The bullet was found in the cecum. This man's death was due to the overlooking of a perforation, and is greatly to be regretted.

CASE 5.—Gunshot wound of the abdomen; seven perforations of the small intestines and one of the sigmoid flexure. Death.

*Patient.*—B. F. T., white, aged 66, was shot on Sept. 2, 1896,

and was admitted to the hospital within an hour. The ball entered the right side of the abdomen.

*Operation and Result.*—A median laparotomy was done, about two hours after he was shot. Seven holes in the small intestine were sutured, and a search not revealing any further wounds, the abdomen was closed. He was not shocked by the operation, and seemed to be in a favorable condition for recovery. Vomiting of blood soon set in, the cause of which I am at a loss to understand. He died on September 3, and the coroner said that the sigmoid flexure was torn and that the No. 38 bullet lodged in the left side of the sacrum. I do not know whether or not the man died of peritonitis.

CASE 6.—Pistol wound of the liver, small intestine and mesocolon. Recovery.

*Patient.*—S. T., colored, aged 12, was shot with a pistol on Sept. 4, 1897, at 5 p. m., and was admitted to the University Hospital five hours later. The bullet had entered the abdomen, slightly to the right of the middle line, and about midway between the ensiform cartilage and the umbilicus.

*Operation.*—Laparotomy was done at 11:30 p. m., the incision, four inches in length, passing through the bullet wound. The bullet had passed through the lower border of the liver, traversed the transverse mesocolon, and wounded the jejunum in five places. The intestinal wounds were ragged, with everted edges, and liquid feces escaped from the openings. The perforations were closed, the intestines cleansed, gauze packed over the openings in the liver, and strips of gauze allowed to protrude from the wound for drainage. The patient was brought from the country, a distance of 10 miles. He made a prompt recovery.

CASE 7.—Pistol wound of small intestines. Recovery.

*Patient.*—E. A. B., white, aged 44, was shot on Sept. 6, 1897, at 3 p. m., and was admitted to the hospital one hour later.

*Examination.*—A bullet wound was found one inch to the right of the middle line, and one inch below the navel.

*Operation.*—The incision passed through the bullet wound, and revealed six ragged holes in the small intestines and one through the great omentum. The perforations were sutured with mattress sutures, closing the openings in a transverse direction to the lumen of the gut. This man was very adverse to an operation, and required considerable persuasion before he would consent. Gauze drainage was employed. Recovery took place, but for some days after operation he was very ill.

CASE 8.—Pistol wound of duodenum. Recovery.

*Patient.*—T. F., colored, aged 23, was shot with a pistol on Sept. 14, 1897, at 11 p. m., and was admitted to University Hospital at 9 a. m. the next morning. He also had been brought from the country, in fact, from the same place as the patient in Case 6, 10 miles distant. The bullet had entered the abdomen on the right side, at about the tip of the eleventh costal cartilage.

*Operation.*—Operation was done eleven hours after the injury. The incision was made in the right linea semilunaris, eventually extending from the costal arch to the pelvis. The peritoneal cavity was filled with dark blood, bile and intestinal fluids, which had gravitated even into the pelvis. A large ragged wound, about an inch in length, was found in the upper part of the duodenum, from which fluids exuded freely. Owing to the deep situation of the injury, it was very difficult to suture the perforation, but it was finally accomplished, two rows of Lembert sutures being placed. The peritoneal cavity was flushed with hot sterile water, and carefully mopped out, and a glass drainage tube was placed between the stomach and liver and another in the pelvis, and gauze was also packed into these parts. The middle of the incision was sutured, and the upper part left entirely open with the gauze protruding. Contrary to expectations, the patient did well, his highest temperature being 100, pulse 90. The bullet, a large conoidal one, was voided at stool on the sixteenth day.<sup>1</sup>

CASE 9.—Pistol wound of small intestine. Death.

*Patient.*—W. D., white, aged 27, was shot on Oct. 1, 1897, and was brought at once to the hospital. The patient, a stout, short and flabby man, had been shot in the left side

1. I exhibited these last three patients at the same meeting of the Clinical Society of Maryland, all of them being on stretchers.



of the belly, the bullet entering about two inches below and to the left of the umbilicus.

*Operation.*—Median laparotomy was performed two hours after injury, and five perforations of the small intestine and three of the mesentery were found and sutured. The patient took the anesthetic badly. Subsequently he complained of much pain and vomited frequently. Death occurred on the third day.

*Autopsy.*—Stitches were intact; there was some plastic peritonitis, but no purulent infection and no perforations had been overlooked. He seemed to have died of acute sepsis.

All the preceding cases, with the exception of Case 2, have been published in detail in the *Annals of Surgery*, vol. xxviii, p. 487, and are presented in abstract here.

CASE 10.—Pistol wound of abdomen and thigh. Recovery.

*Patient.*—W. V. W., white, aged 43, was admitted to University Hospital on Dec. 18, 1898.

*History.*—While seated in a buggy, he attempted to place a heavy Colt's Navy revolver in an inside pocket of his overcoat, when the hammer of the pistol caught in the torn lining of the pocket and the weapon was discharged. The 38-caliber bullet went downward and penetrated the abdomen about an inch above Poupart's ligament, and passing through the flexed thigh, was found embedded in the cushion of the carriage seat. This occurred at 8:30 a. m., and I saw him almost immediately and sent him to the hospital.

*Operation.*—He was pale from apprehension, but was not greatly shocked. He was operated on one and a half hours after injury. The wound of entrance was quite large, that of exit very small. An incision was made parallel with Poupart's ligament, and the track of the bullet explored. It descended behind the ramus of the pubis, escaping the external iliac vessels, and emerged from the pelvis at the obturator foramen, and then passing through the thigh emerged about the gluteal fold. I did not think the peritoneal cavity had been penetrated, but concluded to do a median laparotomy and to search for lesions. On opening the abdomen, there was no evidence of injury to be noted until I passed a piece of gauze, held in a long forceps, into the left side of the pelvis, which showed fecal stains, when it was withdrawn. A loop of the ileum was now pulled up and a rent about one inch in length was found, located near the mesenteric border of the gut. This was sutured with a double row of Lembert sutures and securely closed. The pelvic cavity was wiped out, all blood clots being removed, a large glass drainage tube inserted and the incision closed down to the tube. A strip of gauze was also placed in the track of the bullet for drainage. The after-history is quite uneventful, his temperature was afebrile, the drainage tube was removed on the fourth day and he left the hospital in three weeks cured.

CASE 11.—Pistol wound of the thorax, penetrating abdomen, and passing through the stomach and liver. Death.

*Patient.*—K. O'N., white, female, aged 30, was admitted Christmas night, 1899.

*History.*—Shortly before coming to the hospital she was shot by a man, the pistol being held close to her body. The bullet entered the left side of her thorax, in the anterior axillary line, and ranging downward, fractured the seventh rib, opening the pleural cavity, and passing through the lung and diaphragm, entered the peritoneal cavity, passed through the liver and both walls of the stomach, and lodged in the left psoas muscle.

*Operation.*—Laparotomy was done at once, and a wound on the anterior surface of the stomach, near the point of entrance of the esophagus, was sutured with difficulty. It was believed that another wound was present on the posterior wall of the stomach, but it could not be exposed. There was considerable bleeding from the liver and other injured structures, and she was markedly shocked. Gauze was packed above and below the stomach. In spite of free stimulation, she did not react from the depression and died twelve hours later.

CASE 12.—Pistol wound of the stomach and spleen. Death.

*Patient.*—F. S., colored, aged 23, was admitted on the night of Sept. 27, 1898.

*History.*—While attempting to escape from a policeman, he was shot in the left side over the spleen, between the

eighth and ninth ribs, the ball passing through the spleen and into the stomach at its great extremity, causing a wound an inch in length in the wall of the stomach.

*Operation.*—Laparotomy was done at once, and the lesions mentioned discovered. The stomach was filled with undigested food, which had escaped into the greater and lesser peritoneal cavities. The wound in the stomach was sutured, with great difficulty, the peritoneal cavity cleansed as well as possible, and the incision left partly open, with gauze protruding from it for drainage.

*Result.*—When the patient was returned to the ward, my assistant elevated the end of the bed, as there was a condition of shock. The next day a loop of small intestine protruded from the wound and was replaced; whether this had any influence in causing his death I do not know, but he died in collapse within twenty-four hours.

*Autopsy.*—At the autopsy the perforation was found closed and the bullet lodged in the stomach.

CASE 13.—Pistol wound of stomach and intestines. Death.

*Patient.*—A. T., colored, aged 44, was admitted to the hospital on Nov. 6, 1900. The ball had entered the epigastrium and passed through the walls of the stomach and then passing downward, penetrated the small intestines in many places and lodged under the skin of the buttock.

*Operation.*—Laparotomy was done, and the holes in the stomach and small intestines sutured. There was much extravasation of stomach and intestinal contents, which could not be thoroughly removed. Gauze packing was employed. Peritonitis promptly supervened and the man died in two days. The operation to repair the injuries in this case was very extensive.

CASE 14.—Pistol wound of the abdomen, involving the small intestines, bladder and rectum. Death.

*Patient.*—R. M., colored, aged 25, was shot in the lower part of the abdomen, and the bullet ranging downward, passed through a loop of the ileum, making two openings, and then perforated the bladder and the rectum.

*Operation.*—These perforations were sutured, that in the rectum being difficult to reach. Pneumonia supervened, probably from the anesthetic, and he died in a few days. This case also occurred in November, 1900.

CASE 15.—Rifle shot of the stomach, jejunum and sigmoid flexure. Death.

*Patient.*—L. H., white, aged 15, was admitted to the hospital Christmas day, 1901. He was shot with a rifle at Savage, Md., four hours previous to admission, and was brought about 30 miles to the hospital.

*Operation.*—Laparotomy was done at once, and two perforations were found in the stomach, two in the jejunum and one in the sigmoid flexure; these were sutured, the peritoneal cavity cleansed of blood and fluids. The patient did badly, vomiting set in, and symptoms of peritonitis supervened, of which he died in forty-eight hours.

CASE 16.—F. B., Italian, aged 26, was admitted to hospital on Christmas day, 1901, a short time after the previous patient. He was shot with a pistol at Skyesville, Md., about 35 miles distant, at 10:30 a. m., and reached the hospital at 6 p. m. The bullet, No. 38, entered on the right side of the left lumbar region. His belly was rigid and he complained of much pain. The bladder was emptied and the urine was normal in appearance.

*Operation.*—An eight-inch incision was made by my assistant, Dr. A. A. Mathews, through the left rectus muscle. On opening the peritoneal cavity, a loop of small intestine at once presented in the incision, having two perforations, which were sutured, and a systematic search was made of all the intestines and viscera, and another perforation was discovered in the jejunum, which was closed, and the whole cavity flushed with hot normal salt solution. Drainage was established with gauze packing. The patient made a prompt and uneventful recovery.

CASE 17.—Pistol wound of the abdomen. Recovery.

*Patient.*—W. K., white, aged 16, was shot with a pistol by a negro boy, at a distance of 12 to 15 feet, on Nov. 20, 1904. The bullet entered one and one-half inches above the anterior superior spine and three inches to the right of the umbilicus.



*Operation.*—An incision was made at the wound of entrance and the peritoneal cavity opened. The missile grazed the cecum, making a contusion, but no perforation, and then passed through the posterior layer of peritoneum and lodged in the muscles. The contused area was turned in with sutures, the cavity cleansed and drainage established. Some suppuration occurred, but the boy made a good recovery.

## STAB WOUNDS.

CASE 18.—Stab wound of both walls of the stomach. Laparotomy. Recovery.

*Patient.*—Mrs. M., white, aged 53, was admitted to the hospital on Nov. 23, 1896, with a stab wound of the abdomen.

*Examination.*—The wound was one-half inch in length, situated near the middle line and 3 inches below the ensiform cartilage. The patient was much shocked, the pulse rapid and weak and the extremities cold.

*Operation.*—A transverse incision, including the stab wound, was made across the abdomen, and at once the odor of beer was perceived and particles of partly digested vegetable matter were found loose in the peritoneal cavity, with blood clots. The bleeding wound was found on the anterior wall of the stomach, the vessels were tied and the openings closed with Lembert's sutures. The great omentum was torn through, the posterior wall of the stomach exposed and a wound similar to that on the anterior surface was found and closed. The abdominal cavity was mopped out and then flushed with hot sterile water and the incision was closed without drainage. Highest temperature was 99.4 and pulse 96. She was discharged well in six weeks. The operator in this case was my associate, Dr. St. Clair Spruill.

CASE 19.—Stab wound of ascending colon. Recovery.

*Patient.*—G. L., white, aged 27, huckster, was admitted to the hospital Dec. 14, 1899, with a stab wound midway between the ribs and the crest of the ileum on the right side.

*Operation.*—At my request, Dr. H. M. Fitzhugh performed laparotomy and found the ascending colon penetrated in three places and partially cut in another place. There was a furious hemorrhage, the source of which was not determined, nor could it be controlled until the aorta was grasped and prolonged compression made. The wounds in the intestines were sutured, blood clots removed and the abdominal incision closed.

*Result.*—He was much shocked and required normal salt infusion. The after-course was not smooth, infection of the abdominal wall occurred and much sloughing, but he gradually recovered, withstanding also a sharp attack of pneumonia.

CASE 20.—Stab wound of left side, severing the cartilages of the lower ribs and penetrating the stomach. Recovery.

*Patient.*—J. W. P., white, aged 32, brakeman, was admitted to the hospital on Nov. 2, 1897, at 10:30 p. m. One hour previously he was stabbed in the left hypochondrium, the cartilages of the costal arch being severed and the omentum protruding.

*Operation.*—Immediate laparotomy was done, the protruding omentum reduced and an incision into the stomach closed with silk sutures. The contents of the stomach had not escaped, and the abdominal incision was closed. The after-history is uneventful, and he made a prompt recovery.

CASE 21.—Stab wound of abdomen, severing costal cartilages. Recovery.

*Patient.*—J. W. R., colored, was admitted to the hospital Oct. 26, 1897. While engaged in an exciting discussion in the country, he was stabbed in the belly and came to the hospital twelve hours later.

*Examination.*—The injuries were almost a counterpart of the preceding case, except that the knife did not penetrate so deeply and the stomach was not cut. He had a cut 3 inches long in the left hypochondrium, severing the costal cartilages, and penetrating the peritoneal cavity. The omentum was protruding from the wound and was liberally covered with iodoform, and the parts were filthy.

*Operation.*—The belly was thoroughly cleaned and the protruding omentum excised. An incision was made and the stomach and other structures examined without finding any further lesions. The man made an uninterrupted recovery,

and I had the pleasure of exhibiting him and the preceding case together at a meeting of the Clinical Society.

CASE 22.—Stab wound of the stomach. Recovery.

*Patient.*—A man was admitted to the hospital Oct. 6, 1901, at 3 a. m.

*Examination.*—He was very much shocked and had two punctured wounds of the chest wall, which did not penetrate the pleural cavity, and one just below the costal border on the left side, about 2½ inches from the middle line. This wound penetrated the anterior wall of the stomach, which was distended, but the posterior wall escaped injury.

*Operation.*—He was stimulated with strychnia, and 700 c.c. normal salt solution were injected. A long incision was made on the left side through the left rectus muscle, and a large quantity of blood rushed out. There was also considerable extravasation of the stomach contents into the peritoneal cavity. A cut one inch in length was found in the stomach, from which the mucous membrane protruded as a rosette. Two arteries were spurting and were ligated, and the perforation was closed with three rows of sutures. Large quantities of clotted blood were removed from the dependent portions of the peritoneal cavity. The omentum and intestines were washed off, the cavity flushed with hot salt solution and gauze tucked in every direction for drainage. Although the patient was in a very critical condition, recovery ensued. This patient was operated on by my assistant, Dr. A. A. Mathews.

CASE 23.—Stab wound of the abdomen, made with scissors. Recovery.

*Patient.*—A man about 54 years of age, a voluntary patient at the Sheppard and Enoch Pratt Hospital, on account of melancholia, was taking exercise with an attendant, and saw a large shears in a stable. Before he could be stopped, he pulled up his vest and stabbed himself five times in the abdomen. This occurred about 3 p. m. on Nov. 1, 1902. He had no sooner inflicted, as he supposed, fatal injuries, than he became possessed with an urgent desire to live.

*Examination.*—I reached him about 6 p. m., and found him pale and somewhat shocked and very repentant. There were five punctures in the upper and middle parts of his abdomen, from which blood was escaping.

*Operation.*—Laparotomy was done at once, under difficulties, and it was found that two of the punctures had penetrated the peritoneal cavity, and that one puncture had also cut the stomach, perhaps not entirely through. This incision was sutured, blood removed from the abdomen, the wounds disinfected as well as possible and gauze drainage employed. He made a good recovery, and his melancholia disappeared as soon as his convalescence became assured, and he continues well to the present time.

CASE 24.—Stab wound of abdomen. Recovery.

*Patient.*—Italian, aged 21, was stabbed in the right side of the belly at Havre de Grace, Md., on May 28, 1905. He rode some distance to a physician's office, carrying his intestines in his hand. The physician enlarged the wound and returned the intestines and sewed up the skin with silk sutures. More than twenty-four hours later he was brought to the University Hospital, a distance of 36 miles.

*Operation.*—The abdomen was thoroughly cleansed, the wound opened and enlarged, and a careful examination of the intestines made. A marked peritonitis was already present. The intestines were agglutinated with each other and there was some foreign matter in the peritoneal cavity. There was a partial cut in the small intestines and in the mesentery. The intestines were washed off, drainage with gauze instituted and recovery progressed rapidly.

## CASES OF PENETRATING GUNSHOT WOUNDS OF THE ABDOMEN IN WHICH LAPAROTOMY WAS NOT DONE.

CASE 25.—Pistol wound of abdomen. Recovery.

*Patient.*—J. C., colored, aged 29, received a wound from a pistol of small caliber, fired from some distance. The ball entered the abdomen one and one-half inches below the umbilicus, making a small circular hole, through which the omentum protruded.

*Treatment.*—A drainage tube was inserted, ice bags applied externally and opium administered internally. He was discharged well in one month.



*Remarks.*—This occurred in 1881, immediately before Sim's lectures on this subject, and was the first case of penetrating wound of the abdomen that came under my care. Probably no visceral lesion was sustained.

**CASE 26.**—Pistol wound in epigastrium and of right forearm, causing compound fracture of the radius. Death five days and two hours after injury.

*Patient.*—S. P., negress, was shot by her husband with a 32-caliber revolver.

*Injury.*—One bullet fractured the right radius, the other penetrated the epigastrium, one and one-half inches to the left of the linea alba and three inches below the ensiform cartilage. From the location of the wound it was thought that either the stomach or transverse colon was perforated. The patient had no vomiting of blood or bloody stool, had pain with tympanites at the point of injury, but no elevation of temperature. No operation was performed. She lived five days and two hours.

*Autopsy.*—No peritonitis was found. There was no perforation of any of the viscera. Some liquid blood was in the abdominal cavity, and the peritoneum was extensively raised by an enormous blood clot under it. The bullet had passed entirely through the aorta, below the celiac axis, making a slit in its anterior surface and an everted counter opening, and had then entered the body of the third lumbar vertebra. It seems almost incredible that a person could live more than five days, with two bullet holes in the aorta.

**CASE 27.**—Pistol wound of small intestine, with 25 perforations and 2 in bladder. Death in eighteen hours.

*Patient.*—C. W., white, on June 3, 1884, was shot in the hypogastric region, with a large pistol; he then turned and received another wound in the buttocks.

*Injury.*—The bullets pursued a nearly parallel course, and one lodged under the skin of the abdomen an inch from the first wound, while the other was found under the integument behind, three inches distant from the posterior wound. He was admitted at night, pulse good and shock not marked, urine bloody. When seen by me the next day he was in collapse, pulseless, vomiting, and in great pain.

*Autopsy.*—The peritoneal cavity was filled with blood, feces, pepper pods, and cherry stones. The lower portion of the small intestines for about six feet was riddled, there being twenty-five holes in the gut, one in the mesentery and two in the bladder.

**CASE 28.**—Pistol wound of the liver. Death in eighteen or twenty hours.

*Patient.*—D. G., colored, was shot on the same day as the last two mentioned patients, and like these with large-sized pistols.

*Injury.*—The wound was on the right side, in the anterior axillary line, and about two inches from the nipple. The ball entered the fifth intercostal space, and ranging downward, fractured the sixth rib and entered the abdomen between the sixth and seventh ribs. Much bleeding and marked shock followed, with pain in region of wound and in the right shoulder. No bile escaped from the wound. The contents of the stomach were vomited, but no blood. The patient did not rally from the profound shock, and died on the same day.

*Autopsy.*—The bullet passed entirely through the upper surface of the liver, and was found embedded in the substance of the diaphragm. Peritonitis was beginning.

**CASE 29.**—Pistol wound of back; perforation of the small intestine in two places. Death in twenty-nine hours.

*Patient.*—W. G., colored, aged 34, was shot by a policeman from whom he was trying to escape. The man was running, and was about 15 feet distant from the officer. The weapon used was a large-sized Smith & Wesson revolver. The ball entered one inch to the left of the second lumbar vertebra. Seven hours after the injury the pulse was 82, respiration 32, and temperature 98.8, and there was no shock. Soon pain about the umbilicus set in, with muscular rigidity, vomiting, and also an alvine evacuation of blood. Urine was passed voluntarily and was not bloody. There was numbness of the left thigh in the area supplied by the anterior crural nerve. I was anxious to perform laparotomy on this man, but was overruled by superior authority. Peritonitis supervened rap-

idly, and the patient died in twenty-nine hours from the time of injury.

*Autopsy.*—The ball had entered the peritoneal cavity from behind, pierced the small intestine in two places and finally dropped into the pelvis. Feces had escaped and an intense general peritonitis was set up.

There are here 5 cases of penetrating abdominal wounds, with one recovery and four deaths.

No operation was done on any of these patients, and the mortality was 80 per cent., which corresponds pretty accurately with that computed by Otis. Would the mortality have been less under operative treatment? The first patient would probably have recovered if the belly had been opened, as recovery occurred spontaneously, and the fifth patient would have had excellent chances for recovery. It is possible, but not probable, that the case of perforation of the liver might have been saved if gauze packing had been made use of to arrest bleeding. It is not probable that the patient with 28 perforations of the small intestine and bladder could have been saved by any treatment. Nor is it any more reasonable to expect a cure after a double perforation of the aorta. In my opinion, however, all of these patients should have been subjected to laparotomy.

#### DISCUSSION.

DR. CHARLES M. COOPER, San Francisco, referred to two incidents that came under his observation during the late South African war. The first relates to a patient who had been shot in the abdomen, in whom no exit wound could be found. Unsuccessful efforts to locate the bullet had been made and the x-ray used. Prof. John Chiene, when shown the patient, remembered the golden rule—"examined the rectum"—and found the bullet, thus emphasizing the importance of not forgetting old methods of diagnosis. The second relates to a physician who had been shot in the abdomen, and who recovered without operation. In reply to an inquiry as to his opinion of the main factor responsible, he said he had vomited the day before he was shot and had eaten nothing afterward. Subsequent to his injury he continued to refuse food, and thus applied to himself the well-known starvation treatment of acute abdominal diseases that is associated with the name of Dr. Ochsner. This principle, Dr. Cooper believes, should be enforced in the treatment of patients who are not operated on, care being taken to keep the mouth and fauces as clean as possible and to prevent the swallowing of saliva.

DR. FLOYD McRAE, Atlanta, Ga., said that physicians in the South see more pistol wounds than do physicians in the North. He said that in exceptional cases suturing the bowel in a transverse direction to prevent contractures is the best thing to be done. In this way there is produced an infolding which is particularly obstructive and a tendency to separation of the edges of the wound. Suture in the longitudinal direction should be the rule. Dr. McRae has seen some cases in which the bowel was separated from the mesentery where it was not considered of much importance, but later there was perforation and death. The mesentery is the only means of blood supply to the intestine, and if it is separated a fatal result will certainly occur later. This condition calls for a resection of the bowel. In the toilet of the bowel physicians used to use gallons of water and had a larger mortality than now. It is only in exceptional cases that general lavage of the peritoneal cavity is advisable. The non-exposure of the viscera is a very important point in technic, and the man who follows the intestines carefully without exposure will have a lower mortality.

DR. DEFOREST WILLARD, Philadelphia, said that one point of importance is the question of excessive handling. If the physician is unable with a dry toilet to do good work, posterior drainage will be an exceedingly valuable addition and will save some lives.

DR. JOHN B. BOUCHER, Hartford, Conn., said that his experience with recent gunshot wounds of the abdomen leads him to believe that drainage is a decided disadvantage. He be-



lieves in sewing each perforation as he finds it, making as thorough an examination with as little exposure of the viscera as possible, and after careful sponging, closing the peritoneal cavity tight. By this means better results will be obtained than by drainage, which unquestionably lowers the resistance of the peritoneum. No chance should be left for external contamination.

DR. R. WINSLOW said that handling the intestines is not good practice, if it can be avoided. As to washing out the peritoneal cavity, if there has been but little contamination, certainly not, but if there has been a great deal of soiling, as for example, with beer, food, feces, etc., plenty of water should be used. He is convinced that these cases should be drained.

## THE DENTISTRY OF TO-MORROW.\*

HARRY P. CARLTON, D.D.S.

SAN FRANCISCO.

Several years ago I had the opportunity to read before the Odontographic Society of Chicago a paper on "University Training and Dental Education," in which I took the ground that dentistry would only be a full profession and recognized as such when the character of the men who comprised it brought its recognition up to what it should be; that as this increase in dignity and professional status must come from within the body of the profession itself, a high grade of young men must be added to its ranks. I outlined the demands of the day and the way to meet those demands, making a plea for better educated material with which to begin our dental training, claiming that with these superior men we could shut the doors of our profession against the trifter and the tinker, and reserve the training of our schools for those who brought to the work the instincts, traditions and outlook of the scholar; the result, real doctors of dental surgery.

I look on this occasion and this paper as but another chance to express my thoughts, to take another step forward, and to prophesy what seems to me the inevitable outcome. If dentistry is to continue to advance, along what lines must it go? It is pretty well conceded that mechanically we are close to the top notch, and only moderate advance can be looked for in that direction. The advance must then be along scientific lines, higher education and the encouragement of research and investigation.

Dentistry is a specialty of medicine, but the only specialty not universally requiring the degree of doctor of medicine. Indeed, dentistry should be one of the most important branches or specialties of medicine, for in the mouth begin all those processes of nutrition and metabolism which of recent years have attracted so much attention. Thus far neither the physician nor the dentist has given enough scientific study to this special area of the human anatomy, and neither knows what the other has been doing or learning or is doing and learning.

Medicine and dentistry, though cognate sciences, have always been separately studied. This disassociation is now seen to be a great error, due not alone to the fact that the relation of the mouth and teeth to the rest of the anatomy was not understood, but also because only the mechanical aspect probably appealed to those who first considered the matter; no doubt dentistry had its beginning in the pulling of a tooth. This conception of dentistry as an entity and not as an integral part of medicine has made it an art, possibly a trade, rather than a science. A correct appreciation of phy-

siology, pathology and bacteriology—physiology representing the normal relation between the mouth and the rest of the alimentary canal; pathology showing the relation between the deranged functions of the mouth and abnormal conditions of other portions of the alimentary system; and bacteriology as an outgrowth of the study of pathology, showing the causes of the pathologic conditions of the mouth—necessitates an entirely different attitude and is rapidly bringing the child, dentistry, back to its real parent, medicine. It has been said that "Dental science has brought the diseases of the mouth, jaws and teeth so obviously under the domain of general pathology, that somatic problems elsewhere presented in the body are best and easiest studied in the mouth."

The opportunities of modern dentistry are so new and vast that not only is more manipulative skill demanded, but ampler education, more insight, more sagacity, faculties to whose development nature and elaborate training must both contribute. And this training must be given under the guidance of scientific teachers, non-practitioners, men of productive scholarship, men who devote their lives to the special work of teaching the various subjects which are embodied in a medical education, instead of by those who give instruction during the intervals of a busy practice.

There are new duties calling for a high degree of disciplined intelligence; to quote a recent article, "The knowledge of life and disease represented by the average D.D.S. degree is certainly deplorably deficient." How are we to remedy this? Give our young men a thorough medical training. Dentists are specialists only in their own handiwork, but the ground work is uniform and the demand for individualized education emphasizes the whole difference in our chosen tasks and ignores the great similarities. The technic of our branch of the profession, then, appears only as a small variation of the work in which we all share. The higher the level on which professional specialization begins, the more effective it is. And, again, "The higher the profession, the more nearly is the whole man working in every act and the more, therefore, is a broad general education necessary."

How well I remember Professor Joe Le Conte's likening of the modern system of education to the great sequoia, in which the primary and secondary schools were the rootlets and roots, the college culture courses the great bole, and the coming out from it at various altitudes as specializing branches, were the group of professional schools that make up the university. The trunk thus dividing grew higher and smaller, but persisted as the principal member all the way, until the topmost reach of pure culture was highest of all. Specializing without culture he likened to the low-branching bush, with no hope of reaching any fair height, and that the great branch of this tree of knowledge that deals with the study and care of the human body should spring from the main trunk after a considerable height of culture, at least that of the college curriculum, which Dr. Le Conte likened to the unbranching trunk, was the contention made in the former paper already mentioned. Without this no standing among the learned professions can be had at all. The half-light of the forest depth can not be grown out of at any less altitude.

It is equally clear, also, that the great branch, the study of the human frame I have spoken of, must go out from the culture trunk of the university tree as a whole. The least consideration of its logical relations to the

\* Read in the Section on Stomatology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



general culture and to other branches of knowledge will show the justness of this statement. And, having thus gone out from the main trunk, there is plenty of room for a considerable outward and upward reach of this great branch before it begins to subdivide into the various specialties, as the care of the various portions of the human body. So viewed, the mouth has as much relation to medical science, as a whole, as has the care of the eye, the ear, or, indeed, any other organ or group of organs.

He would be a superficial reasoner who would deny the great culture value of the medical course. Dr. Le Conte himself found it a firm foundation in its hold on physics and chemistry and a whole group of other sciences, and yet more in its cultivation of the habits of scientific observation of facts and logical reasoning from them for the stately structure of his own scientific attainments. The man who has taken it is a doctor, with none of the weakening qualifications of D.D.S., connoting a lesser scientific rank.

Most dental schools of the present time are at the mercy of the demands of the day and age, and their students are the product of the surroundings, not the choice of the school. An ideal professional school would be one that exists for its work alone, for scientific investigation and practical instruction not given by busy wage earners.

The dentist of to-morrow can not be the same sort of man as the dentist of the past, whose own little sphere has been bounded by thirty-two teeth. He must be the carefully educated student in the medical branches, plus the dental specialties, and you can only make him so by following the same educational plan as in preparing the doctor of medicine. Without the requisite medical education, the ordinary mechanically expert dentist is not competent to practice his profession—he can only exercise a mechanical dexterity, but with the proper education he not only exercises the same dexterity, but he has professional ability.

The mouth is a fairly good barometer of the whole system, but your merely mechanical man, as contrasted with the dental specialist in medicine, is not competent to read it, and he does not. Why? How can any man untrained in medical science understand the problems presented to him in the condition of the mouth? We all know how exceedingly often some affection of the mouth or teeth is but an indication of a general systemic disturbance of metabolism; and, on the contrary, how frequently we see a faulty dental anatomy causing nutritive derangements which are puzzling to the physician who is ignorant of the large part played by the mouth in general alimentation. These things can not be comprehended by the merely mechanically trained dentist, as distinguished from the dental specialist, any more than they are intelligible to the physician whose training has omitted all reference to the mouth as a vital part of the alimentary canal. He who would in the future confine his professional work to conditions involving the mouth and teeth—the dental specialist—must be a broad diagnostician; he must know the relation of the mouth to the general system and he must interpret what he sees in the mouth in the light of his general medical education.

To bring about this condition—a condition which must surely come with the passage of time—the same preliminary training in the academic sciences will be required, whether the student intends to practice general medicine or surgery, or to specialize along the lines of

ophthalmology, dermatology, orthopedic surgery or dentistry.

The same general medical education must also be required, no matter to what special region of the anatomy nor to what special line of work the student intends to confine himself eventually.

What will be the results of this medical education? When this is accomplished what is going to become of your dentist? Practical life demands a division of labor; therefore, the specializing of the individual. There will be a division of the product just as in general medicine, and the natural ability of the individual will show itself. Some are going on plugging teeth, but better able, not less equipped for that work, for this higher education is not a question alone of preparing great men for great things; it must also prepare little men for greater things than would otherwise have been possible. Another lot are going to take up broad scientific work and research—not merely the mouth, but the mouth as merely a part, and the world will be spared from lots of trouble. But he who takes up the mechanical side of dental medicine has a broad and an inviting field of work before him. Thus far the orthopedic surgeon and the ophthalmologist who confines himself to refraction are most highly skilled mechanical specialists in medicine, but the medical dentist of the future will stand with them.

Consider the remarkably high degree of mechanical skill developed in the proper adjustment of a plaster jacket! Think of the tremendously complex Wullstein apparatus, devised for this purpose, and consider a man with no mechanical skill, in spite of any amount of medical education, attempting to apply such a jacket!

Dentistry, as well as orthopedic surgery, requires this highest kind of mechanical ability—take the apparatus used in orthodontia, for example; its construction and application call for the best mechanical skill, but they need back of that the academic training, or they don't reach the elevation. The real professional man should possess the resources of a highly developed, reasoning faculty, which comes only after years of systematic pursuit of what might be called higher or university study. It is this broad mental training that makes better dentists and better men. We are not only professional wage earners—we live for our friends and our nation; we are in contact with nature and science, with art and literature; we shape our town and our time. Let us, then, provide the kind of men who know how to think.

Imagine a profession of mere operators; professional men! Not so; mechanical artisans. The hope of the profession lies not in fitting a system of instruction to the capacity of unpromising students, not in "substituting intellectual milk for intellectual meat, aye, even in giving this milk in small quantity because of the puniness of the babes; but in choosing students equal to the requirements of an advanced method of instruction and substituting capable men for the class that now fill our colleges."

Turning out men with broad, well-balanced minds, with the faculty of judgment, strengthened by the mastery of principles rather than the acquisition of information. So much of the groundwork of medicine and dentistry is held in common that it is a wasteful folly to teach it in separate schools rather than in one well-equipped and well-manned institution. The cutting out of this unnecessary duplication of work is the spirit of the age and the method of much that we call our modern advance.



To summarize this point: The things that are purely ground work, physics, inorganic chemistry, and all the branches that make for the building up of the man able to see clearly, to imagine vividly and to reason correctly, as Dr. Henry Van Dyke puts it—these should be given in college. Then, all the studies necessary to the understanding of the human anatomy, physiology and hygiene should be taken in a medical course; then, and then alone, is it time to specialize on oral surgery to make a dentist. It used to be said of Cuvier that, given a single bone, he could construct a whole animal, but he never arrived at that point by the study of one kind of bones only. Rather it is the method of to-day to study the whole skeleton, yes, and all the other parts of an animal as well, in order to understand one bone.

"Great truths approach slowly and dwell a long time with small minorities." Progress is the law of this American race, which stands for all that's best; truly it is a race which knows no rest. Was it not Macaulay who said, "A standing point which was yesterday invisible is the goal to-day and will be the starting post of tomorrow?"

### WHAT WILL PROBABLY BE THE DENTAL EDUCATIONAL STANDARD FOR THE COMING DECADE?\*

CHARLES C. CHITTENDEN, D.D.S.

MADISON, WIS.

At the last meeting of this Section, at Atlantic City, in 1904, a symposium on dental educational standards was read, which was exhaustive and thorough in its character. In a paper presented at that symposium I had the honor to report chronologically the various facts as they had transpired, during the current year, concerning the attitude of the individual dental schools and the National Association of Dental Faculties toward the newly inaugurated four years' college course.

It had become apparent that a large number of the smaller and financially hampered schools were determined on returning to the three years' course.

This Section, at that time, in its discussions, expressed, in no uncertain terms, its entire disapproval of any such retrograde action.

Immediately following the meeting of this Section came the annual meeting of the National Association of Dental Faculties at Washington, D. C., where the whole subject was gone over and discussed very exhaustively, with the final result that, by a close vote of twenty-four to twenty-one colleges, the four years' course was upheld. This occurred in the early part of June. Almost at once following the adjournment the *ad interim* committee began to receive the resignations from membership in the National Association of Dental Faculties of a number of schools which were opposed to the decision at Washington to continue the four years' course. These resignations created such a panic in the ranks of the colleges that the *ad interim* committee was finally induced to call a special meeting of the National Association of Dental Faculties to be held at St. Louis, July 18, 1904, whose sole purpose should be a reconsideration of the final decision made at Washington, the month previous, to continue the four years' course.

At this special meeting there were, of the fifty-one colleges in membership, twenty-eight represented. By a vote of 26 to 2 (being by a majority of one of the

total membership) the four years' course was revoked and a three years' course of thirty weeks in each year was adopted in its place. The public announcement of this distinctly retrograde step (taken by a bare majority of one of the membership of the college association) came as a distinct shock to the rank and file of the profession. There was no semblance of an off-set in the way of increased standard requirements for admission to the college course to, in some measure, soften the baldness of the action. The outside world was simply made suddenly aware that the National Association of Dental Faculties, without waiting to graduate a single class or man under the vaunted higher educational system which that body had spent at least three years in elaborating, and had then declared to the world as absolutely necessary to properly fit the student for the dental degree, had, without explanation, struck its colors and surrendered. The one saving phase of the whole transaction was the fact that practically one-half of our colleges had been opposed to the change and had only acquiesced in it "to save the Faculties Association."

The examiners of the United States had been loyally standing behind and ready to protect the schools in their higher standards in every way. To them this bold retrogressive step called for immediate action. A blow had been struck, for commercial reasons only, at the established standards, and struck, too, by our National Association of Dental Faculties! All the schools of the better class had been obliged to yield to the inevitable and lower their standards—all save one, whose noble independence but makes the situation appear the more pathetic.

The annual meeting of the National Association of Dental Examiners was held late in August, 1904, at St. Louis. It was apparent, from the first news of the "retrogression," that something must be done to retrieve the situation before the world, and the examiners rose at that meeting to the occasion. The following report from the committee on colleges, preceded by a careful résumé of the entire situation, was unanimously adopted:

Your committee would therefore recommend that this association establish at once, to go into operation not later than the opening of the school year of 1905-6, the educational requirements, for admission to the dental college course, of graduation from an accredited high school or its full equivalent, all examinations of credentials and equivalents to be placed in the hands of an acceptable appointee of the state superintendent of public instruction where not otherwise provided for by law.

In view of the present disturbed and unsettled conditions existing in dental educational circles, and with a belief in avoiding all unnecessary disturbances of standards at this time, your committee would further recommend that no change be made at this time in the present requirements of this association of not less than 28 calendar months of college attendance for graduation.

By what had occurred the trust of the examiners in the ability of the college association to maintain good faith under certain exigencies was so badly shaken that all standing resolutions which in any way interfered were rescinded, and the committee on colleges was instructed to prepare a new list of recommended colleges, based on the acceptance by the individual schools of the standards declared in the above report. The work was to be done independently of the National Association of Dental Faculties.

After having spent many months in correspondence and careful conferences with many of our ablest teachers and scientists, the committee on colleges issued the fol-

\* Read in the Section on Stomatology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



lowing letter to the deans of this country, Feb. 14, 1905:

In consideration of the conflicting views as to dental educational standards which have existed for some time, the National Association of Dental Examiners at its annual meeting held at St. Louis, August, 1904, deemed it expedient, and necessary for the upholding of such schools as sought to maintain the standards already published to the world as the minimum that should obtain, to declare what educational standards should be required by the state boards of examiners as a criterion of reputability of the schools seeking recognition of their output.

This *ad interim* committee, which is also the committee on colleges, was instructed to inform all schools of the action taken, and directed to prepare a recommended list of colleges on the basis of the standards established at that meeting.

Feeling fully the gravity of the duty imposed, this committee has expended much effort in striving to arrive at a basis of fairness to all interests concerned, in carrying out its general instructions. The chief requirement established at St. Louis was that of "graduation from an accredited high school or its full equivalent" for admission to the classes of 1905-6.

In several schools and university departments this requirement is already in actual operation, and our committee finds a considerable number of other schools desiring to maintain it. All these, of course, will be placed on the recommended list. There are, however, other schools whose deans assert that to enforce at once this advance requirement would work a serious financial injury to their institutions.

The question of what would constitute a proper length of course for graduation from a dental college has always been left by the examiners to the colleges themselves, except that, after a school has announced to the public a certain course as necessary to properly fit a student for graduation, if it, for private or financial reasons, deliberately lowers its requirements in any particular, the question of good faith and reputability of that school becomes at once a matter for adjudication by every board in the country.

We, therefore, acting on authority of, and, *ad interim*, representing the National Association of Dental Examiners, which is the advisory body of the various state boards in their official acts, respectfully request that you authorize the committee on colleges to place your school on the recommended list of colleges by the acceptance of the following educational requirements for students, viz.:

For matriculation or registration, "graduation from an accredited high school or its full equivalent, all examination of credentials and equivalents to be placed in the hands of an acceptable appointee of the state superintendent of public instruction where not otherwise provided for by law," said requirements to be inaugurated not later than the beginning of the school year of 1906-7; and a college course for graduation optional with you of either four years or seven months each or three years of nine months each, this course requirement to be inaugurated the present year, 1905.

It is to be expected that schools maintaining these standards will be protected in so doing by the several boards composing the National Association of Dental Examiners.

It is the intention of this committee to prepare and to publish the recommended list of colleges not later than April 1 next, in order to give all schools the earliest opportunity to announce these standards to the public. Therefore information as to your decision is desired as early as possible.

Very respectfully yours,

COMMITTEE ON COLLEGES.

The responses have been quite general and, on the whole, unexpectedly satisfactory. It developed that a large number of schools were only too desirous for the establishment of an educational requirement at once reasonable and at the same time so sufficiently advanced as to not only retrieve the unfortunate back step of 1904, but also to place their schools on a permanent working basis so advanced as not to be liable to material change for several years to come. As one dean expressed it,

"This higher standard places us in a position to go ahead with our business, and we will not have to change again unless the Faculties' Association goes one better. It has been this uncertainty as to what was coming or what we were going to do next that had troubled me most. Now I feel as though we had something definite before us."

And thus it has happened that, up to this date, the acceptances have far outnumbered the refusals and the new college list is still growing.

The *rationale* of the matter being that while the National Association of Dental Faculties may and has set minimum bounds of requirement for its members, it can not and never will undertake to prohibit any or all of its membership from placing their individual requirements as much higher as they may see fit. The only chance taken by the individual school in so doing is as to the ability of its product to compete successfully in the market with that of the schools retaining the lower standards.

The question, therefore, resolves itself to this: Will the examiners, with the power of law behind them, keep faith and redeem the pledges made by their authority and in their name by their chosen representatives, i. e., stand by and judicially maintain the advanced educational requirements established by the National Association of Dental Examiners at St. Louis in 1904?

The faith manifested by more than a score of our foremost schools and universities in the integrity and honor of the examiners in this respect would seem to be a harbinger of a new order of things which will be, at least, paramount to commercial success in the conducting of educational institutions.

If the hopes herein foreshadowed shall become realities, a new impetus will be given to dental education, a better class of minds will be attracted to our schools, and for many years to come there will be no further disturbance in preliminary educational requirements for entering our dental colleges.

#### DISCUSSION.

DR. F. L. PLATT, San Francisco, said that a degree from a university is certainly commendable and necessary, but he thinks that it is hardly all that is required. A large part of dentistry is mechanical and must necessarily continue to be so. He believes that in addition to a university degree, if a young man is going to study dentistry, he should also attend a school of manual training. Dr. Platt has noticed that the students who have had some manual training do superior work. There must be a combination of these two kinds of training before one can become a good dentist. After a man has gained a knowledge of chemistry, physics, bacteriology and therapeutics, his training should be largely clinical. The greater part of dentistry can be taught by clinics, and Dr. Platt believes that each member of a class should be required to demonstrate his ability in the presence of others, and should not wait to learn to do this after he has acquired a degree. Experience in teaching operative technic has convinced Dr. Platt that so far as operative work is concerned, clinical instruction is far ahead of the lecture. He does not believe that dental colleges should be private corporations. Schools of law, medicine, theology and dentistry should be integral parts of state universities, with funds provided by the state and faculties paid by the state. At the end of the first six months, if a student does not display aptitude for the work, he should be advised to take up something else. Dr. Platt agreed with Dr. Carlton that a high school education is not sufficient. Dr. Platt attended a pedagogic meeting a year ago, and heard many people speak who were in favor of a four years' course in dentistry, but did not hear a single sound argument in its favor. He thinks that the course should be at least nine months a year and four years if necessary, but



to make the course four years at the expense of cutting down the length of each year, is not advancing. Students who have five months' vacation will not graduate from college as well equipped as students who have only three months' vacation. Some argue that the students get so tired they need five months' vacation. Others argue that students ought to have five months to work to earn money to finish their course. Neither of these arguments is worth considering. If the course is to be lengthened, let it be made four years of nine months each. A plan could be adopted requiring a degree in arts and letters for admission, as well as a manual school training, and then three years of good, earnest work would turn out good dentists.

DR. M. L. RHEIN, New York, said that possibly the colleges that have a six months' course are in the South, and they would have a six months' course whether it was three years or six. It has always seemed difficult to get southern colleges to give any lengthy term. The tendency in the northeast has been to increase the teaching term whatever the number of years. Dr. Rhein thinks the basis for dental education should be absolutely as high as that of medical education, and until that standard is reached dentists are below their true standard, and that is the only thing that keeps dentistry from being recognized as it should. It is the one thing that keeps students of the proper caliber from taking up this specialty. They do not care to place themselves on a lower plane than any of the other branches of medicine. This section should strive to make the requirements of dental education as high as that required for medicine, and to keep them up to that standard. Dr. Rhein thinks it impossible for a man to practice this branch of medicine without being thoroughly grounded in general medicine. The groundwork of medicine is recognized as being not only of value but of necessity, and while dentistry is a technical work, and while a technical school is of the utmost importance, without the scientific knowledge of medicine the dentist is at a loss to properly apply his technical knowledge.

DR. A. H. LEVINGS, Milwaukee, said that there are many subjects in the medical curriculum which would be of no use to the dentist, though a dentist must have some knowledge of the fundamental branches, such as chemistry, pathology, bacteriology, histology and therapeutics. He must have some knowledge of surgery and perhaps a smattering of medicine, but Dr. Levings thinks that the study of neurology, gynecology, obstetrics, dermatology, otology and allied subjects would be of no benefit to the dentist commensurate with the time spent in study. If the coming dentist were required to take a full course in medicine, he would have to spend an extra year in mechanical work, because the medical student's time is fully occupied. He can not complete the course of to-day in less than four years of eight or nine months each. Dr. Levings said that he has heard many say that the requirements should be put so high that but few dental students could meet them. The only consideration should be what is best for these prospective dental students. Dr. Levings appreciates as much as anyone that the more culture, refinement, education and mental training an individual has, the higher he can rise in his profession, and the more easily he can maintain himself, but it is not within the possibility of every prospective dental student or every prospective medical student to secure the standard. Such a course as is given now in dental colleges will train any man who has a high school education so that he can master all the problems pertaining to either dentistry or medicine. Those who have the time and money may take a medical and a dental degree, and before this an A.B. degree, and polish themselves as much as possible.

DR. M. I. SCHAMBERG, Philadelphia, said that it may take some time before dentists will reach a higher standard than that existing at the present time. To his way of thinking, there are two things of prominent importance in taking up this subject: one is the raising of the standard of the profession, and the second, which he considers even more important, is the placing of such men in the dental world as are able to render the best possible service to humanity. The financial status of the dental college should be absolutely ignored. It may be that the work of the stomatologist and the dentist

will ultimately become separated before arriving at the desired goal. If that be the case, it will probably be best for humanity at large. Dr. Schamberg would prefer to see the various dental institutions under the control of state universities, so that the financial side of the question would not enter into it so much as the educational.

DR. G. V. I. BROWN, Milwaukee, said that in this question of dental education a distinct advance of some kind is wanted. The purpose of Dr. Chittenden's paper is to fulfill the crowning act of a long life that has been given freely to the up-raising of the standard, that before he dies something definite may be accomplished in the establishment of a higher standard of dental education. Dr. Brown said that he drew the resolution in the faculty association regarding the four-year term, and he has made more or less of a battle at different times for the four-year course. It is useless to discuss at this time the value of such a course because for the time at least it has been decided to be inadvisable. He believes that the additional year could be secured with less hardship to the schools and with more likelihood of its being practical than any other advance. He believes every argument that has been made about the mechanical side of dentistry, and that since there can not be a four-year course there ought to be higher entrance requirements, and that the course should be at least nine months, or as near that length as possible. Dr. Brown is connected with schools in the South and in the West. He sees both sides of the question, but at the present time no plan has been suggested which is practicable for meeting the situation. When some one presents a plan which will carry with it a distinct advance, so long as it is an advance which will enable the colleges of the South, West and elsewhere to continue and to prosper, that plan will meet with approval, and when that time comes he has no doubt the examiners' and faculty associations will again be on a harmonious basis. Dr. Brown believes in the value of having dental colleges under state control, but even under this condition it is not all smooth sailing by any means. At this time it seems nothing beneficial can be accomplished by discussion alone.

DR. H. P. CARLTON said that he has never yet written a paper of this character nor spoken his thoughts along this line, that the discussion did not at once turn to the question of courses and years. He wants to establish foundation courses and to leave the length of courses and curricula out of the question. He hopes to live to see it proved that the dentist of the future is going to be a medical man. The more a man gets in brain development the better dentist he will be. A man can not be too broad and too scientifically trained to be a dentist.

## RECENT PROGRESS IN MATTERS OF WATER SUPPLY AND SEWAGE DISPOSAL.\*

GEORGE W. FULLER, C.E.

NEW YORK CITY.

Of the various topics in this branch of sanitation there is none which has received so much discussion during the past year as that of the proposed use of copper sulphate. This chemical has been proposed for various purposes, the chief of which are as follows:

1. As an algicide; 2, as a germicide for infected water supplies used without subsequent filtration for drinking; 3, as a germicide for the effluent of coarse-grained sewage filters prior to entering drinking water streams; 4, as a germicide in conjunction with a coagulant in the filtration of highly polluted streams.

### COPPER SULPHATE AS A GERMICIDE.

Although copper sulphate as a germicide and disinfectant has been studied from time to time for many years, especially in Germany during and after the se-

\* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



vere outbreak of cholera in 1892, this question has recently pressed forward for attention, largely due to the very interesting bulletin prepared by Dr. Moore and Mr. Kellerman<sup>1</sup> and issued in May, 1904. A second bulletin by the same authors was issued in April, 1905, and it appears from it that more than fifty reservoirs and ponds have been treated during the past year with copper sulphate to remove various forms of algal life producing objectionable tastes and odors.

To repeat these various experiences is needless here, in view of their having been detailed elsewhere and summarized in the more important instances in the last bulletin referred to.

When attention was directed to this matter last year, as is usually the case under such circumstances, public opinion varied widely in regard to it. On the one hand, were those who approved and supported the proposition most cordially and were inclined to regard it as a cure-all, while, on the other hand, were those of a more dubious frame of mind who were uncertain as to whether with ordinary care the copper sulphate might not become so unequally distributed in the water as to become injurious to the people drinking the treated water, and who were somewhat skeptical as to the ability of this chemical to kill vegetable life, at least under some conditions.

As a result of various experiences, copper sulphate as an algicide now appears to be viewed somewhat more favorably than it was a year ago. When water infested with algæ is to be filtered carefully after treatment, the process appears safe, provided the copper sulphate is applied uniformly in small proportions and is precipitated by the water.

When copper sulphate is applied to waters used for drinking purposes without being filtered following the treatment, a number of eminent professional men have felt disposed to advise against its use until further information concerning it is available. This position seems to be a conservative and prudent one ordinarily to adopt at this time.

Doses of copper sulphate of one part in from 1,000,000 to 10,000,000 parts of water usually suffice to kill algæ. Sometimes the doses are much more dilute, and in a few instances the strength must be about one part per 100,000.

It is not clearly understood into what form the chemical is converted when applied to various waters. Also uncertain in the minds of some is whether or not the passing of an abnormally large proportion of the copper from the reservoir in a relatively small portion of water is due to disturbances of the precipitated copper.

In this review it is needless to discuss more or less conflicting evidence on a variety of topics allied to this subject. It is sufficient to point out that opinion is not harmonious to a satisfactory degree on the following points:

(a) Toxicity to man of copper sulphate and salts in quantities encountered under various conditions.

(b) Chemical reaction of copper sulphate with constituents of various waters.

(c) Immunity and stimulation of other vegetable growths.

(d) Effect of copper sulphate on various fish.

(e) Disposal of copper under varying conditions of application.

#### COPPER SULPHATE AS A GERMICIDE FOR UNFILTERED WATER SUPPLIES.

This use of copper has been widely studied in the laboratory and has been put into practice in a number of places where public water supplies are known to be of unsatisfactory quality and where high death rates from typhoid fever prevail. Some misunderstanding in regard to this subject has occurred, and the general public in a number of communities appears to have gathered the impression that copper sulphate applied with this end in view serves as a substitute for filtration. Evidently this is not the view of the government officials who have looked into this matter, as they claim that the process is applicable in places where filter plants have not yet been built, and where during the period of filter construction unfiltered water of a dangerous character is supplied to the consumers.

Another aspect of this same matter is, of course, the use of copper vessels, such as canteens, etc., for obtaining water free from objectionable germ pollution.

It is very clear that copper sulphate can not serve as an adequate substitute for properly constructed and properly operated filtration works. In the case of adequate filters giving poor efficiency due to improper supervision, it is debatable whether, other things remaining equal, copper sulphate would or could be used so as to insure better results. Where filter works do not now exist, the feasibility of this treatment may be considered. This also applies, perhaps, to the treatment of water in this way in small receptacles.

It seems to be the consensus of opinion of quite a number of prominent sanitarians that a final opinion on this proposition of using copper sulphate as a germicide for drinking waters without subsequent filtration ought to be deferred until available data are more complete and trustworthy than they are at the present time. When this condition of affairs is reached it is not probable, in my opinion, that there will be material differences of opinion among experienced sanitarians.

Laboratory data on typhoid germs artificially cultivated for comparatively long periods do not necessarily afford a reliable criterion as to the quantity of the copper sulphate required, nor the period of contact necessary in order to effect, or even to approach, sterilization under conditions of practice. Depleted vitality in this connection may quite likely be of as much importance here as it is in species determinations. Laboratory data, furthermore, are seriously involved by questions of osmosis and other features which, independent of the copper sulphate added, in laboratory experiments cause typhoid and other germs to die more quickly than can be relied on in practice.

Concentrations of from 1 in 100,000 to 1 in 50,000 seem necessary for sterilization of infected water. Experiences such as those recorded at Columbus, Ohio, by the city health officer and summarized in the last bulletin of the U. S. Department of Agriculture do not seem to cover sufficiently the various essential facts to entitle them to great weight. In fact, I am certain that there are many reasons for believing that in the experiences with the city water supply of Columbus too little is recorded of the actual condition as to infection of the treated water and also of the prevalence of typhoid fever after the treatment ceased to justify the conclusion that doses of copper sulphate of less than 1 per million actually destroyed typhoid fever germs in a few hours.

1. Bulletins Nos. 64 and 76 Bureau of Plant Industry of Department of Agriculture.



## COPPER SULPHATE AS A GERMICIDE FOR THE EFFLUENT OF COARSE-GRAINED SEWAGE FILTERS.

Since it is now a well-established fact that coarse-grained sewage filters, more frequently spoken of as contact beds and sprinkling filters, are capable of producing at fairly high rates of filtration effluents of a non-putrescible character, sanitarians have given more or less thought to the question of the hygienic significance of such effluents, since it is known that they do not remove disease germs with such thoroughness as intermittent sand filters. Further, as these sewage filters seem to be the only ones available in some sections of the country, where porous layers of sand or gravel are not to be found, the sterilization of these partially purified sewages is a matter which doubtless will receive attention in the future. At present little need be said other than that the process is a somewhat expensive one, according to investigations at the Sewage Testing Station at Columbus, Ohio, by Messrs. Johnson and Cope-land. They find that to kill typhoid germs in sewage effluents it is necessary to make an application of about 1 in 50,000, the cost of which at current prices is in the neighborhood of \$8 a million gallons.

The composition of the sewage with reference to alkalinity and organic matter, temperature and period of contact are more or less important matters which require further elucidation. The applied copper salts in these proportions produce a noticeable precipitate, the deposition of which requires consideration.

## COPPER SULPHATE AS A GERMICIDE IN CONNECTION WITH FILTRATION.

At Anderson, Ind., during the past winter, copper sulphate was applied to the water just prior to filtration and in conjunction with sulphate of iron and lime as coagulants. These experiments were made for a comparatively short period with a new filter plant, the construction of which was not at that time fully satisfactory in all particulars. The investigations were conducted by Professor Burrage on behalf of the city, and Mr. C. Arthur Brown, representing the contractors for the filter plant and also the American Steel and Wire Company, which places sulphate of iron on the market in large quantities. Several other bacteriologists and chemists were present, including representatives of the United States Department of Agriculture. The claims made of the beneficial result in killing bacteria by adding minute quantities of copper sulphate, such as 1 in one million parts of water or less, do not harmonize with a considerable amount of information obtained elsewhere. Especially inconclusive are tests for *B. coli communis* in 1 c.c. of water before and after filtration. Later tests have been made at a new filter plant at Marietta, Ohio, but the data are not yet available to the public. Still further tests are doubtless needed under a wide range of conditions before opinion on this phase of the subject may be safely reached.

## WATER PURIFICATION.

Recent progress in this field has been confined largely to the application of the principles hitherto developed carefully along a scientific scale. It is highly gratifying to note that works are now being built for a number of the larger cities in this country, including Providence, R. I.; New Haven, Conn.; Hoboken, N. J.; Harrisburg, Pa.; Philadelphia, Pa. (partially completed); Washington, D. C.; Pittsburg, Pa.; Columbus, Ohio; Louisville, Ky., and quite a number of other smaller cities. Active steps toward securing filtered water also seem about to be taken at Cincinnati, Ohio;

Toledo, Ohio; New Orleans; Troy, N. Y.; Wilmington, Del., and Minneapolis.

An interesting feature in connection with this subject is the number of reports made recently by prominent engineers in which filtration is advised of water supplies which a short time ago were regarded as of a quality not requiring filtration. The most prominent instance on record is that of the supply of New York City, where, as is well known, there has been an unusually low typhoid fever death rate for an American city for many years—since elaborate undertakings were made for the elimination of sources of pollution on the Croton watershed.

As to the extent to which filtered water from surface sources is now used in this country, reference is made to the important paper presented by Mr. Allen Hazen at the International Engineering Congress at St. Louis in the autumn of 1904. In the statistics therein presented, it is pointed out that in 1904, of an estimated population in the United States of 32,700,000 in towns and cities of more than 2,500 inhabitants, there are about 3,160,000, or 9.7 per cent., which are supplied with filtered water. Of this number, about 2,600,000 received water from mechanical filters, and the remainder, about 560,000, are supplied with water from sand filters. During the past four years, according to these statistics, there has been an increase of 70 per cent. in population supplied with filtered water, and this increase, from what has already been said with reference to large purification works now building or soon to be completed, will, no doubt, advance still more rapidly in the near future.

As still further indicating the extent of the present use of water filtration works, it was pointed out in the paper mentioned that, of all cities in the United States having a population of more than 25,000, there were 7.9 per cent. provided in 1904 with filtered water; 11.4 per cent. had filters under construction; 21.4 per cent. had filters either authorized or recommended officially; 31.1 per cent. had water of a sanitary character requiring either filtration or a new supply; 22.2 per cent. had water of reasonably satisfactory quality and probably not needing filtration for a long time, and 6 per cent. had water of good quality not requiring filtration.

There is no feature connected with water filtration of more interest to the sanitarian than the effect which these improvements in public water works produce on the health of the community adopting them. It is gratifying to note that a considerable proportion of the recently constructed filter plants are now operated in quite a satisfactory manner, while the larger ones are provided with superintendents possessing all the needed skill in chemical and bacteriologic technic. These more recently constructed filters, operated under intelligent supervision, have produced very marked reductions in the typhoid fever death rates in the communities in question, and, as pointed out in the paper by Mr. Hazen, they have affected also a material reduction in the general death rate. This latter feature is, of course, associated with quite a number of other factors, as is also true of reductions in typhoid fever death rates; but, generally speaking, it may be said that filtered surface waters in several communities have caused death rates to appear as low as in other communities similarly situated in which ground water of unsuspected character is supplied. Unquestionably, further investigation and elucidation are needed in order to establish clearly the significance of matters of water supply and sewage disposal with reference to vital statistics. In brief, how-



ever, it appears that pure water is a sanitary feature of predominant importance, and there is no doubt about the substitution of a pure supply for an impure one having in repeated instances reduced the death rate to an extent practically unequaled by any other single sanitary improvement.

Nearly all recent improvements, both as regards sand filters and mechanical filters, refer to those features of design which relate, first, to means of securing a more reliable and automatic control of the process, and, secondly, to means of reducing the cost of operation, largely by the elimination of hand labor, due to improved mechanical appliances. In mechanical filters, this has come about largely through automatic regulating devices and the larger size of individual units, and in sand filters in devices for reducing the labor in cleaning the filters. In the latter, matters have advanced even so far as to the question of considering mechanical scrapers for cleaning the sand surfaces (Pittsburg).

Recently the city of Columbus, Ohio, situated in a section where the water supply, both from surface and ground sources, is very hard, put under contract a municipal purification plant of 30,000,000 gallons' daily capacity, which will not only filter the supply, but will also enable it to be softened. While there are many industrial softening plants in this country, and small town plants at Winnipeg and Oberlin, this is the first instance on record in this country where a large city has undertaken thoroughly to soften the water supply.

Much attention in the public press has been given to the recent method of treating the St. Louis water supply. This water, taken from the Mississippi river, has for many years been partially clarified by sedimentation in large open reservoirs. Early in 1904, as a preparatory step for the St. Louis Exposition, this water was further clarified in the same reservoirs with the aid of sulphate of iron and of lime as coagulants. In other words, the water was treated in a manner very similar to the treatment of sewage in the chemical precipitation works at Worcester and Providence and in many places in Europe. The result has been a far better clarified water than was the case previously. In fact, ordinarily the supply has been of satisfactory appearance.

Several statements by St. Louis authorities have appeared which indicate that this method is a complete and effective means of securing a water of satisfactory appearance and hygienic quality, and that filters are a superfluous institution. The facts do not warrant this position, as unquestionably filtration would improve the water supply of that city.

Sulphate of iron and lime in connection with filtration is a serviceable substitute for sulphate of alumina for some waters, but not for all. In some instances, the composition of the water makes it very difficult to guard against objectionable quantities of lime or of iron appearing in the filtrate.

#### PROGRESS IN WATER SUPPLY CONTROL.

There have been two steps taken in this country during the past year with reference to the control of water supplies which are of much interest to the sanitarian. The most notable of these is the establishment of a state department of health in Pennsylvania, with ample laws to bring to a higher grade of efficiency the sewerage and water systems in the various cities in that state, which has suffered quite severely for years from typhoid fever. It is gratifying, also, to note that the legislature in Pennsylvania has made a reasonable appropriation for carrying out these new laws in an efficient way

so far as making it possible to provide a skilled staff of technical advisers and assistants is concerned.

The legislature of the state of New York also recently created a state water commission, with an appropriation of about \$40,000. The object of this appears to be to investigate available supplies within the state with reference to seeing that there is an equitable arrangement made for the various large communities, including New York City, taking new supplies from sources well considered in the interests of all concerned. Projects for new supplies, it is understood, are required to be submitted to this state commission.

#### SEWAGE DISPOSAL.

I reviewed this branch of sanitation in its various aspects in a paper prepared on this subject for the International Engineering Congress held in St. Louis last October. In this paper it was pointed out that in towns of the United States of 4,000 population or over in 1900, of which there were 1,049, with a total population of about 28,000,000, there were about 20,400,000 people estimated to be discharging raw sewage into inland streams or lakes; about 6,500,000 discharged their sewage into the sea or into the harbors or tidal estuaries along the sea coast; while the remainder, about 1,100,000, were connected to sewage purification works.

As compared with most European countries, the population in this country is so scattered, the rivers are so large and the rainfall, for the most part, so much greater and more evenly distributed, that this relatively small proportion of sewage purification works indicates by no means that this country is so backward as some might seem inclined to think with reference to adopting purification works where they are clearly needed. There are, of course, quite a number of instances where sewage purification works are badly needed in this country; but, generally speaking, there are more efforts now being made toward the purification of the sewage of larger towns than has been the case hitherto. This is partly because of the status of local lawsuits and injunctions, and partly owing to the more adequate information now available indicating the best and cheapest way of purifying sewage under various local conditions.

Information on the subject of sewage purification still continues to be forthcoming each year from the important investigations which for 18 years have been systematically and uninterruptedly conducted by the Massachusetts State Board of Health at the Lawrence Experiment Station. In the annual reports of that board for the years 1902 and 1903 are especially valuable reports indicating the experiences not only with the various sewage purification works in that state, but also the conditions resulting from discharging the sewage of various cities under different degrees of dilution into neighboring water courses.

Generally speaking, it is found that nuisances are avoided when a stream provides a dilution during dry weather of about 3.5 cubic feet a second for the sewage of each 1,000 population connected with the sewers. Where manufacturing wastes are unusually extensive, it is sometimes necessary on small streams to provide a greater dilution than this to guard against nuisances. On large streams it is possible that this dilution may be slightly greater than needed in some cases.

As to that aspect of sewage disposal by dilution, which involves the question of infection of water supplies taken from streams a considerable distance below the entrance of sewage, it is to be stated that, while information has increased considerably, especially in con-



nection with the testimony recently taken with regard to the litigation over the Chicago drainage canal, views are not as yet clearly crystallized. It is largely a question of time interval elapsing under various conditions of stream flow between the point of discharge of sewage and the withdrawal of the water for drinking purposes at points below.

Elaborate investigations made by Drs. Jordan, Russell and Zeit indicate that the life of typhoid fever germs may be somewhat shorter than has hitherto been considered to be the case. This, however, is still a debatable proposition, notwithstanding the general acceptance of the idea that various species of bacteria exert a more or less antagonistic influence in water on typhoid germs. Parchment sacks have in some ways improved the technic of these studies, but at Columbus, Ohio, Messrs. Johnson and Copeland have found apparently that these sacks when free from punctures do not prevent motile bacteria from passing through them.

Information from all sources, when plotted on a diagram, indicates that about 90 per cent. of typhoid fever germs in waters of various classes will live in decreasing numbers for periods ranging from 3 to 13 days, although it is quite uncertain how long the last 1 per cent. survives. Some of these bacteria undoubtedly live for a considerably longer period than one month.

There are about 90 sewage purification works of artificial construction now in existence in this country, and serving, as above indicated, a little over 1,000,000 population. Recently, on an average about half a dozen plants in large towns or cities have been constructed each year.

Based on practical experience and observation in the sewage purification field, and on observations made at considerable length at the Lawrence Experiment Station and elsewhere, it may be said that when porous sandy soil is available at small cost, this still appears to be the cheapest as well as the best method of purifying sewage. There are about 40 such plants now in existence in this country, serving a population in the aggregate of about 250,000.

The principal objection to sand filters is their clogging during cold weather, resulting then either in a material reduction in rate of filtration or in by-passing the filters entirely. It is as yet uncertain how far it is advisable to give sewage a preliminary purification before application to sand filters.

In the South and West, where porous sandy soil is not available, or in the East where it is expensive at suitable sites, it becomes necessary to consider other methods of filtration. The two principal types of coarse-grained filters are called contact beds and sprinkling filters. In each instance, they are composed ordinarily of fairly coarse material, ranging in size from about one-half inch to two inches. A contact bed is operated by filling the pores of the filter, letting the filter stand for a short period and then slowly draining out the sewage. Ordinarily the filters can be filled in this way three times daily, but from time to time they require resting. This method, particularly when double filtration is practiced, permits an effluent to be obtained which is non-putrescible and quite satisfactory for discharging into a stream. With sprinkling filters the unfiltered sewage is applied to porous material in the form of a spray, either from revolving sprinklers or nozzles set in satisfactory piping. If need be, sprinkling filters in cold weather can be operated as contact beds. The fact that spraying devices (sprinkling nozzles) did not freeze up at Columbus during the past winter is perhaps

the most surprising feature to those who then visited the Columbus sewage testing station. This being so, it seems safe to say that with sprinkling filters rates of filtration several times as great as with contact beds may be used; that is, rates in the neighborhood of 2,000,000 gallons an acre daily. In some instances, this advantage of sprinkling filters can not be readily utilized, owing to inability to secure sufficient head for their operation without resorting to pumping.

The effluent of these coarse-grained filters, while non-putrescible, is not so free from bacteria as effluents of sand filters, and they are quite turbid. Much of this turbidity, however, can be removed by sedimentation for a few hours.

Clogging is a more or less serious factor in all filter beds for sewage treatment; in the sand filter, clogging material accumulates in small quantities year after year, and it appears that ultimately there is needed to be scraped a portion of the upper surface of the sand layer. Present indications are that coarse-grained filters, receiving a partially clarified sewage, will require the entire filtering material to be cleaned once say in from three to five years, or oftener, if excessively high rates of filtration are employed.

Generally speaking, the removal of suspended matter from the sewage before filtration is an economy, enabling higher rates of filtration to be used.

Chemical precipitation is not now adopted for new projects, owing to the expense both of chemicals and sludge disposal.

Septic treatment ordinarily is helpful, as it causes from 50 to 70 per cent. of the sludge to be deposited by subsidence. Of this deposited sludge about one-half can usually be disposed of by bacterial action. The tanks ought to hold at least from eight to ten hours' average flow. Covers generally do not assist septic action in proportion to their cost. With an adequate design and skillful regulation, objectionable odors need not be feared with ordinary sewages.

Where septic treatment is applied to domestic sewages, available evidence indicates that several years may elapse between periods of cleaning out the sludge. Where street washings and trade wastes enter the sewers, septic tanks may require cleaning once a year or oftener.

#### SEWAGE POLLUTION OF OYSTERS AND OTHER SHELLFISH.

Evidence from various sources indicates that sewage pollution of shellfish needs correction in many places, both for the welfare of the public health and for the interests of the oyster industry, which suffers from "oyster scares." Means for suitable regulation and control are a live topic for discussion among sanitarians.

When sewage comes from a small community and affects large shellfish interests, it seems reasonable to provide for adequate purification of the sewage. When the shellfish interests are small and the expense of sewage purification would be relatively great, it seems logical to remove the shellfish. Intermediate conditions require different treatment, depending on various local conditions, which is also true of a large number of sewage disposal problems.

#### DISCUSSION.

DR. N. K. FOSTER, Sacramento, Cal., said that the question of water supplies and sewage purification to a person who is directly interested in public health is paramount to any other question. More preventable diseases can be traced to the water supply, and indirectly to the want of sewage purification, than to any other causes, barring, possibly, tuberculosis. The destruction of sewage in our state, California, comes more under



the health authorities than the water supply. Unfortunately, the health authorities have nothing to do with that except to keep streams from being polluted. Any municipality can take their water as they see fit, or allow any private corporation to do it without any permission from the health authorities. That is an unfortunate condition, which Dr. Foster hopes sometime to see remedied. The same condition exists in a good many of the Western states. In the protection of streams the health authorities have considerable power, and in this work, bearing directly on the health as it does, more can be done than in any other direction. The protection of streams from sewage appeals directly to physicians and health officers, because they know that the typhoid rate is something alarming all through this country. If not a quarter of the typhoid cases are reported, as has been stated, and nearly all will admit that a large proportion are not, what a terrible condition there is, with the large number of deaths that result and the amount of suffering that pertains to that one disease, a disease which is absolutely caused by the carelessness and want of information of the people. In a recent inspection of one of the principal rivers in California, Dr. Foster found everything going into the stream, and when he brought to the attention of the authorities the fact that they were throwing their sewage into the stream from which others were drinking below, some of them felt that he was interfering with their personal rights. One man remarked that the streams were made for sewers, although that town was taking water out of the stream farther up and throwing their sewage back into the stream, where the neighboring towns below took it out. It is a question that ought to have prompt attention, and the health authorities should be given the power to control absolutely the disposal of sewage and also the water supply. The use of copper sulphate is another question that is of great interest. Dr. Foster is a little fearful of it unless it is under good control. A company in California is working on that system, and claims to be able to purify any reservoir. In one reservoir it is reported that the water is coming through colored. The copper may kill some germs and the algæ, but algæ are not the worst thing in water. If water is going to be poisoned with sulphate of copper, Dr. Foster asked if it is an improvement on the germs. The bacterial count in water treated with copper is certainly very low, probably a good deal lower than in most cities in the United States, but the gas-producing germs are still there, showing contamination. Whether or not the typhoid germs are there can not be determined, but Dr. Foster believes that they are. He thinks that physicians should go a little slow before giving full sanction to the copper sulphate method of treating water, and have it studied a little more. If irresponsible companies are promising to do these things and pointing to a scientific body of men as authority for it, it will lead to untold trouble.

DR. M. L. PRICE, Baltimore, said that the effects of copper in small repeated doses have never been properly investigated. It may be of interest to those not acquainted with the fact that the oxygen-bearing pigment of the lobster's blood, corresponding to the hemoglobin of most animals and the chlorophyll of plants, is a copper instead of an iron salt. The modern sand filter beds for municipal water supply, and the contact and trickling beds for the disposal of sewage, mentioned by Mr. Fuller, are illustrated in the hygienic exhibit of the Massachusetts State Board of Health. All these methods of water supply and sewage disposal have been subjected to tests at the Lawrence Experimental Station, of which there is a model in the exhibit of the Section. Dr. Price said that he would be glad to demonstrate this exhibit to any one interested in water supply or sewage disposal.

DR. C. V. GENOWAY, Spokane, said that in Spokane there is some trouble about sewage, and he wished to ask for information. The authorities in Spokane are about to spend about half a million dollars on water-works, and he has been asking them to pay some attention to the question of filtration. It has been talked of, but nothing has been done so far. They seem to think that the water is good enough without filtration, but the Spokane Valley above Spokane is becoming very thickly settled, and in the course of five years the river banks

from Spokane to Coeur D'Alene City, about 30 miles, will be a continual town, and unless something is done now, some day there will be a frightful loss of life in Spokane. The new mayor, elected two weeks ago, has partly promised to listen on the subject of filtration. Dr. Genoway said that he knows little about filtration, but he wants to learn something about it, and to get what available literature he can on that line to show to the Spokane officials. When he went in office as health officer there were a large number of wells throughout the city. The water was cooler than the river water, that being the excuse people had for using the well. He looked up the records and found that typhoid fever had been prevalent, and on tracing it back he has found that at least 65 per cent. of the cases were caused by drinking well water; therefore, he is closing up the wells as rapidly as he can and compelling people to use river water. The sewage system in Spokane is not very satisfactory; that is, sewers empty into the river above the city and all through the city. Spokane started as a little town, and wherever the people found a convenient place to run the sewer water into the river they did so, and that Dr. Genoway is trying to have changed.

DR. DENSLOW LEWIS, Chicago, said in regard to conditions in Chicago that extensive bacteriologic determinations have been made by certain health officials of Illinois, with the result that the water supply of St. Louis is found to be improved. Now, there is an explanation, which is probably true. The increased volume of water going into the Mississippi since the construction of the drainage canal has diluted the sewage, favored oxidation, and, by increasing the flow of the river, has tended to lessen or to destroy bacteria. At all events, the statement has been made, and Dr. Lewis believes that it is true, that the water in the Mississippi at St. Louis is really better now than it was before the construction of the drainage canal in Chicago. The matter of first importance is to have a pure and adequate supply. All cities can not, like Portland, have snow-clad mountains in their vicinity, nor can they all have spring water, but the endeavor should be made to have the supply pure and to have it adequate. Failing in that, the next thing is to see that the water is purified one way or another, as is now done in many cities. Dr. Lewis was surprised at the statement that in Columbus, Ohio, the first attempt at public filtration had been made, as he had always understood that Philadelphia had a public filtration plant which had proved very successful. In Chicago, the work is not yet done. The drainage canal is completed, but still many sewers empty into the lake. There has been under construction for years a system of intersecting sewers, the idea being to have all the sewage from the city flow into the intersecting sewers, to be finally emptied into the drainage canal. As a matter of fact, some localities drain into the lake. At one fashionable hotel on the lake, where the bathing facilities are extensively advertised, a hotel that has become a resort of southerners during the summer, the sewage enters one street and the beach is just around the corner. In that hotel there are usually victims of typhoid; Dr. Lewis was one of them last January. Although the water is not supposed to be used for drinking purposes, it is used in the kitchen and for bathing, and it is easily understood how infection may occur. In Chicago, and it is an important factor to be recommended in every community, publicity is advocated regarding the actual condition of the water. When the intake is contaminated, as occurs at different times, the fact is announced in the newspapers, and the people are advised to boil the water. Of course, boiling the water is not all sufficient, but publicity is a step in the right direction, for it notifies the public regarding the actual condition of the water supply.

DR. E. A. PIERCE, Salem, Ore., said that two years ago in one of the meetings of the State Board of Health it was decided to look over the water supply of the different institutions of the state. Dr. Pierce's residence being in the Willamette Valley, he made an effort to inspect the water supply on that region. In Salem there was a mild epidemic of typhoid which started in Stayton, about 12 miles north of Salem. The sewage from one or two infected families was drained into a small creek which runs through Salem. The contaminated



water infected several people living at Turner, a few miles below. Later the reform school was in turn infected, though the pupils were forbidden to use the water for drinking; some of them did so and a number of cases appeared. In the penitentiary, where the water was used for bathing and for toilet purposes, there were a number of cases, and in the insane asylum, which also used the water, a number of patients were infected. A large number of samples of water were collected, and it was found that they were infected, and also that a large number of surface wells near the creek were contaminated. Despite all efforts along the creek and in the suburbs, the health officials were seriously handicapped on account of lack of an adequate sewerage system. After a time Mill Creek purified itself, and, after a few deaths, and a large number of mild cases, the condition of affairs was greatly improved. The city supply of water was overhauled. This is taken from the Willamette River, after passing through a large gravel screen, and, at the present time, it is apparently free from contamination. Of course, the use of Mill Creek water in the institutions has been abandoned, and the city is now as healthy as any. In the treatment of sewage in the suburban districts and in the outlying portion of the city, where there were no sewers, the septic tank system was adopted, as far as possible, and that method has been a great help. At the asylum farm, 6 miles northeast of the city, there is one septic tank which is accommodating the night soil of sixty patients. It has been inspected regularly since it was built two years ago, and is working splendidly. A large amount of waste is passing through it, and at the last examination the sludge at the bottom of the tank was scarcely perceptible, although it has never been removed. The scum on top of the fluid is six or eight inches deep, and the effluent is clear and not objectionable, the effluent passing into an open ditch. Dr. Pierce has one of these tanks at his home and it is working well. There is a large tank at the Chemawa Indian Training School, which is giving excellent satisfaction. Formerly the sewage of the institution of about 600 pupils and teachers was conveyed through open ditches a long way off across the field toward the river, and there was much annoyance and complaint regarding the bad odor arising therefrom. With the adoption of the septic tank, the condition has been entirely relieved, the effluent passing along the same ditch. The health officials instituted an investigation of the different institutions and towns along the Willamette River and streams tributary. These are more or less contaminated with sewage all the time. Oregon City established a filter, the water being taken from the river. The bacteriologic count of the water after having been treated by the filter, as compared with Bull Run water at Portland, is almost equal to it. It is hoped later to have the same plan adopted in other cities in the state. Mill Creek at Salem has apparently purified itself, but it is only a question of time, of course, when it may become contaminated again. Dr. Pierce declared that inland water ways should be protected against contamination by sewage, and the streams should be allowed to return to their virgin purity. He believes that the septic tank should be adopted for the treatment of sewage wherever the sewer can not be used, and in all suburban localities. Even in the large towns and cities he thinks that the same plan can be employed. The sewage farming plan as practiced largely in Europe has given excellent results. In reply to a question he described the tank at the asylum farm. It is ten feet long, five feet wide and four feet deep (the depth below the level of the fluid). The sewage enters at a slight grade from the toilet, and there is a pipe with an elbow that carries it about eighteen inches below the surface of the tank. This prevents any disturbance of the surface. The outlet is at the other end of the tank, on an exact level with the inlet, and is submerged to the same depth. The tank is built of cement, and is covered with a cement or iron cover. Most of the tanks have been sealed as described, but the one at Chemawa is not sealed, but has a shingle roof over the entire tank and a large air space above it. This tank treats the sewage of 600 people, nature has sealed the surface with a scum which is tough and leathery, and so the air is entirely excluded. Dr. Pierce does not believe that it is necessary to seal the tank, as nature

makes that provision. The anaërobic bacteria thrive in the absence of light and air, hence the first thing nature does is to seal the tank. All, then, that is necessary is to protect it with a cover to prevent debris from falling into it. The tank at Chemawa is fifty feet long, fourteen and one-half feet wide, and four and one-half feet deep. There are two baffle boards, one about ten feet from either end and a wire in the center. A mistake was made in its construction, as it was not originally made for a septic tank, but was intended simply for a storage tank. The weir was too high and enough space was not left for the free passage of sewage over the weir. That, however, has been remedied. Mr. A. G. Strang, engineer at the State Insane Asylum, who has had experience in this line, says that he does not favor the weir or baffle boards. Dr. Pierce's object in advising the weir and baffle boards, particularly in large tanks, is to break the currents, and in all the tanks that he has been consulted about, he has had them put in and they have given perfect satisfaction. A tank to work properly should have sufficient water supply to fill and empty once in twenty-four hours, and should have a capacity of about thirty gallons to each person using it. There should not be any odor from the tank, for the reason that nature seals the tank, and the effluent should not be offensive. Dr. Pierce believes that the action of the aërobic bacteria on the effluent as it emerges into the air and sunlight completes the work that was begun in the closed chamber by the anaërobic bacteria. A sand or gravel filter could be attached with admirable results.

DR. H. G. BEYER, Washington, D. C., said that he has always been surprised at the slowness with which the septic tank system has grown into prominence. Prevention of disease begins with the soil. Filtering and boiling the water after first allowing it to become contaminated through contact with polluted soil seems to him like putting the cart before the horse. If the soil were not polluted this filtration might be unnecessary. Human excretions are the most serious causes of soil pollution. If the soil were kept from this pollution by a good system of septic tanks, or by a proper sewage system a great deal of disinfection, Dr. Beyer thinks, would be unnecessary. He does not think that it would be extravagant for every block in town to have a space set apart for a septic tank. In this way every house in a city might be sure of sending its sewage into this filter; it would then not make any difference whether or not a sewer leaked or whether the sewage flows through a regular sewer or is taken care of by the ground, the soil itself remains unpolluted. It seems to Dr. Beyer that this is a very much more effectual method of sewage disposal than any other he can think of, and it is for reasons such as these that the slowness of the growth of the septic tank idea in the prevention of the spread of infectious diseases, is to be deplored. Of course, at first health officials would have to proceed very carefully in doing away with the filtration or purification of water, and that the latter procedure should be incidental to the imperfect disposal of sewage. The west coast is fortunate in its water supply, but unfortunate in its sewage disposal. The soil in large sections is a loose surface soil with a subsoil of hard pan, which is really lava and is absolutely impermeable to water. Any drainage will follow the subsoil for miles, so that water may be taken at one point containing infection coming from a great distance.

### MATERNAL SYPHILIS.\*

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Hereditary syphilis may be a transmission of disease from the father alone or from the mother alone or from both together. Maternal syphilis may be defined as only the disease of the pregnant woman, but to-day we may also consider, briefly, its influence on her offspring as well.

Syphilis in the mother, without paternal disease, is

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rare; the reverse is common. The large majority of married women afflicted become so from their husbands. Bulkley records 85 cases out of 120, or almost 75 per cent. Obstetricians and gynecologists are daily called to examine pregnant women and often are the first to have a chance to observe syphilitic disease in the innocent young wife pregnant for the first time, and yet but brief mention is made of it in text-books and treatises on obstetrics and gynecology. The former are more than half devoted to operative obstetrics, and the latter almost wholly to operative gynecology. For almost half a century Ricord, Colles, Diday, Fournier, Hutchinson, Bulkley and others have presented evidence enough to convince the most skeptical that syphilis is a common disease and a serious menace to the happiness of marriage and of motherhood; yet the text-books, one copied largely from the last preceding, hardly even mention its existence.

The diagnosis of syphilis in married women, especially those in the higher classes of society, is surrounded by difficulties. As a rule, the woman herself is ignorant of the nature of her trouble and unobservant of trifling and transient symptoms. Her conscience does not accuse her of illicit intercourse and she is not on the lookout for evidence of disease conveyed through her marital relations with the man of her choice. She believes him to be as pure and above reproach as she herself is, and suspicion of the existence of disease in him is slow to enter her mind. It is well that this should be so, for obvious reasons, but serious obstacles confront the physician when the ignorant or unprincipled husband infects his innocent wife.

Remember at all times Hutchinson's advice "not to be overconfident in the diagnosis of syphilis," because when all the typical symptoms are present the diagnosis is plain and easy, but there are cases in which it is difficult or even impossible. It has been said that syphilis is a mimic, that at times it simulates almost every form of skin disease or mucous membrane affection or even may be confounded with tuberculosis or cancer. On the other hand, a disease at once so common and so far-reaching in its effects should not be long out of one's mind when studying gynecologic cases, and this is doubly important when it concerns the welfare not only of the woman herself, but also of the unborn child and its relative place in society, as well as the future of the family.

When the pregnant woman presents a typical chancre, exanthem and other symptoms, the diagnosis is easy and the course clear, but how often is a physician called to attend a miscarriage case in which the fetus has died in utero from some syphilitic accident or in which syphilitic disease of the placenta has caused the birth of a child too immature to live. Yet do not make the mistake of supposing that every macerated fetus has been the victim of luetic visceral disease or that every puny, premature infant is the victim of syphilitic mischief. Physicians know how common these accidents are when no syphilis exists and what a variety of causes may occasion the one or the other. Jonathan Hutchinson<sup>1</sup> warns us that intrauterine syphilis is the exception. In fact, he declares that he has never seen an infant surely syphilitic at birth. On the other hand, it is evidently impossible for an infant whose mother is syphilitic to escape infection in utero unless her disease has been so very recent that no time is given for its development before parturition.

Often the first notice the attending obstetrician has

of the existence of maternal syphilis is in the development of the taint in the infant a few days or weeks after birth. Such cases are very distressing and often troublesome to the physician. There have generally been slight symptoms which should have been as danger flags, but which were so mild that they were overlooked or else have been explained away as the result of some other affection. Sometimes an ache or a pain is supposed to be neuralgia or rheumatism, sometimes a superficial skin trouble is not rightly diagnosticated. I have seen a case in which a well-known gynecologist opened the abdomen in search of extrauterine pregnancy only to find a normal intrauterine pregnancy and later to have it proved that the hemorrhage from the uterus, which had been the symptom leading him to operate, had been the result of syphilitic placental disease. I have seen more than one case of what were thought to be varicose ulcers of the legs in pregnant women heal rapidly and completely under iodid of potash, in spite of the fact that the venous return was still obstructed by the uterine tumor.

Do not mistake me. I do not mean to emphasize the specific taint as the most important etiologic factor in most puzzling cases, but I wish to urge physicians not to forget the possibility of it. I am aware that psoriasis, eczema and some other forms of skin disease are apparently aggravated by an intercurrent pregnancy, but that should not blind us to the possibility of a recently acquired syphilis. In genitourinary practice I have had abundant opportunity to notice the fact that many husbands are inconstant during the later months of their wives' pregnancies. It is human nature. However much we may deplore it and despise the man for it, let us remember the fact. Many a woman has become infected because of disease acquired by her husband when she was not physically able to satisfy his demands. Having committed adultery, acquired syphilis, infected his wife and, through her, condemned his offspring yet unborn, the husband is slow to acknowledge his unmanly conduct. As a rule, he rather hides the fact from his wife's physician, thereby often causing delay in the administration of treatment because of an incomplete or obscure diagnosis. On the other hand, if the husband does not pursue this course he goes to the other extreme, driven by remorse for what he sees he has done he tries to remedy the evil by a full confession to the physician. In such an event, the obstetrician's way is clear and his duty plainly not to wait for symptoms in the woman, but at once to begin treatment either by inunction or by the administration of gray powder as a prophylactic against the transmission of the disease to the fetus.

Should the fetus have inherited the disease from the mother, either as the result of so-called germ infection or from an intercurrent acquired syphilis beginning during gestation, but after conception, then what will be the prognosis for the child? Without treatment, the mother may miscarry or may bring the fetus to term. The latter is not at all uncommon. In that event, as a rule, the child seems sound and well at birth, but signs of inherited taint show at the end of two or three weeks. If the child survives the first acute, febrile outbreak of secondary symptoms, it will probably respond to treatment and very likely grow up an apparently well individual. Among the better class of patients this is generally the case. When the system is less able to withstand an acute febrile disease, as among the poor in large cities, the mortality is, luckily, much

1. Syphilis, edition 1901, p. 78.



higher. Even in cases in which some deformity of bone has taken place, as, for example, in hydrocephalus, anti-syphilitic treatment often causes an absorption of the products of the disease and an arrest of pathologic growth, and in time the deformity is no longer noticeable.

Mercury is best administered to the infant by inunction, but it may be necessary to use the gray powder, in spite of its action on the bowels, which, if need be, may be controlled by opium. Mercurial medication should be continued at least as long as there are symptoms or signs of disease, and many authorities advise it for at least a year. I believe it is best to compromise by keeping up treatment for two months after all signs have vanished. I have no doubt Hutchinson is right in thinking that mercury given in early infancy has a detrimental effect on the permanent teeth later. This can not be absolutely proved, however.

To sum up this brief paper, I would say:

1. Look oftener for syphilis, as the presence of this disease will frequently explain obscure symptoms.

2. In the pregnant syphilitic woman give mercury promptly and fearlessly. Only in this way can the health of the fetus be protected from the inherited taint.

3. Give the syphilitic infant every care and mercury. The child should recover entirely in a few months.

After thorough treatment the late forms of hereditary syphilis are rare. I will not discuss the principles which should guide us in putting syphilitic children to the breast. These have been fully and ably discussed by Fournier and others; besides, in these days of bottle-fed babies, the subject is not so important as it once was.

## PULMONARY TUBERCULOSIS AS AN OBSTETRICAL COMPLICATION.\*

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CHICAGO.

Probably from 1 to 1.5 per cent. of all pregnant women have tuberculosis in such degree that it can be detected if careful examination is made. Freund found about 12 cases in 1,000. Of these patients, nearly half were in a serious condition. The fact that only about 50 per cent. of the cases discovered were comparatively mild suggests the possibility that a larger number of mild cases could have been discovered if a stricter examination had been made. We have not a sufficiently large statistic from other clinics to justify the statement above made concerning the frequency of the disease, but it is probably true because the ratio given corresponds to the frequency ratio of tuberculosis among adults between 15 and 45 years. This ratio is obtained from the consumption mortality rate and the duration of the disease. According to the United States census of 1900, there are 252 deaths annually from tuberculosis in 100,000 adults between 15 and 45 years of age. In order to find the number of cases of tuberculosis in 1,000 adults, we should have to know the duration of the disease, and there are few data bearing on this point.

Hoffman repeats the common statement that patients live two years after the disease can be diagnosed. In the Phipps report the records given would indicate a duration of at least five years. From estimates given me by clinicians of experience, it would seem that an

assumption of the average duration of the disease of five years might not be far from the truth. With this coefficient and with a mortality of 2.5 per mille, we would have a frequency of 12.5 per mille, or, in other words, about 1 in every 80 adults between 15 and 45 years of age has consumption. This refers, of course, to what we may call clinical tuberculosis and not to the pathologic condition of the individual. As is well known, according to the examination of certain pathologists, some tuberculosis is found in the great majority of postmortem examinations, showing that some time in his life nearly every individual has a little tuberculosis.

If, clinically, from 1 to 1.5 per cent. of all adults have tuberculosis, the proportion is about the same as in pregnant women. There is, indeed, very little reason why the ratio should be less in pregnancy, for it is rare that tuberculosis is a cause of sterility. The only conditions in which tuberculosis might be a factor in causing sterility are the tubercular involvement of the genital organs by a descending tuberculosis and the atrophy of the egg because of anemia, which either results in failure of ovulation or renders it incapable of fertilization. Both of these conditions are probably so rare that they are nearly negligible.

Using the ratio of 1 to 1.5 per cent., we should find that among the 60,000 women confined in Chicago each year from 600 to 900 are tubercular. In the whole United States, we should have, approximately, 40 times as many, or from 24,000 to 36,000. Although perhaps only three-fourths of these cases are of the advanced type, it is evident that the frequency of the condition makes it of great importance medically, socially and economically.

There has been much difference of opinion concerning the effect of pregnancy on the progress of the disease. Formerly the idea was prevalent that pregnancy improved the tubercular condition and even that it sometimes caused a cure. No doubt this idea was based on clinical observation and cases of improvement are occasionally observed to-day. Such an improvement may be attributed to a stimulant to general nutrition, an occurrence frequently seen, and to better general hygiene, including more rest, etc. That chemical changes in the blood caused by fetal products might be inimical to bacterial growths is not impossible.

In many cases, however, there is no doubt that pregnancy has a bad effect on the tubercular process. There may be a rapid development of tuberculosis in the lungs or an acute miliary fever may appear. The bad effect is much more apt to appear when the disease has already progressed so far or when nutrition is low from other causes. For this reason nausea and vomiting or other gravidal toxemias may increase the danger.

In the latter part of pregnancy disturbances arising from pressure against the diaphragm by the growing uterus may interfere seriously with an already impaired respiratory function.

Labor is very apt to be an unfavorable factor in the development of the disease. In all severe forms the exhaustion from the loss of energy and from the depletion of the system is extreme and not rarely leads to an immediate fatal termination. The detrimental influence of the latter part of pregnancy and of labor is revealed during the puerperium, which is characterized by a rapid progress of the disease. The puerperium itself, with its usually enforced confinement in imperfectly ventilated and overheated rooms, is injurious and its

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



influence is added to that of labor. As a result, this period is always a critical one, even for milder cases and for those more advanced it is very dangerous.

The effect of tuberculosis on pregnancy is slight except in severe cases, when there is considerable fever and coughing. In those cases abortion is common. Placental or decidual hemorrhage, with injury to the egg, is much less common than in case of cardiopathies or nephropathies. Even when there is considerable emaciation and general nutritional disturbance it is somewhat astonishing how little the fetus suffers. There is less tendency to abortion than in complications of pregnancy with heart or kidney diseases.

The fetus may be infected, but this occurs only rarely. Probably such infection takes place when there is a solution of continuity in the placental partitions between maternal and fetal blood. As such a break in the walls is less common than in many other infectious diseases, like smallpox, scarlet fever, cholera, etc., so fetal tubercular infection is less common than fetal smallpox, fetal scarlet fever and fetal cholera. The chances are that the child will be born free from tuberculosis if abortion does not occur. It is likely that it may possess a predisposition to the disease, but the pathologic condition is not conclusively demonstrated.

In mild forms of the disease, labor may be quite normal. In emaciated patients both the uterine and the abdominal contractions may be feeble and inefficient. This failure in the forces of labor, combined with the weakness of the patient, is an indication for an early interference.

Generally it is the puerperium which shows most markedly the effect of consumption. When the exhaustion of labor is considerable the patient is apt to die in the first two or three succeeding days; in milder cases she is quite apt to go to pieces. Even those who hold that pregnancy generally benefits a mild type of the disease admit that the puerperium almost always unfavorably influences it.

The French are fond of concisely summing up the treatment of tuberculosis complicating pregnancy by applying the formula of Peter concerning cardiopathies to these cases, *Fille pas de mariage, femme pas de grossesse, mere pas d'allaitement*. So far as the rule applies to the unmarried, it can be endorsed without question. If a tuberculous process undoubtedly exists there can be no excuse for a marriage that can only result in dangerous complications. The only difficulty arises when we have to decide for those apparently cured. Here each case must be decided for itself. The sexual life is a source of danger independent of the fear of pregnancy.

In this connection, the question of imposing restriction on the marriage of tuberculous individuals by legislative enactment might be discussed. As is known, such propositions have been made in some states. To one who is in touch with the spirit of our people, it seems very doubtful if such a law could be carried out. The machinery for its execution would be too repulsive to the prevailing sentiment. I believe that much more can be accomplished by educating the people concerning the infectiousness of the disease and the ravages caused by it.

When we come to consider the case of the married woman we may have to make a slight exception to the French rule. Suppose we are consulted by a man and wife in comfortable circumstances. They desire greatly a child. The wife has some tuberculous involvement of

the lungs which is not extensive but which will not entirely yield to any treatment that has heretofore been instituted. She can be put and kept in the best hygienic surroundings during her pregnancy and puerperium. The child can be cared for in a proper manner. If such a woman, fully informed concerning the risks she runs, refuses to be dissuaded, I think the physician may rightfully consent to care for her in her attempt to secure the much-desired pregnancy.

This is a rare case, however, and interferes but little with the rule that prohibits pregnancy in a tuberculous wife. Certainly in all cases in which the circumstances do not allow such an ideal management of the pregnancy and the puerperium, and when the woman must care for her house and remain a large part of the day indoors or removed from pure air, when she can not have sufficient nourishing and well-cooked food and when she would be obliged to nurse and care for her baby, conception should be absolutely forbidden.

For these patients, artificial sterilization may be a legitimate operation. Its permanent consequences should be thoroughly explained to both husband and wife in order that later recovery of the wife should not lead to censure of the physician for a mutilating operation. The probability of a recovery should be carefully weighed before making a decision. When some operation is determined on that one which does not remove the ovaries should be chosen. The vaginal resection of the tubes is generally the simplest and best, unless some other pathologic condition indicates a laparotomy, when, of course, the abdominal resection would be done. Pincus and others recommend his method of atmocauterization, or obliterating the uterine cavity by burning it out with superheated steam. With proper apparatus and with experience in the operation, this method would seem a good one, but it has not gained adherents in this country.

When a probability of a cure of the consumption remains, so that a subsequent pregnancy would be allowable, or when for other reasons a sterilizing operation is impossible, some means of preventing conception may be advised. No physician of experience would feel justified to rely on giving the advice to abstain from sexual intercourse. The preventive measure should be advised only as a measure of last resort and not as preferable to a sterilizing operation. For many reasons it is less desirable and less scientific.

When we come to consider the case of the tuberculous pregnant woman we must decide whether or not the pregnancy should be interrupted. The decision will depend largely on the circumstances of the patient. If she is able to afford the best of care during pregnancy and puerperium and also to care for the child, she should be encouraged to continue the pregnancy, especially if the tuberculous process is not very advanced. When, on the other hand, she can not hope for hygienic surroundings and good food, nor for help in the care of the child, she may be advised to have an abortion performed. A complication of tuberculosis with heart or kidney disease, with hyperemesis or with other serious acute or chronic disease furnishes additional indication for inducing abortion. The operation should be decided on before the twentieth week. Later, an attempt should be made to carry the child to the period of viability.

Rapid emptying of the uterus is the best method of inducing abortion. Anesthesia properly administered is not contraindicated. I believe that ether is the safe anesthetic here, as in other cases.



If pregnancy be allowed to continue, the patient should be treated according to the principles now accepted as the best adapted to control or to cure the disease. According to these principles, the essential rules of treatment direct: 1. She should live in the open air as much as possible, that is, she should breathe fresh, pure air. 2. She should be well fed with good, nutritious food. 3. She should avoid exhaustion or fatigue. Whether in carrying out these rules she should remain at home or go to a sanitarium depends on individual circumstances. I do not see that the details of management differ from those in any other case of consumption. Symptomatic medicines like those for coughs, night sweats, etc., are to be administered as necessary.

After the period of viability is reached, the question of inducing labor will come up for decision. Rapid or gradual failure of nutrition, due to loss of appetite or to stomach disturbances or to exhausting discharges, will be an important indication for the operation. Hemoptysis would be an urgent indication. Exhausting, uncontrollable cough or laryngeal or pleural complications or other severe respiratory disturbances, like dyspnea, may call for artificial delivery at the earliest possible moment. As in all other cases of induction of labor, the operation should be postponed till the thirty-sixth week unless the urgency of the symptoms calls for earlier interference. The method of operation should be that which furnishes quick relief from the urgent symptom and which also assists and hastens labor. For these reasons the bougie method should not be employed. The cervix may be dilated if necessary with instruments or with the finger, the membranes ruptured and then, after the escape of the liquor amnii to relieve the symptoms due to pressure on the diaphragm a metreurynteur is introduced through the cervix into the amniotic cavity. In the most urgent cases, a vaginal Cesarean section may give better chance of saving both mother and child. With this operation, as well as with any operation during labor for which anesthesia must be employed, oxygen should always be provided for eventual need.

The proper management of labor in a consumptive involves a careful watching of the patient and efficient, timely interference on the first appearance of evidences of exhaustion. Oxygen should be used freely and strychnin as a tonic should be given hypodermically as indicated. Post-partum hemorrhage is not particularly common in such patients, but its possibility should be anticipated and provision made for instant control. Subcutaneous injections of physiologic salt solution may be necessary and the solution must be prepared beforehand.

The well-known fact to which I have already referred, that the puerperium is the period of greatest danger to the mother, should prove that it ought to receive the most careful and rational management. For the first forty-eight hours the most imminent danger is from circulatory disturbances. Oxygen, strychnin and physiologic salt solution, with most careful watching, are our weapons to combat this danger. Later, we must look after nutrition and fresh air. The common fear of cold air, which leads to the imprisonment of the patient in an overheated, unventilated room, is often chiefly responsible for the rapid emaciation. There is no reason why she should not be carried to an outdoor bed or couch, where she can lie most of the day unless the weather is very bad. This plan may be begun as soon after labor as the immediate danger is passed. If the

patient lives in a large city in an apartment she may still find some benefit from a porch. If the air is very smoky and harmful she should be removed to a proper sanitarium or to better surroundings if possible within a week of her confinement.

Under no circumstances should she nurse the child, and it should not be kept in the same room. When possible it should be fed by a wet nurse. There is no danger to the wet nurse from the child, for it is almost never tuberculous; of course, arrangements for the feeding and care of the child should be made before it is born.

It may be difficult to make a differential diagnosis between tuberculosis in the puerperium and genital wound infection. The absence of the local symptoms of the latter with the history of the fever should enable us, generally, to separate the two diseases. Complication of puerperal fever with tuberculosis of the puerperium is, of course, of greatest danger.

We all know that there has been considerable advance in the method of control and treatment of tuberculosis in the last few years. A large ray of hope has partly dissipated the depressing gloom of the despair of the past. This improved outlook for the future is due to the advance of our knowledge of the disease and to the demonstration that it can be cured by hygienic management. I have tried to call attention to the importance of applying these more rational methods of cure of consumption to the disease when complicated with pregnancy, labor, and the puerperium. I believe that by a careful but thorough use of the fresh air, rest and feeding cure, many more of the 30,000 consumptive pregnant women in the United States can be brought safely through pregnancy and the puerperium and eventually, perhaps, be cured. This management before and after labor and a free use of oxygen in labor and in the subsequent disturbances are the points to which I desire to call especial attention.

#### DISCUSSION.

DR. MARIANA M. BERTOLA, San Francisco, mentioned one case of transmission of tuberculosis to the fetus. The mother was unquestionably tubercular. She was put on treatment similar to that advocated by Dr. Bacon, and carried the child to term. The child was emaciated, undersized and presented symptoms of tuberculosis. It was removed from the mother, fed artificially and kept out of doors as much as possible. After two months it died, and at the autopsy tuberculosis of all its organs was found. Although the mother still has bacilli in the sputum, her general condition is better than before. She has not had any more children.

DR. J. F. TAUSSIG, St. Louis, said that this condition occurs often and the general practitioner should know more about it. As a result of two cases in his practice he made inquiries, and was surprised to find how few general practitioners realized that there is justification for the induction of abortion or premature labor on account of tuberculosis. The question has not been discussed sufficiently. Every case should be judged by itself. In arriving at a decision the physician should be governed by three things. First, the site and stage of the tuberculous process. If in the larynx, the case is practically hopeless, and everything should be done to save the child. In such a case the physician should not interfere, because the mother's life is practically lost, but that of the child may be saved. A similar condition exists in a case of advanced pulmonary tuberculosis. In less advanced cases the physician should be governed largely by the weight of the mother. If she is not gaining in weight, he is justified in interfering; otherwise not. All such patients should be kept constantly under observation. Second, the state of pregnancy. Physicians would be more inclined to interfere in the first half of pregnancy than in the last half when they must consider the prob-



ability of saving both the life of the mother and the child. Third, the social condition of the patient. As Dr. Bacon mentioned, hygienic treatment is of the utmost importance. Hence, the physician would be more inclined to interfere in the case of a woman belonging to the working class than in the case of a woman of a higher or better social plane with whom correct hygiene can be carried out. It is to be hoped that in the future, when sanatoria are more numerous, physicians may be able to do more for the poorer class, and thus be able to save the lives of these women, which is now impossible in many cases.

DR. EFA V. DAVIS, Chicago, said that physicians are too ready to say to a pregnant woman that they will relieve her of her burden if she is not well. In fact, the laity has come to expect that of physicians. Dr. Davis does not see any reason for performing an abortion just because a woman lives in bad surroundings and is unable to care for herself. The life of the unborn child should not be destroyed, except for some very good reason. If it is only to curtail the misery of some poor woman of the slums, it is poor practice. It is far better to save the life of the child than to prolong the life of the unfortunate mother. The position of Penard of never producing an abortion is a much safer one than the one where physicians are expected by the laity to do it on any pretext. Dr. Davis has found that many women have syphilis, acquired not through their husbands, but through their fathers. That kind of syphilis is likely to baffle the physician. A child came under Dr. Davis' care born of a mother who was syphilitic through her father. She had given birth to many syphilitic children, none of which lived. The husband of this woman was perfectly well. Dr. Davis treated the woman all through her pregnancy, and she gave birth to what seemed to be a healthy child. The child was treated with bichlorid baths after the appearance of a rash when five weeks old and apparently recovered. After seven years the child had a syphilitic iritis. Physicians ought to be very careful about saying that they have cured patients with two or three months' treatment.

DR. W. O. HENRY, Omaha, protested emphatically against producing abortion because the mother is tuberculous. The physician's business is to save life, not to take it. Of course, it is unfortunate when a tuberculous woman becomes pregnant, but the physician has no right to do a criminal act because of that. He should use all possible means to help the mother during her pregnancy and puerperium, and should endeavor to save both the mother and the child, but he should never take the life of the child.

DR. J. H. CARSTENS, Detroit, agreed with Dr. Bacon, but said he believes physicians can do more by education. People know that consumption is a dangerous disease, and that it is infectious, and they do not marry a consumptive if they know it. Young men and young women consider this. He does not agree with Dr. Bacon that physicians are justified in sterilizing a woman because she has consumption. That is absolutely wrong. It is never justifiable under any circumstances. As far as producing abortion is concerned, Dr. Carstens thinks that Dr. Davis hit the nail on the head, but he would not say that physicians should never do it because there are exceptional, rare cases. Those women stand confinement pretty well. Dr. Carstens has been asked to operate for fibroids, lacerated cervix, etc., for the purpose of relieving some condition of the system which he has cured with mercury or iodid of potash without operation. Syphilis is more common than any other disease except hysteria. It produces almost every symptom, in season and out of season. In obscure cases, the physician should think of syphilis by giving iodid of potash, and he is quite likely to cure the patient.

DR. F. D. DONOGHUE, Boston, said that aside from the moral aspect, the induction of abortion is a confession that the physician can not cure the disease, and is a temporary makeshift, at best. The patients in whom Dr. Bacon would produce abortion are almost sure to die. In the incipient case, the patient is almost sure to recover under good treatment. A woman with emaciation, great loss of flesh, high temperature, pregnant or non-pregnant, is sure to die. Why sacrifice a useful life by producing abortion? The function of the

physician is to advise against pregnancy in these cases, and if the advice is not followed, the parties responsible for increasing the danger are to blame, not the adviser. The time has gone by when it can generally be said that the profession will protect patients from the effects of their own acts.

DR. C. S. BACON said that it is difficult to determine in a given case whether a child is born with tuberculosis. Dr. Bertola's case is very interesting, and it would be well if we knew that the patient was not exposed to tuberculosis after birth. If the child was exposed, it is not unreasonable to assume that the child contracted the disease in that way. The case as related does not prove the transmission of tuberculosis. He said that Dr. Taussig's indications for the induction of labor and abortion are exactly in line with his own views. Dr. Bacon said that a careful reading of his paper will show that in regard to the right to induce abortion in all cases of tuberculosis complicating pregnancy he agrees entirely with those who oppose it. He has no doubt that the suspicion of the presence of tuberculosis is often improperly made a reason for inducing abortion, and so far as the general objection goes, he agrees with Dr. Carstens and others; but when the matter is considered from the practical standpoint, the question is a different one. Dr. Donoghue seems to believe that tuberculosis is not so very dangerous, in the incipient stages at least. It has been demonstrated that even in the incipient stages the disease progresses rapidly, and the woman may be in a very dangerous condition or may die during the puerperium. The woman with a rather serious complication is not necessarily condemned to death because she becomes pregnant, if the pregnancy is removed at once. Certain indications for the induction of abortion are recognized, although the Catholic Church prohibits abortion under any circumstances, and there is something to be said for that side; but if any reason for the induction of abortion is recognized, or if it is ever justifiable to destroy the child in utero, physicians must recognize that there is an indication in those cases. Of what use is it to let a woman who has rather advanced tuberculosis go on and probably die during labor or in the puerperium? What will become of the child? The mother of a family is an extremely important member of society. Why should physicians say that they have absolutely no right to try and save her life, when otherwise she will bring into the world a child that will have no care after it is born, and therefore probably will die? Dr. Bacon said that he can not agree to the objections made by those who, perhaps, see too little of these cases, and whose objections are theoretical and not practical. Dr. Carstens objects to the induction of abortion and also objects to sterilization. His advice, if carried out, will favor the increase of tuberculosis by increasing the number of children born to tuberculous parents. Dr. Bacon knows of no objection, moral or otherwise, to sterilization. In the paper he emphasized that all the circumstances should be considered and that the patient should be informed of the situation so that she takes the risk and not the physician.

DR. G. S. WHITESIDE said that he does not quite understand what Dr. Davis meant by syphilis through the father. He doubts if she meant inherited syphilis, because there probably is no authentic case on record of syphilis having been transmitted to the third generation. Dr. Whiteside did not mean to imply that infants should be treated for only a few months. On the other hand, it has been demonstrated time and again that no matter how long antisyphilitic treatment is kept up in an infant, it does not bar the later developments of syphilis, such as syphilitic iritis or keratitis, bone lesions, syphilitic disease of the nervous system, etc. Although these late manifestations are more common in patients treated for only a short time, they are not unknown in those treated for a long period of time.

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**Medical Advertising.**—Classify advertised remedies under four heads: Reputable, doubtful, semi-fake and fake. Therapeutically and ethically considered we should put into the first class only preparations whose constituents are known to the prescriber, and all others would and should be thus banished to the outer darkness of undoubted fakes.—Jackman, in *Journal of Medicine and Science*.



# LACTIC ACID IN GONORRHEA.

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Surgeon to Garretson Hospital. Gynecologist to Charity Hospital.  
PHILADELPHIA.

One must realize that one of the many unpleasant sequences so often following a gonorrhea in the female is a cervical infection, accompanied by an irritating and disagreeable discharge.

Again, when it has been estimated that 50 per cent. of all pelvic disorders in the female are due to gonorrheal infection, and that in the great majority of these infections the cervix is affected, it impresses on us the necessity of combating this disease.

It is comparatively easy to eradicate the disease from the urethra, yet at times it is difficult without local attention strictly applied, but it is a very different affair when the cervix is diseased. The glands in the cervix are peculiar because of their deeper position and branched condition. They easily retain the cocci, which are ever a source of irritation and its resulting discharge. I have known in my practice such a discharge to have existed six years after a positive bacterial examination.

After many operations no credit is given for an operation most skillfully done for a most trying condition, because an irritating vaginal discharge from a diseased cervix continues after the patient is otherwise well and about, this discharge keeping the case fretting and nervous and baffling the ordinary douches to cure it. Neither the worry of the patient nor the inability to cure the case is a condition at which to wonder. It is annoying and distressing to a woman to have such a discharge, and it does keep her in an excited state. The inability to effect a cure is not to be marveled at because the ordinary douche nozzle is not the proper instrument to reach the glands of the cervix.

The physician paints the cervix with silver, and for a while all goes well, but sooner or later back comes the discharge, and he must go over his case again. At times he loses the care of the family, and another physician makes "history repeat itself."

These facts led me to investigate, and in a great majority of the cases of chronic vaginal discharge I was enabled to discover the gonococci, and to find that its habitat was in the cervical glands, in most instances being limited to them.

It then appeared to me that the only procedure was to destroy the glands, because to destroy the cocci without the destruction of the glands was highly improbable. Therefore, I injected drugs into the cervix. Silver and its preparation, pyroligneous acid, iodine, creosote, carbolic acid, lactic acid were tried, and now I am of the opinion that lactic acid is so far superior to any yet used.

Some agents cause too much of a slough, some only close the ducts, etc., but lactic acid, while causing a small slough, has never caused any ill result in any case yet, and has always responded to my expectations so far. In total, I have used it in 34 cases. Every case has shown the gonococci present before treatment.

The method is: First to cleanse the vagina and cervix thoroughly with warm water and cotton soaked in a water solution (4 ounces to 6 ounces) of pyroligneous acid. Expose the cervix by drawing it downward and into view by an ordinary long tenaculum. Then take an ordinary hypodermic syringe loaded with pure lactic acid, and inject just beneath the membrane a few drops

of the acid. Continue this until the whole of the cervix is exposed as the superior and inferior lip is injected. It may be done in one sitting, or in a nervous case, if desired, in two or three sittings.

The accompanying table shows cases, both acute and chronic, which were so treated, and the results. Gonococci were found in every case.

I have since had an acute case in a patient aged 66 years, the oldest patient with acute gonorrhea I have ever treated.

The tabulated cases were treated at the Garretson Hospital, Charity Hospital, and in my private work. I wish to thank the resident physicians in the Garretson Hospital, Dr. Lopez in the Charity Hospital, and the other members of the staff of the hospitals for their

TABLE OF CASES OF CERVICAL GONORRHEA CURED BY LACTIC ACID.

Case.	Age.	Discharge.		Irritating.	Examined.	Stage.	Began to Treat.	Treatments	Mos. after
		Color.	Amount.						
1	40	Greenish ..	Profuse ..	Yes	Sept. 6, 1904.	Acute ....	Sept. 8, '04	2	8
2	30	Greenish ..	Profuse ...	Yes	Sept. 6, 1904..	Acute....	Sept. 8, '04	2	8
3	22	Greenish ..	Profuse ...	Yes	Sept. 10, 1904	Acute....	Sept. 10, '04	2	8
4	25	Greenish...	Profuse ...	Yes	Sept. 11, 1904	Acute....	Sept. 11, '04	2	8
5	18	Greenish...	Profuse ...	Yes	Sept. 11, 1904	Acute....	Sept. 11, '04	2	8
6	19	Greenish...	Profuse ...	Yes	Sept. 11, 1904	Acute....	Sept. 11, '04	2	8
7	27	Greenish...	Profuse ...	Yes	Sept. 11, 1904	Acute....	Sept. 11, '04	2	8
8	31	Yellow.....	Fair.....	No	Sept. 18, 1904	20 days ..	Sept. 18, '04	1	8
9	30	Yellow.....	Profuse ...	Yes	Sept. 18, 1904	22 days...	Sept. 18, '04	2	8
10*	16	Greenish yellow.	Profuse ...	Yes	Sept. 24, 1904	22 days...	Sept. 28, '04	3	8
11	50	Greenish yellow.	Small.....	Yes	Oct. 4, 1904...	30 days...	Oct. 4, '04..	2	6
12	41	Yellow.....	Fair.....	No	Dec. 1, 1904..	24 days...	Dec. 1, '04..	2	5
13	29	Greenish...	Profuse ...	Yes	Dec. 1, 1904..	Acute....	Dec. 1, '04..	2	5
14	23	Greenish...	Small.....	Yes	Dec. 6, 1904..	Acute....	Dec. 6, '04..	1	5
15	25	Greenish...	Profuse ...	Yes	Dec. 10, 1904.	Acute....	Dec. 10, '04	3	5
16	33	Yellow.....	Profuse ...	No	Sept. 10, 1904	Chronic..	Sept. 10, '04	1	8
17	30	Yellow.....	Profuse ...	No	Sept. 18, 1904	Chronic..	Sept. 18, '04	2	8
18	28	Yellow.....	Profuse ...	Yes	Sept. 24, 1904	Chronic..	Sept. 24, '04	2	8
19	35	Yellow.....	Profuse ...	No	Oct. 4, 1904...	18 mos....	Oct. 4, '04..	2	6
20	27	Yellow.....	Small....	No	Oct. 4, 1904...	Chronic..	Oct. 4, '04..	1	6
21	24	Yellow.....	Small....	No	Oct. 12, 1904..	Chronic..	Oct. 12, '04	1	6
22	25	Yellow.....	Small....	No	Oct. 12, 1904..	Chronic..	Oct. 12, '04	2	6
23	40	Yellow.....	Profuse ...	No	Oct. 12, 1904..	Chronic..	Oct. 12, '04	2	6
24	55	Yellow.....	Profuse ...	Yes	Dec. 1, 1904..	Chronic..	Dec. 1, '04..	2	5
25	44	Yellow.....	Profuse ...	Yes	Dec. 6, 1904..	Chronic..	Dec. 6, '04..	1	5
26	40	Yellow.....	Profuse ...	Yes	Dec. 6, 1904..	Chronic..	Dec. 6, '04..	2	5
27	38	Yellow....	Fair.....	Yes	Dec. 10, 1904..	2 years...	Dec. 10, '04	3	5
28	30	Yellow.....	Fair.....	No	Dec. 10, 1904..	Chronic..	Dec. 10, '04	2	5
29	40	Yellow.....	Profuse ...	No	Dec. 12, 1904..	4 years...	Dec. 12, '04	1	5
30	26	Yellow.....	Profuse ...	Yes	Dec. 12, 1904..	Chronic..	Dec. 12, '04	1	5

\*Pregnant.

†Each case was examined in 3 weeks and found cured; this column shows date of re-examination, at which time no further evidences of the disease were found.

Acute are so classed if not over 12 days. Chronic are so classed if over 40 days. Between these days or years are given only cases where gonococci were found and reported.

courtesies in making bacterial examinations, in sending me cases, and in many other ways assisting me in the work.

## CONCLUSIONS.

The conclusions so far reached are as follows:

Lactic acid injection does cure cervical gonorrheal infection.

Lactic acid injection has no ill after effects.

Lactic acid injection stops the spreading to the endometrium of the body of the uterus in acute cases if treatment is started soon enough.

Ordinary douches and painting of cervix can give only temporary relief.

It is better to destroy the cervical glands, and this should be done as soon as diagnosis is positive.

An examination should be made, not only of the discharge, but if necessary (where that examination is negative) of the cervical membrane, with its glands.

Most of the chronic discharges are due to retained gonococci.



It is possible to cure this discharge by injection by this method into the cervical glands.

Cervical infection is always possible in gonorrhea in the female, but by prompt action, tubes, etc., may be spared future disease.

So far lactic acid used by this method is the best drug for injection.

A too deep injection of the lactic acid may cause a slough, which, while not dangerous, is to say the least annoying, and lessens the good result which should be obtained from said injection.

2010 Chestnut St.

## A CASE OF CEPHALIC TETANUS, WITH PARALYSIS OF BOTH SEVENTH NERVES.

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In 1870, Rose<sup>1</sup> described a rare form of tetanus in which the tetanic symptoms were sometimes (but not always) confined to the muscles of the jaw and throat and were associated with a paralysis of the seventh nerve. This paralysis of the seventh nerve may be said to be the most distinguishing symptom of this form of lockjaw, and the cases thus far reported have, without exception, arisen from wounds in the territory of the fifth nerve.

Although paralysis of the seventh nerve is the most characteristic symptom, this nerve is not the only one paralyzed in all cases, for in very few instances the motor nerves of the eye, the hypoglossal nerve, and the branches of the pneumogastric nerve supplying the muscles of the pharynx, have also been involved. Such an anomaly as these local palsies present in cases of lockjaw could not fail in time to attract attention, and the disease has been variously named cephalic tetanus, *kopftetanus*, and *tetanus hydrophobicus*, the last name having been used by Rose because of a fancied, but quite superficial, resemblance to rabies.

It was not until 1887, however, that the disease was first described in France by Terrillon,<sup>2</sup> and in America it seems even yet to be rare, for comparatively few reports of cases are on record. The best American paper is by Willard,<sup>3</sup> of Philadelphia, who, in 1895, published the report of a case in a boy and collected references in the whole literature to seventy-four cases, his own being the seventy-fifth. There are few other cases which have appeared since Willard published his paper or which escaped his observation.

In the vast majority of all reported cases the paralysis of the facial nerve has been unilateral, and this paralysis has been almost, if not quite, always on the side of the wound. A very few cases, however, of double facial palsy have been noted—so few, indeed, that I have found but six, possibly seven, examples. In these few cases, the wound, with but one exception, had been in the median line, usually on the nose, or on the bridge of the nose, or on the forehead. The case which is reported in the present paper is an instance of this

double facial palsy, or facial diplegia, occurring in cephalic tetanus; and, as it is possibly only the seventh, or at most eighth, case of the kind to be observed with care, it has been deemed worthy of a special report.

*Patient.*—Mrs. K. O., aged 41, white.

*History.*—The patient first came to the Methodist Episcopal Hospital on Sunday, May 28, giving a history of having fallen downstairs eighteen days previously and having sustained an open wound on the bridge of the nose. The nose was swollen for a day or so, and the wound was covered with a small piece of court plaster. The patient felt no disability from the injury, except the discomfort from the wound, until fourteen days later, when she noticed her face beginning to draw toward the right side. She gradually became unable to move her lips, or to separate her jaws, and dysphagia soon developed.

*Examination.*—On examination by the resident physician, the following conditions were noted: The face was smooth and "ironed out;" the patient was unable to close her eyes, to wrinkle her forehead, to move her lips, to open her jaws or to swallow without difficulty. If the lips were held open by



This shows the patient in the attempt to close the eyes. It also shows the trismus and the slight wound on the median line of the nose from which the infection occurred. The smooth expressionless appearance of the face and brow is also shown.

her fingers, she could articulate imperfectly; otherwise she answered in grunts. Sensation over the distribution of the fifth nerve was normal. The patient returned on the following Tuesday, when Dr. Holmes, under nitrous-oxid gas, found a spasm of the muscles of mastication, but no surgical condition present. The patient's friends said that she was able to close her eyes, to open her mouth, and to swallow until two weeks after the injury.

When the patient was examined by Dr. Lloyd, on June 2, the conditions were noted as follows:

The head is freely movable in all directions; no retraction of the head; no paralysis in any limb. A wound on the bridge of the nose is covered with a scab. The patient does not talk clearly, but answers mainly in grunts. She claims

1. Handbuch der Chir., von Pitba and Billroth, vol. 1, Ab. 11, No. 11, p. 5.

2. Rev. de Chir., 1888, No. 1.

3. Trans. Col. of Phys. of Phila., 1895, p. 27. Willard refers to a previous case reported by Hunt. (Trans. Col. Phys., Phila., 1862, May 7, vol. 111, N. S. p. 466), but Hunt's case was not one of cephalic tetanus. It was a case of punctured wound of the cranium, with injury to the brain, causing hemiplegia. The patient died of general tetanus, not kopftetanus with facial palsy.



that she is able to swallow, but complains of the accumulation of saliva and phlegm in the throat. She swallows water at request when it is given slowly through a space left by an extracted tooth, the patient lying on her back during the process. The larynx does not seem to rise as fully as in the normal act of swallowing.

Third, Fourth and Sixth Nerves: There is no involvement of any one of these nerves. Both the exterior and interior muscles of the eye act normally. The balls move freely in all directions. The pupils react normally to light and on accommodation and convergence.

Fifth Nerves: There is no anesthesia in the distribution of the fifth nerves. In the effort of chewing there is very slight movement of the masseters and temporals, but not enough to move the jaw, which is firmly set; and these muscles are felt to be rigidly contracted.

Seventh Nerves: There is slight ability to raise the right corner of the mouth. There is no sardonic grin, no tetanic rigidity of the facial muscles. In the act of trying to close the eyes, the balls roll far upward, but the orbicular muscles do not move, and the lids do not cover the whites of the eyes. There is no wrinkling of the brow. When laughing, there is no expression of the features indicating that act. The patient is unable to whistle, to puff out the cheeks, or to show the teeth. All the muscles of both sides of the face are paralyzed, except for the slight movement in the right corner of the mouth. The paralysis of both facial nerves is thus seen to be classical. The upper and lower fibers are alike involved. Both orbicular muscles are paralyzed; the patient can not close her eyes, and when she attempts to do so the eyeballs roll far upward until the corneæ are concealed beneath the upper lids. The brow and face are smooth and motionless, and the lips are powerless. The mask-like, expressionless appearance of the face is striking.

Twelfth Nerves: The patient claims that she can move her tongue; but this act can not be seen, because of the spasm of the jaw.

The trismus is extreme. The jaws are firmly set, and the patient can not separate the teeth to the slightest extent. In making an effort to talk she uses her fingers to separate the lips, which are flaccid and powerless. There is no tetanic involvement of the muscles of the neck, trunk, or limbs. No retraction of the head nor opisthotonus is present, or has been present.

The patient has no paralysis of the extremities. She is able to use her hands and arms perfectly, and walks with a natural gait; in fact, she walked into the hospital. The general condition is good; pulse and temperature are normal.

*Course of the Disease.*—The patient declined to remain in the hospital, and returned to her home, where she was treated by her family physician, Dr. William Irwin, to whose kindness I am indebted for the opportunity of continuing to see the case until the end.

June 7, the patient is slightly better. The eyes shut a little better, otherwise the symptoms are about the same. When she tries to talk, which she does very imperfectly, she holds the paralyzed lips apart with her fingers in order to enunciate more clearly (a characteristic action which has been noted in several of the reported cases). She is much annoyed by the accumulation of saliva, which tends to escape from between the paralyzed lips. The trismus is still complete; the lower jaw is clamped rigidly to the upper and is motionless. The patient is fed with fluids through a space left by an extracted tooth. There is to-day no true dysphagia or suffocation on swallowing, although from the statement of her attendants there has been something of the kind at times. There is no extension of the tetanic spasms to the neck, trunk or limbs. There is no paralysis of the limbs; the knee jerks are slightly increased, also the biceps jerks. There is no Babinski, or Oppenheim, or McCarthy reflex. The attempt to laugh produces a curious result; there is an odd sound, as of a chuckle, in the throat, but the face remains motionless. The general condition is fairly good; pulse 100; temperature normal.

June 16, examination with Dr. Irwin. The patient is better. She has regained some power in the face, more on the right side, and is able to draw the corner of the mouth farther over to that side. She is still unable to shut her eyes, to

wrinkle her brow, to whistle, or to laugh. There is some relaxation of the jaw, as is seen on attempts at chewing, and as is proved by the fact that the patient has bitten her tongue. This also proves that she is able to move her tongue. The lower jaw, nevertheless, is still very rigid. There are no ocular palsies, or fifth nerve palsies, sensory or motor. There is no spasm on deglutition, nor of the neck or trunk. Saliva still tends to dribble from between the lips. General condition is good. The treatment by Dr. Irwin has been with chloral and the bromids. No antitetanus serum has been used at any time in the case. The prognosis seems very favorable to-day.

July 3, the patient has improved greatly, and has been out to walk. She can shut her eyes, wrinkle her forehead and whistle, but the lower fibers of the seventh nerves are still somewhat involved, more than the upper. The jaw is much relaxed, but still a little stiff. The eye muscles are normal. The expression of the face on laughing is still peculiar. The patient can be pronounced convalescent.

From this time the progress of the case was steadily onward to recovery. The whole duration of the tetanus was about six weeks.

#### CHIEF FACTS OF NOTE IN CEPHALIC TETANUS.

The following are some of the main facts to be noted in cases of cephalic tetanus:

*The Seat of the Wound.*—In the majority of cases of cephalic tetanus, the facial paralysis has been one-sided, and the wound, too, has been on one side, the paralysis being on the same side as the wound. Exceptions to this rule have been rare, and even open to doubt. A wound on the right side of the face does not cause facial paralysis on the left side, or *vice versa*. In all the cases of facial diplegia, however, except that of Roberts', the wound has been in the median line of the face, nose or forehead, but not every wound in the median line has produced bilateral symptoms, as witness the cases of Nankevell<sup>4</sup> and Oliva,<sup>5</sup> in which the wound was on the bridge of the nose, but the facial paralysis was on the right side of the face only; the case of Wagner,<sup>6</sup> in which the wound was in the center of the forehead, and that of Nerlech,<sup>7</sup> in which the wound was at the root of the nose; but in both cases the paralysis was in the distribution of the left facial nerve. By far the greater number of observers place the paralysis on the same side as the injury. On whichever side it occurs, however, the wound in cephalic tetanus is in the area of distribution of the fifth nerve, the commonest point being in what some authors call the orbital-nasal-temporal angle. One case has been reported, that of Pollock, in which the wound was in the eyeball, and another in which it was in the mouth. In the few cases in which the muscles of the eye have been paralyzed, the wound has been on or near the lid, but not all cases of wound on or near the lid have caused ocular paralyses.

*The Character of the Paralysis.*—The paralysis of the seventh nerve has all the characteristics of a peripheral paralysis; hence, it is like a genuine Bell's palsy. Both the upper and lower fibers are involved. The brow, the orbicularis palpebrarum, the small muscles of the face and lips, all are involved. Consequently, the patient can not wrinkle the brow, close the eye, move the face or lips, whistle, or display the teeth; and in unilateral cases the characteristic deformity is present, as caused by the flattening of the nasal fold and the drawing of the face toward the sound side. For some unknown reason, however, the reactions of degeneration are not present.

4. Lancet, July 14, 1883.

5. Gaz. de Chir., 1886.

6. Schmidt's Jahrbuch, 1884, p. 139.

7. Inaug. Dissert., Halle, 1892.



*The Tetanic Symptoms.*—Trismus is always a marked symptom, and in some cases it is the chief or even the only tetanic symptom. In not a few cases however, the tetanus extends to other muscles, as of the throat, neck, trunk, and limbs, the case thus presenting the picture of a more or less general tetanus. As a rule, however, the symptoms of cephalic tetanus are not so widespread or severe as in the ordinary type—a fact which bears on the prognosis.

*Paralysis of Other than the Facial Muscles.*—In a very few reported cases, the muscles of the eyes have been paralyzed. Thus, in Roberts' case, the left eyeball was completely immobile, while in the right orbit only the third and fourth nerves were paralyzed, the sixth escaping. The wound was under the left eye. In one case,<sup>8</sup> ptosis was observed. Willard makes no reference to these complications, so they are probably rare. v. Schrötter<sup>9</sup> reports a case of *kopftetanus* in which there was paralysis of the facial, the ocular, and the hypoglossal nerves. Neumann<sup>10</sup> claims that the facial nerve is paralyzed first; then the oculomotor, abducens, trochlear and hypoglossal are affected in the order named; but the number of reported cases is too small to admit of such a dogmatic rule. In most cases, the paralysis of the facial nerve has appeared at about the same time as the lockjaw.

#### PROGNOSIS.

Cephalic tetanus is not quite so severe a disease as the ordinary type of tetanus. More patients recover than in the usual form of lockjaw. Nevertheless, it is a very grave affection, with a high death rate, as the reported cases prove. From Willard's table we learn that of 45 "acute" cases (counting those as acute in which the lockjaw supervened within the first week after the wound) 39 patients died and only 4 recovered, a mortality of 90 per cent. Of 32 "chronic" cases (after the first week), 8 patients died and 24 recovered, a mortality of 25 per cent. This difference is striking and shows very conclusively that the important factor in prognosis is the date of onset of the tetanus after the reception of the wound. Gowers has claimed that the age of the patient is the determining factor; that all cases in patients over 25 years of age are fatal; but Willard's table disproves this claim effectually, for 15 of the patients who recovered were over 25 years of age. In the case reported in this paper, the patient was 41 years old and made a good recovery, but she comes within the "chronic" group, for the lockjaw did not appear until the fourteenth day. Willard's table also proves that in the "local" cases, i. e., those in which the tetanic symptoms are confined to the jaw, throat and neck, the prognosis is better, for 14 patients recovered and 15 died; while of the "general" cases, in which the tetanus is widespread, 14 patients recovered and 32 died. This is in accord with what might be expected. In the present case, the tetanus was strictly limited to the jaw, and the patient recovered, her condition never presenting such a grave appearance as is seen in generalized tetanus. On the other hand, the majority of the cases of facial diplegia have been fatal; in the 7 cases noted, only 2 patients recovered, one of them being my case; but these fatal cases also have all been in the "acute" group.

#### REVIEW OF THE CASES IN THE LITERATURE.

The following are brief statements of the cases of

facial diplegia in cephalic tetanus that have been collected:

*Thenée's Case.*<sup>11</sup>—The wound was on the root of the nose, hence probably in the median line. It is reported as a case of "one-sided trismus," but there was also paralysis of the left side of the face, followed by paralysis of the right side. It proved fatal on the ninth day after the wound.

*Roberts' Case.*<sup>12</sup>—The wound was under the left eye, with early onset of tetanus and general convulsions. The left facial nerve was paralyzed completely, also the upper distribution of the right facial nerve. The left eye was completely immobile, while on the right side the third and fourth nerves were paralyzed, the sixth escaping. The case was fatal.

*Huntingdon's Case.*<sup>13</sup>—The wound was a little above the root of the nose—hence, probably in the median line. There was complete bilateral facial paralysis, but no orbital paralyses. Dysphagia was present, with profuse salivation. Trismus and cramps in the legs and trunk muscles occurred. Recovery took place in six weeks.

*Bourgeois' Case.*<sup>14</sup>—This patient was a gardener. The wound was in the median line on the nose. Both seventh nerves were totally paralyzed. Convulsions were general; the patient had dysphagia and spoke with difficulty, using his fingers to open his lips. The onset of the tetanus was on the sixth day, and death occurred on the third day after the first appearance of the lockjaw.

*Crouzon's Case.*<sup>15</sup>—The wound was in the median line at the root of the nose, and both seventh nerves were paralyzed. The patient used his fingers to separate the paralyzed lips in speaking. The case terminated fatally on the thirteenth day from the reception of the wound, the convulsions having become general.

*Bouchaud's Case.*<sup>16</sup>—The patient was a gardener. The wound was on the nose in the median line. The patient could not swallow liquids and spoke with great difficulty. Both seventh nerves were totally paralyzed, the paralysis being of the peripheral type. There was possibly some weakening also of both superior recti muscles of the eyes. Slight power remained in the lips. (Does this indicate that the lips are partially innervated by the twelfth nerves?) The patient, as in other cases, used his fingers to separate the lips in attempting to speak. Attempts at swallowing brought on suffocation. There were no tetanic spasms in the neck, trunk or limbs. An interesting feature was the fact that the patient was an epileptic, and had one epileptic seizure during his illness; but unfortunately it was not noted whether the paralyzed facial muscles were convulsed during this fit. The tetanus appeared on the sixth day after the wound, and death occurred six days later.

*Caretti's Case.*—Bouchaud refers to a case of facial diplegia in cephalic tetanus, reported by Caretti, but I have not secured the report of this case.

#### COMMENTS.

There has been much speculation about the nature of the paralysis of the facial nerve in cephalic tetanus. It is a unique phenomenon, for tetanus does not cause paralysis in other parts of the body. As these cases

11. Berl. klin. Woch., 1880, p. 531.

12. Lancet, July 11, 1891.

13. Lancet, Sept. 17, 1892.

14. Gaz. de Hôp., 1900, p. 418.

15. Rev. Neurol., 1900, p. 402.

16. Jour. de Neurol., 1905, ix, p. 40.

8. L'Union Méd., 1886, No. 173.

9. Wein klin. Wochft., 1902, No. 2, p. 56.

10. Zeit. f. Heilkunde, 1902, p. 344.



all occur from wounds in the area of distribution of the fifth nerve, the hypothesis of a reflex paralysis has been invoked, but it explains nothing. Tetanus is an infectious disease, caused by a microbe. This microbe gains entrance in these cases at a point where it can exert a direct action on the seventh nerves, and its effect is to paralyze one set of nerve fibers (the seventh) while it causes tetanic spasm in neighboring nerves (the motor branches of the fifth). It might well be called *tetanus paradoxus*. Some observers have claimed that the trismus also has a tendency to be unilateral, or at least more marked on the side of the wound.

Vaillard (quoted by Bourgeois) denied that the facial nerve is truly paralyzed in these cases; he seemed to think that it was in tetanic spasm. It has been suggested that the asymmetry of the face is not due to paralysis, but to excessive tetanic spasm in the muscles of the opposite side.<sup>17</sup> Such an explanation, however, falls completely to the ground in those cases in which both facial nerves are paralyzed. Moreover, it can not explain the typical inability to close the eye and to wrinkle the brow and all the other classical symptoms of Bell's palsy. It has also been suggested (by Bernhardt and by Guterbrock) that the paralyzed muscles are also contracted; but this does not appear to be so on close examination. The passive raising of the lips by the breath on expiration and the lifting of the flaccid lips by the fingers in attempts at speaking (a characteristic act) are clearly indicative of paralysis.

Some of the clinical observations here recorded have been confirmed by experimental work, especially with reference to the seat of the wound. Brunner<sup>18</sup> injected the tetanus toxin into guinea-pigs and obtained symptoms on the same side into which the toxin was injected; and if it was injected into the median line, the symptoms were bilateral.

The pathology of this facial paralysis in cephalic tetanus has not been satisfactorily determined, although a number of autopsies have been made. The results, however, are negative. The reactions of degeneration have not been obtained. This was so in Willard's case, in which I made the tests. In the case reported in this paper the opportunity to make an electrical study was not favorable.

There has been no attempt in this paper to go into an exhaustive review of the literature. Willard's paper, already quoted, gives a long list of references and it is easily accessible. The attempt has been made here, however, to collect all the cases in which the facial paralysis was bilateral. Willard, in a review of 75 cases of cephalic tetanus, found but 2 in which both seventh nerves were involved. With the assistance of Dr. C. D. Camp, I have studied about 25 additional cases of cephalic tetanus, found but 2 in which both not included in Willard's list, and have found a total of 7 cases of facial diplegia, as abstracted above, the present case being the eighth.

Important papers on the subject of cephalic tetanus are by Villar,<sup>19</sup> Bernhardt,<sup>20</sup> Dard,<sup>21</sup> and Sapincourt,<sup>22</sup> the last two of which have not been accessible to me.

## ATAXIA OF CENTRAL ORIGIN APPEARING IN CHILDHOOD.\*

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This paper is a brief consideration of a form of central nervous disease previously described under the titles of hereditary ataxia, cerebellar ataxia, and not infrequently under the heading of Friedreich's disease. It varies, in certain particulars, however, as we shall see, from the usual conception of what should constitute the affection bearing Friedreich's name. In view of its relative rarity, the number of cases of this affection coming under the observation of any single observer is naturally small.

The clinical characteristics of this affection stated briefly are: Muscular inco-ordination commencing usually in childhood, and, as a rule, first affecting the muscles of the lower extremities, thence extending to the upper extremities, and to the muscles of the trunk, head, larynx, tongue and eyes; slowness of muscular response to volitional impulse; swaying, unsteady gait; slow, hesitating or deliberate speech, sometimes of nasal character and occasionally explosive; nystagmus; oscillation or tremor of head, body or extremities; and certain involuntary movements, which may or may not be of choreiform character, and which may occur independently or may be associated with volitional intended movement of some other part of the body; lateral curvature of the spine; deficient energy in carrying out voluntary movements; and, in an advanced period of the disease, paralysis, muscular spasm and contractures.

To this symptom-complex may be added, during the course of certain cases, various other symptoms not sufficiently invariable to be considered characteristic, but nevertheless to be regarded as inherent, although less common, phenomena. Among these may be mentioned vertigo, headache, optic atrophy and impairment of pupillary action and of the movements of the ocular muscles, apathy of facial expression, a tendency to involuntary and unprovoked laughter, loss of muscular tone, sensory disturbance, peculiar deformity of the feet, trophic changes in muscles, and very rarely interference in the action of the sphincters and trophic changes in the skin.

Certain other phenomena must be regarded in the light of complications, since they are clearly due to involvement of those parts of the central nervous structure, primary affection of which would produce a clinical picture totally different from the one we are considering.

Such is the occurrence of psychical phenomena, depreciation of intellectual power, or epileptiform attacks. In this symptom-complex will be recognized many of the symptoms that characterized the well-known cases described by Friedreich in 1861, and which have since been identified with his name. Since then many cases have been reported differing so widely from the type originally described that certain observers have been led to believe that they were dealing with an affection of different nature. Several of these cases were undoubtedly not instances of Friedreich's disease, and even in the light of our present knowledge of how manifold may be its symptom-complex, bore in their clinical characteristics no resemblance whatever to the affection. The

17. Gosselin: *Gaz. d. Hôp.*, 1880, ix, p. 65.

18. *Deut. Zeit. f. Chir.*, xxx, p. 574; also *Beiträg f. klin. Chir.*, vol. 9, p. 269.

19. *Gaz. de Hôp.*, 1888, p. 1357.

20. *Zeit. f. klin. Med.*, 1884, p. 410.

21. Thesis, 1896.

22. *Rev. Med. de Normand*, 1904, iv, 333.

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majority, although varying in certain features, are, for the most part, so strikingly similar that no doubt of their close relationship can be entertained. Neither Friedreich's eases nor any other of the early instances reported can be used as a standard either on the basis of their clinical or pathologic character. An adequate idea of the affection and its variations can only be obtained by a study of many cases at different stages of the process and by careful comparison of the clinical phenomena with the changes found in the central nervous structure where systematic pathologic examination has been made.

Not all the symptoms of the affection develop in its early stage. Several are late phenomena. Naturally, therefore, the number of typical symptoms presented by any given ease depends, in great measure, on the duration of the affection. Then some of the later symptoms tend to mask or obscure the earlier phenomena and thus alter the clinical picture. Finally, much depends on the extent of the process in the central nervous structure. Obvious as these facts may seem, they have not been given due consideration by many observers. In this connection I venture to assert my belief that the condition of the tendon reflexes, so long a bone of contention between the adherents for and against the maintenance of Friedreich's original type, is solely a matter of the duration, location or extent of the central lesion; and that the presence or absence of the knee jerks is, in itself alone, of no differential diagnostic value in this affection, and only indicates to us whether the process has or has not involved certain definite portions of the nervous structure.

Several cases, all in the early stage, because seen in young children from 3 to 10 years of age, have come under my observation. Five concern children 4 and 5 years old, in all of whom the affection was noticed first when the child began to walk, by its failure to acquire the power of equilibration. The brevity of the time allowed unfortunately forbids the giving of these cases in detail.

In all of these five eases the gait was unsteady; in three extremely so, these children walking with feet wide spread, from time to time hesitating, halting in their forward progress to sway several seconds over their center of gravity, as if about to fall, then moving forward, often with several short, quick steps in their effort to maintain their balance, approaching their objective point in a more or less indirect course.

In three of the five, well-marked ataxia of both upper and lower extremities was present, and was in all much more marked in arms and hands than in legs. In two speech was affected, in one associated with distinct involuntary accessory movement of lower facial muscles; in two speech was not acquired; in the fifth it was not yet abnormal. None of the other symptoms have yet appeared.

These cases are mentioned together because of the early period at which they came under observation, but also because in no single instance were the knee jerks lost.

For the privilege of reporting these cases I am greatly indebted to Dr. Bullard and to Dr. Thomas, from whose clinic at the Children's Hospital the cases come.

To these I wish to add a child of 10 years, which I saw in Senator's clinic, in which the knee jerks were greatly increased, and, in addition to the above well-

marked symptoms, choreiform movements of head and arms and nystagmus were present.

The six cases reported by Friedreich in 1861 presented many, though not all, of the features of our symptom-complex. Being the first cases to be clearly recognized as a clinical entity, apart from the ataxy of Duchenne, and so reported and carefully described, they attracted wide attention and were discussed everywhere. This universal interest, fostered by several later papers by Friedreich, and increased by subsequent reports of apparently analogous eases by other observers, soon led to the adoption of Friedreich's name as the synonym of the disease. Then appeared, on the part of certain writers, an attempt to construct a rigid standard, based on the symptoms of Friedreich's eases and of those reported soon after his article appeared, to which it was required that all cases should conform. For a brief period all went well. Soon, however, as the field of observation enlarged, there began to appear instances differing materially in features of their symptom-complex from the clinical picture considered by these observers as characteristic of Friedreich's disease.

Cases appeared, the apparent origin of which was not at puberty, but much earlier; others also appeared of later origin. In some the knee jerks were not absent, but present, and even increased. Impairment of vision, disturbance in action of the pupils and external ocular muscles and other evidence of cranial nerve involvement occurred, while the not very infrequent presence of disturbances of sense gave evidence of occasional participation on the part of the sensory sphere.

Among these instances and possessing nearly all of the phenomena of our symptom-complex in most pronounced degree are the eases reported by Everett Smith, Menzel, Nonne and Sanger Brown. These cases are of exceptional interest on account of the extreme degree the affection attained and the frequent occurrence of the more unusual symptoms, and especially bulbar phenomena. Smith's eases are of special interest to us, because of five children affected in a family of thirteen the affection began in four before the tenth year. Of the greatest importance, however, is the fact that we have, in certain eases of each series, the records of the pathologic changes at the basis of this symptom-complex.

Six autopsies are presented for our consideration. Nonne's case showed general smallness of the entire nervous system without signs of degeneration. This case as reported is an anomaly. If this was, as Nonne thinks, a congenital condition, it can not be explained why the symptoms did not become marked until well along in adult life, and then were markedly progressive up to time of death.

In all of the other cases extreme degeneration of the posterior columns of the cord was found, together with marked involvement of the direct cerebellar tract (if we assume, as seems to me probable, and as I think the plate of the cross-section of the cord indicates, that a part of the degenerated fibers, in the lateral columns of Smith's case, were fibers of this tract). The condition of Clark's column is also unfortunately not mentioned in this case. It is, however, specifically stated that cells of the gray matter were far less numerous than usual, especially in the posterior portion, and in some places only a scattered few were to be seen. This, taken into consideration with the fact that the cells and fibers of



this column of the gray matter of the cord have been affected in nearly every instance where a pathologic examination has been made, make it exceedingly probable that Clarke's column was involved.

If, therefore, we may include this case, we find this column also affected in every one of these five cases. In every case the posterior nerve roots were more or less degenerated. The central canal is usually blocked with cells and its epithelial lining lost. In addition to these well-defined lesions, slight changes were found in individual cases in the rest of the gray matter and in the anterior roots. In two instances the crossed, in one the direct, pyramidal tracts were involved in the degenerative change. In all but one of these cases there were found abnormal conditions of the medulla and cerebellum, consisting of a reduction in size as a whole, atrophy of medullary fibers belonging to the cerebello-spinal system, and in two instances fibers of the cerebello-cerebral tract in the brachia conjunctiva, and atrophic changes and reduction in size and number of the ganglion cells of the gray matter, including in Menzel's case some of the cranial nerve nuclei, the spinal accessory, hypoglossal, facial, and the motor nucleus of the fifth.

The finer changes are characterized by a loss of the medullary sheaths, a shrinking and granular degeneration of the ganglia cells, by a proliferation of the neuroglia and an increase in the glia cells. In other words, by a parenchymatous degeneration and an interstitial proliferation.

While it is not my intention, in this brief paper, to discuss the etiology of this affection, it is nevertheless of the greatest interest to note that that portion of the cord, at least, which is the seat of the greatest intensity of the process is that part which is formed last, and which is nearest in point of time, and perhaps in condition, to the embryonic state, namely, the columns of Goll, Clarke and Burdach. Of the elements composing their structure, the matrix, or neuroglia, remains the nearest to the embryonal state. The tendency of embryonic or immature tissue to proliferate, in response to trauma or other irritant, is well known. It may be that the primary step in this affection is a proliferation of the neuroglia, followed by a degeneration of the medullary fibers, which are, perhaps, through their immaturity or inherent lack of vitality, only too ready to degenerate.

The sclerosis of the direct cerebellar tract is, I think, to be regarded as purely secondary to the atrophy and disappearance of the cells of the column of Clarke, and that, whatever part the neuroglia may elsewhere play in the process, it is here increased only as a result of the loss of the medullary fibers.

Just why the pyramidal tracts should degenerate as they have in certain cases is much more difficult to answer. It seems possible to me that, in cases where there is extreme proliferation of the neuroglia in the region of the transverse fibers of the pons, the pyramidal tracts may be injured as they pass through these transverse bundles from the middle cerebellar peduncle. This does not explain, however, those instances where the pyramidal fibers in the cord alone are implicated, with no involvement above their decussation. Interesting, however, is the occurrence of ascending degeneration of these tracts in certain cases of gliosis and cavity formation in the cord. Here it is, also, of interest to note the singular proneness of Clarke's column to degenerate in these cases of syringomyelia, and the much greater frequency of involvement of the posterior columns in the gliosis and secondary degeneration in this affection.

Proliferation of glia tissue, in cases associated with structural defects, either congenital or acquired, in the cord, is, of course, well known. Of the greatest interest it seems to me, in this connection, is the fact that structural abnormalities of the cord have been found several times in Friedreich's disease; in fact, in one of the cases reported by himself two symmetrical canals were found in the lower dorsal region nearly corresponding to the columns of Clarke on each side; and in a case reported by Mackay, a picture of which I hope to show you later, marked structural anomaly was present. In our series, in Smith's case, an abnormal canal was present in the lumbar region. These defects lend strong support to the view that we have to do with, a process supervening on a developmental insufficiency, either in structure or inherent vitality, of the nervous system. This view is still further strengthened by the frequent strong family tendency to the disease, by the occasional history of its occurrence in other generations, and by the not infrequent presence in other members of the family, not affected by the disease, of marked anatomic, physiologic or psychical defects. Marie, in 1893, attempted to establish a differentiation of certain cases from Friedreich's disease on the basis of a difference in the clinical symptoms, laying especial stress on the age of onset and the condition of the knee jerks. A study of a large number of instances of the symptom-complex does not seem to support the contention.

The variations in the phenomena are seen to be merely a question of degree, the variations so merging into one another as to allow of no abrupt distinction. Neither do the results of pathologic examination permit of any sharp differentiation. Even in one of the first cases ever reported we find invasion of the lower portion of the medulla; in others the upper part as well; in still others implication of the pons and cerebellum. Moreover, some of the symptoms of Friedreich's disease are distinctly cerebellar in character, and, while I do not believe it essential that the cerebellum be affected for the production of these phenomena, they being also possible in disease of its connections with the rest of the nervous system, I believe it would be found affected much more frequently if microscopic examination of its structure was made.

Moreover, many of the phenomena of our symptom-complex have occurred in cerebellar atrophy, hemorrhage and other lesions, in the human being, and have been features of the phenomena following atrophy or experimental lesions of the cerebellum in animals. I regret that the time does not permit giving the details of these instances.

I may mention, however, among many other interesting instances, the results of the experiments of Luciani, in Italy, in which partial or complete extirpation of the cerebellum, in monkeys and dogs, was followed by muscular inco-ordination, loss of muscular energy, loss of muscular tone, tremor and oscillations of different parts of the body, curvature of the spine, forward inclination of the body, slowness of voluntary movements, nystagmus and muscular contractures; all of which symptoms are frequently met with in Friedreich's disease, and the most of which are almost invariably present.

#### DISCUSSION.

DR. C. F. WAHRER, Fort Madison, Iowa, asked whether the choreic movements mentioned by Dr. Fairbanks included the movements of the so-called *tic convulsif*; also whether there were any athetoid movements and if diminished nutritive change was noticed in the nerve tracts.

DR. H. E. GARRISON, Dixon, Ill., asked if Dr. Fairbanks has ever noticed any consumptive tendency in connection with



these children. The only case Dr. Garrison has seen which resembled it was a 5-years-old child whom she was called to see. A consultation had been held and the child was to be operated on for tubercular peritonitis. Dr. Garrison found the child completely paralyzed except in the left hand. She objected to the operation, for she saw no signs of tubercular peritonitis, and asked the physician to examine for tubercular organisms in the sputum and a few bacillus were found. The child, three months afterward, visited Dr. Garrison and remained for three weeks. When she came she was able to creep around. By judicious manipulation the development of the atrophied muscles was aided and the child is now apparently in perfect health and has since been able to enter school.

DR. A. W. FAIRBANKS said that the movements noted were not those of *tic convulsif*. The athetoid movements did occur, but so rarely that he did not include them in his summary of the signs. He is inclined to think that they were not athetoid movements, but rather choreic movements of slow character, simulating athetoid movements. There was extreme atrophy and degeneration of the peripheral nerves. Dr. Fairbanks thinks that there is no ground for the assumption that tuberculosis is an etiologic or pathologic factor. Tubercular processes are sometimes terminal factors of the disease, but do not form an integral part. He should not consider that the case mentioned by Dr. Garrison belongs to this class of disease because of its marked improvement. Instances do occur in which the disease does not progress for a time, but sooner or later it progresses and the patient dies. He believes that the more these cases are studied the more it will be found that they originate in childhood. The very slowly progressive symptoms in the early stages are overlooked by the parents.

## COLLODION AS A DRESSING AFTER INTRANASAL OPERATIONS.

A PREVENTIVE OF POST-OPERATIVE HEMORRHAGES.\*

KASPAR PISCHEL, M.D.

SAN FRANCISCO.

Since the publication of my first paper on this subject,<sup>1</sup> some improvements have been made in my method of using collodion as a dressing after intranasal operations. These were partly evolved from my own experience and partly from the suggestions of my colleagues.

Dr. E. Rixford of San Francisco suggested the use of compound tincture of benzoin as a substitute for collodion. I found it very reliable as a preparation of the wound for collodion; it dries the tissue nicely, so that the collodion sticks to it much better.

Dr. James F. Smith of San Francisco uses pieces of gauze instead of wisps of cotton. I have followed his suggestion.

Dr. C. W. Richardson,<sup>2</sup> Washington, D. C., applies the collodion with a probe; I had tried that before I selected my present method, but discarded it.

That the usual after-treatment is not satisfactory to many was well expressed lately at two European congresses where this question was discussed.

I therefore take the liberty to describe my method. After intranasal operations, we must choose between packing the nose or risking a postoperative hemorrhage. A reliable, firm packing of the nostril causes great discomfort and often a sleepless night, while the collodion dressing allows the patient to breathe even through the nostril operated on, but covers the wound against infection from the air and prevents secondary hemorrhages.

I have now used this dressing in 243 cases with perfect results in 233 cases. I had to replace the collodion dressing after a few hours in 4 cases. In 3 of these the hemorrhage occurred on the posterior end, in 1 case of polypoid degeneration of the erectile tissue in the anterior half. In 6 cases, or less than 3 per cent., the collodion dressing was not sufficient and had to be replaced by packing. The hemorrhages occurred in 5 cases from the posterior end of the lower turbinal. One of these five patients was a bleeder, with hypertrophy of the left ventricle, high blood pressure and traces of albumin in the urine, indicating the beginning of a shrinking kidney. The sixth case was a fibrous polypus from above the posterior end of the lower turbinal on a place on which I could not properly apply the collodion dressing.

I am aware that this method is far from perfect, but I hope that if some members of this Section take the matter up and try to improve on it they will perfect it to such a degree that there will be no more postoperative hemorrhages.

### TECHNIC.

After I have finished the operation and stopped the bleeding with adrenalin, I clean the field carefully, wipe over the wound and surrounding tissue compound tincture of benzoin on a cotton carrier, then cover the wound with a piece of sterilized gauze (about 1 by 2 cm.). I am particularly careful to press this around the posterior end, as from that point hemorrhages occur most frequently. These pieces of gauze I keep on hand compressed, so that they are stiffer and can be more easily introduced. I drop the collodion slowly on this gauze, beginning on the posterior end, while my assistant blows hot or cold compressed air into the nostril to quicken evaporation. The collodion and gauze form a white, firm membrane, which fulfills two purposes: it protects the wound against infection from the air, and prevents secondary hemorrhage. As an extra precaution, I instruct the patient to keep a little cotton in the entrance of the nose on the way home. This absorbs the little oozing of blood and serum which exists even when the nose is packed. The cotton may be changed as often as it is soaked; but the patient may take it out at home so that he can breathe through that nostril. This dressing I leave in the nose from four to six days; if left longer the edges become loose and too much discharge is kept back.

In order to remove the dressing, I cocaine the nose and apply some peroxid of hydrogen, which helps to loosen the dressing, which I then take out with a pair of pincers; frequently a few drops of blood follow this procedure.

For dropping the collodion on the wound an ordinary eye dropper will not do. The collodion would flow too quickly. It must be dropped on the wound slowly and carefully, so that it does not run down into the pharynx, an accident which would make the patient gag and cough. One might use a fine Eustachian catheter, on the wider end of which a small rubber bulb is mounted, fastened airtight with a rubber band. One filling of the tube with collodion is usually enough to cover the whole wound. I use a small metal tube 9 cm long, 1 mm. thick, with a tulip tip on one end, to fasten the rubber bulb. This tube must be cleaned out thoroughly after use.

### DISCUSSION.

DR. OTTO T. FREER, Chicago, regards dismissing patients after intranasal operations without tamponing as permissible after operations on the middle turbinated body, but a dan-

\* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Arch. of Otol., vol. xxxi, No. 5, 1902.

2. The Laryngoscope, vol. xiv, No. 9, 1904.



gerous practice to follow after resections of the lower turbinate or operations on the septum. A false security is created by the long duration of the bloodlessness about the wound due to cocaine and adrenalin, so that even a good-sized artery will not bleed. After some hours, however, relaxation of the vessel with dangerous bleeding is very apt to occur, and to last a long time before the surgeon can reach his patient. Dr. Pischel's method may be a good substitute for the tampon though Dr. Freer has had no experience with it, but to let the patient go without any precaution against delayed hemorrhage is a mistake. Dr. Freer said that he knows of a case in the practice of a colleague in which the patient bled to death in spite of packing, and of a hemorrhage in the practice of another physician in which the patient became almost exsanguinated before relief came. It is therefore not safe, he said, to send the patient home unpacked. The physician can not be sure that he will observe instructions and will not sneeze and blow the nose. Dr. Freer has seen a violent delayed hemorrhage follow the use of the galvano-cautery.

DR. HAL FOSTER, Kansas City, Mo., said that if physicians err at all they would better err on the side of safety and use some packing in the nose. There may be many cases without hemorrhage, but they are likely to have an unpleasant experience at any time. He would feel safer with a packing in the nose.

DR. ROBERT C. MYLES, New York, said that the history of nasal operations resembles in some respects the work on the throat. Mackenzie did more operations without a death than probably any other man, and he had no hemorrhage. Dr. Myles has had several hemorrhages that were very distressing. He adopted the practice of putting nothing in the nose and got along very nicely until he would have a hemorrhage in the midst of a busy day, and then he would begin packing all of that class of cases. It is often advisable, he said, to remove large pultaceous masses of tissue from the anterior turbinate when these cause distress in sleeping and breathing or in the ear. The removal with snare, scissors or trephine, of the redundant tissue of the turbinate and the periosteum gives often permanent freedom, but hemorrhage frequently occurs. No doubt there are many evil consequences from packing and from the pressure. If patients could be controlled it would be better not to pack. Physicians pack in many cases in which, possibly, it is not needed, because of the danger of hemorrhage. When called to these cases of hemorrhage there is usually a great loss of blood before the physician arrives.

DR. KASPAR PISCHEL, San Francisco, declared that just such experiences as Dr. Richards has described compelled him to use packing before 1901. In his own nose the packing was so disagreeable that he began to look for something else. He covers the whole wound with collodion. The same method is used after operations on the middle turbinate and on the septum.

### LESSONS TO BE LEARNED FROM THE PRESENT OUTBREAK OF YELLOW FEVER IN LOUISIANA.\*

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The present seems to be a suitable occasion to invite attention to several points in connection with the epidemic occurrence of yellow fever in the United States at the present as well as at other times. In the discussion of the symposium on yellow fever at the meeting of the American Public Health Association in Washington in 1903, I called attention<sup>1</sup> to the necessity during the epidemic season for requiring physicians, in cities where yellow fever is prevailing or likely to prevail, to report promptly to the authorities all cases of

fever of any kind coming to their notice. This is necessary in order that there may be no delay in the institution of proper measures to protect the community against extension of the disease if it be yellow fever, for this extension will almost surely take place in the more southern latitudes if the patients are not protected from mosquitoes at the outset. If all cases of undetermined fever were promptly reported and at once protected from mosquitoes<sup>2</sup> it would hardly be possible for the disease to spread if it were yellow fever; on the other hand, where the physician waits for the appearance of black vomit, the golden opportunity passes by, for it has been shown that in practically all cases the disease can not be communicated after the fourth day of the fever. For this reason the diagnosis should be anticipated, and all febrile patients should be immediately protected from mosquitoes until it is shown by actual demonstration that they are not suffering from this disease. Epidemics do not follow every introduction of yellow fever; mosquitoes becoming infected may die before they bite a non-immune, or the patients may happen to be treated in a locality free from *Stegomyia*. A group of cases of yellow fever occurring without black vomit usually receives the designation bilious remittent fever, a diagnosis that should be erased from our text-books. Bilious remittent fever, acute in type and of short duration, appearing in the United States, is yellow fever, and it should be so regarded. Bilious remittent fever was formerly regarded as a type of malarial remittent, but that was before the use of the microscope was found to be necessary for a positive diagnosis of malarial infection. We know now that malarial fever is not a disease of cities, but of outlying districts, while the bilious remittent fever, so called, has been recorded in the cities, in epidemic form, and in such intimate association with yellow fever that by some, the diseases were declared identical, and by others the latter was said to be only a modification of the former. Most interesting and important in this connection is the statement cited by La Roche,<sup>3</sup> in his chapter on bilious remittent fever, that "the morbid appearances revealed on dissection are the same in remittent as in yellow fevers." This statement, however, was not wholly accepted by him, for he calls attention to the bronzed appearance of the liver in certain remittents, a condition that we know results only from malarial pigmentation. Now that we can so easily differentiate malarial remittent and typhoid from yellow fever, the diagnosis is much less difficult, except where yellow fever occurs as a complicating infection.

Our confrères in Havana have demonstrated to us that it is possible to prevent the epidemic occurrence of yellow fever, while occasionally admitting cases of the disease into the heart of a city in which the climatic and other conditions are known to be most favorable for its extension in epidemic form, and in which there are more susceptible persons now than ever before. The method suggested here is in many respects similar to, and is based on, the one adopted during the American occupation of Havana.

Since then it has been sufficiently demonstrated, in 1903 and again in 1905, that under the lax system heretofore and now in vogue, yellow fever can easily secure a firm foothold in certain of the southern states and escape recognition until it has passed almost completely

\* Read at the Thirty-first annual meeting of the American Public Health Association at Boston, September 25-29, 1905.

1. Report of the Proceedings of the American Public Health Association, vol. xxix, p. 291.

2. Since this paper was read, I have been informed by Dr. E. Liceaga, president of the Superior Board of Health of Mexico, that the line of procedure indicated is now being followed in his country.

3. Yellow Fever, La Roche, Philadelphia, 1855, vol. 1, p. 590.



beyond control. On both occasions cited, the outbreak was suppressed or limited only by the intervention of the general government, which, through the energetic action of the U. S. Public Health and Marine-Hospital Service, finally succeeded in checking two epidemics that threatened to become little less than national calamities. Great credit is due to those officials for the success that was attained in spite of the extreme delicacy of the situation and the passive opposition encountered from many quarters.

Our experiences in Cuba have shown that for the exclusion and suppression of yellow fever absolute hygienic control is necessary, not only of the people at large, but of the patients as well, and especially of the practicing physicians. The aim of modern medicine is the prevention of disease rather than its cure, and the safety and welfare of the thousands of persons exposed demand that the proper measures be instituted and rigidly enforced. No valid argument can be brought forward to show why the United States should not be kept as free from outbreaks of yellow fever as the city of Havana, its former endemic home has been, during the past four years.

To attain this result the following requirements seem to be essential:

1. Our physicians, or at least those who are in control, must disabuse their minds of the impression that black vomit necessarily occurs in the majority of cases of yellow fever.

2. During the epidemic season, viz., from about May 1 to October 31, and in the epidemic zone, physicians should be required to report to the health authorities, immediately, all cases of fever of any kind that come under their observation, whether among their patients or not, and failure to do so should be made punishable under the law.

3. The board of health should be authorized to appoint, with proper compensation, a commission of three experts, all of whom should be men of high reputation as diagnosticians. It should be the duty of this commission to visit without delay all cases of fever reported to the health authorities, and the onus of diagnosis should rest on the commission and not on the attending physicians. They (the commission) should visit each patient daily until the diagnosis is established or the patient sent to hospital, and they should forward promptly to the health department a written report at each visit. The commission should determine whether or not the patient shall be treated as a possible case of yellow fever, and their decision should be final and obligatory on all concerned.

4. All patients presenting the symptoms of yellow fever, and all cases not diagnosed but remaining under suspicion, should be promptly removed for treatment to a hospital especially located and provided with wire screens and mosquito nets, and the whole or a portion of which has been set apart for that purpose. The yellow fever wards or hospital should be under the direct control of the senior diagnosis commission, and the patients should be treated by physicians appointed only on their recommendation and acting under their direction.

5. In exceptional cases, to be determined by the commission, patients under observation awaiting diagnosis could be treated in their homes beneath mosquito netting, and in rooms properly protected with wire screens, until the nature of the case had been finally settled to the satisfaction of the commission.

The commission and not the attending physician

should be held responsible for the enforcement of all clinical measures necessary for the protection of the community, and they should be empowered to employ such help as seemed in their judgment to be required. They should also be assisted at times by subcommittees appointed on their recommendation.

Under such a system, conscientiously carried out, the occurrence of an epidemic of yellow fever in any city would become an impossibility. Objection can not be made on the ground of expense if the members of the diagnosis commission are paid only for every visit to a patient; under such an arrangement the cost to the city would be trifling when compared with the losses now sustained by individuals and the whole community through the failure of practicing physicians to recognize and report mild cases of the disease. And herein lies the crucial point. The diagnosis must be anticipated and the proper precautionary measures be taken before the disease has fully declared itself. Diagnoses of malarial remittent, and above all of bilious remittent fever, must not be accepted as conclusive until the presence of malarial or other parasites has been demonstrated to the satisfaction of the members of the diagnosis commission. Attention was called two years ago<sup>4</sup> to the fact that over and over again, since the time of Benjamin Rush, yellow fever has stalked abroad in our cities, unrecognized, under the guise of bilious remittent fever. The time has come when a diagnosis of bilious remittent fever should no longer be accepted, for there is no such disease *per se*. We may have malarial fever complicated with jaundice, but this should not change the diagnosis of malaria any more than an accompanying icterus would change a diagnosis of typhoid fever. Similarly a complication of malaria no longer justifies the diagnosis of typho-malarial fever, and that term has properly been discarded. In numerous instances it is stated in the records of the older epidemics of yellow fever that the disease was preceded by, or began as, a bilious remittent fever, just as in more recent times physicians have believed that typhoid fever began as malarial fever. The conclusion is equally untenable in both cases, and the deduction is obvious that cases of so-called bilious remittent fever must be regarded and treated as cases of yellow fever, unless a satisfactory specific cause for the condition can be demonstrated beyond a doubt. It is proper to mention here that in every one of the twenty-two cases of yellow fever purposely inoculated by the Army Board in Cuba, a diagnosis of bilious remittent fever would have been justified if it had not been known that they were produced from true cases of yellow fever, for, although some of them were severe, black vomit was absent from all.

It may seem unnecessarily severe to require physicians under a penalty, to report all cases of fever coming under their observation, but no other means will attain the desired result, and the enormous interests at stake demand that the methods instituted be thorough and that they be rigidly carried out. The appointment of a board of diagnosis, as has been suggested, will relieve the attending physician from the odium that accompanies a diagnosis of yellow fever in a doubtful case, and the board, fully appreciating the responsibility that rests on them, may be relied on to do their duty. During the discussion on yellow fever before the American Public Health Association at its meeting in Washington two years ago, already referred to in my remarks, which were badly

4. Journal Association of Military Surgeons, 1903 (No. 4), vol. xiii, pp. 193, 199 and 200.



misquoted.<sup>5</sup> I urged the necessity for requiring physicians, under a penalty, to report all cases of fever in order that they might be examined by a board of experts (as was done in Cuba), and treated as cases of yellow fever until the diagnosis was established. Only last month, in a conversation on this subject with a physician from a large city in Texas, he laughingly remarked, "We never report our cases of yellow fever until we have about a dozen of them!"

The present epidemic in and about New Orleans only serves to emphasize the necessity for such regulations as are here suggested, and this necessity is further emphasized by the statement in the public press of September 5 that "Inspector Brady attributed the continued spread of the disease to the unwillingness or inability of physicians to diagnose mild cases of yellow fever, and that physicians of standing and ability look for black vomit before making a diagnosis." We have elsewhere<sup>6</sup> cited the occurrence of the same difficulty at Key West in 1889, and we again assert that these physicians may be thoroughly conscientious and able men, but they are baffled by the differences between the aspects of the disease as they actually find it and as they have been taught by the best authorities to expect to find it. It is the manifest duty of local health authorities, therefore, to relieve the physician of the burden of diagnosis and to leave that and the adoption of protective measures to the board of expert diagnosticians.

In this connection I beg to be permitted to call attention to the present situation at Jackson Barracks, a station of two batteries of coast artillery, in New Orleans. By the seventh day of the present month a number of cases of yellow fever had appeared in the neighborhood and seven of them in a block that approached within one hundred feet of the officers' quarters. Still the garrison has not been removed and up to the present time no single case has occurred among them; even should a case or two appear an epidemic is not feared. The reason for this is simply that the medical officers know that it is absolutely within their power to prevent any epidemic extension of the disease; they are constantly on the alert, and all cases of fever are handled in the beginning as though they might be yellow fever.

Again, at Fort McIntosh, in Laredo, Texas, in 1903, there were only five cases of yellow fever in a command of 111 officers and men, while in the town alongside them over 1,000 cases and more than 100 deaths occurred. It was found that the five men who became infected had violated orders by visiting the town at night without wearing the prescribed mosquito head-nets, leather gauntlets and leggings.

If, in the presence of cases of yellow fever among and around them, garrisons of soldiers can be protected from the infection in anything like epidemic form, it necessarily follows that the same measures and the same degree of vigilance will protect a community, provided the physicians do their full duty and they are properly assisted by the authorities. The subject is one involving the lives and interests of thousands of innocent persons, and the secret of success lies in eternal vigilance with the determination to allow no case, however mild and doubtful, to escape the fullest precautions.

5. Reports of the Proceedings of American Public Health Association, vol. xxix, 1904, p. 291.

6. Journal Association of Military Surgeons, 1903, vol. xiii, No. 4, p. 201.

The Better Surgeon.—Better is the surgeon who saves a finger than he who amputates a leg.—*Proverbs Up to Date.*

## TEST TYPES ACCORDING TO THE GEOMETRICAL PROGRESSION OF DR.

JOHN GREEN.\*

CHARLES H. WILLIAMS, M.D.

BOSTON.

In 1868, Dr. John Green, of St. Louis, wrote as follows:

The letter proven of Snellen are deservedly the acknowledged standard for determining the acuteness of vision. They are, however, somewhat imperfect both in plan and in the execution of the smaller letters. The defects in plan consist in the selection of letters which are not so uniform in size and character as is to be desired and still more in the fact that the gradations of size in the successive numbers of the series are not uniform. I have now to propose a new series—bearing the constant ratio of .795 and combining the advantage of regular geometric progression with the preservation of all the important numbers of Snellen.

A series of such numbers in Gothic form was published in the transactions of the American Ophthalmological Society for 1868.

Again, at the meeting of the Fourth International Ophthalmological Congress, held in London in 1872, Dr. Green read a paper on "Some Improvements in Test Letters," and presented a series of letters arranged according to the geometric progression, in which a constant ratio of  $1 : \sqrt[3]{.5}$  ( $1 : 0.7937$ ) was adopted. He said:

This series includes all the most important numbers of Snellen and contains very few fractional quantities. After four years of constant use I now venture to recommend this ratio of gradation for general adoption.

So far as I know, these test-types were never placed on the market for general sale. No public recognition was made of the soundness of this gradation until the paper by Dr. E. Javal, of Paris, which was read at the Section of Ophthalmology of the Thirteenth International Congress of Medicine at Paris in 1900. He acknowledged the work of Green in 1868, but recommended a geometric progression on the ratio of  $1 : 1.41$ , that is the  $\sqrt{2}$ . He concluded his paper with this sentence:

En effet je ne doute pas qu'avec le temps, les échelles a progression géométrique proposées par Green dès 1868, ne soient universellement adoptées.

The standard of normal acuteness of vision proposed by Snellen more than forty years ago, and which has been so universally adopted, namely, the ability to recognize isolated capital letters whose height subtends a visual angle of five minutes, and the width of whose component lines subtends an angle of one minute, ought to be retained, but we must remember that when Snellen made his experiments to determine the smallest visual angle at which letters could be recognized by normal eyes, he included in this class all eyes having an error of refraction of less than one diopter. The result is, for normal eyes free from errors of refraction, the visual angle of five minutes is somewhat too large, since these eyes can see letters which subtend a smaller angle than five minutes, and in arranging a new series of test-types at least one line of letters should be provided which subtends less than the five-minute angle. If we start with an accepted testing distance of five meters, it will be best to have the letters of the smallest line of test-types of such a size that at a distance of four meters they will subtend the standard visual angle of five min-

\*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



utes, and if these letters can be read at the five-meter distance they will represent a vision of  $5/4$  (or 1.25) of the Snellen normal. Taking four meters for our smallest line of test types, equal to  $V.=5/4$  (or 1.25), and fifty meters for the largest line, equal to  $V.=5/50$  (or 0.1), as representing the extreme range that it is desirable to cover in such a series of test-types, let us construct a series of figures for the intermediate lines according to the proposed ratios of Green and of Javal, and compare them with each other and with the Snellen series.

Beginning with 4 (4 meters) and applying the Green ratio for an ascending series of  $1:\sqrt[3]{2}$ , or  $1:1.2599$  (approximately 1.26), we get the following:

Let 4 = the number for the first line, and  $x$  = the number for the next line.

$4 : x = 1 : 1.26$ .

$x = 5.04$ .

For the next line:

$5 : x = 1 : 1.26$ .

$x = 6.30$ .

For the next:

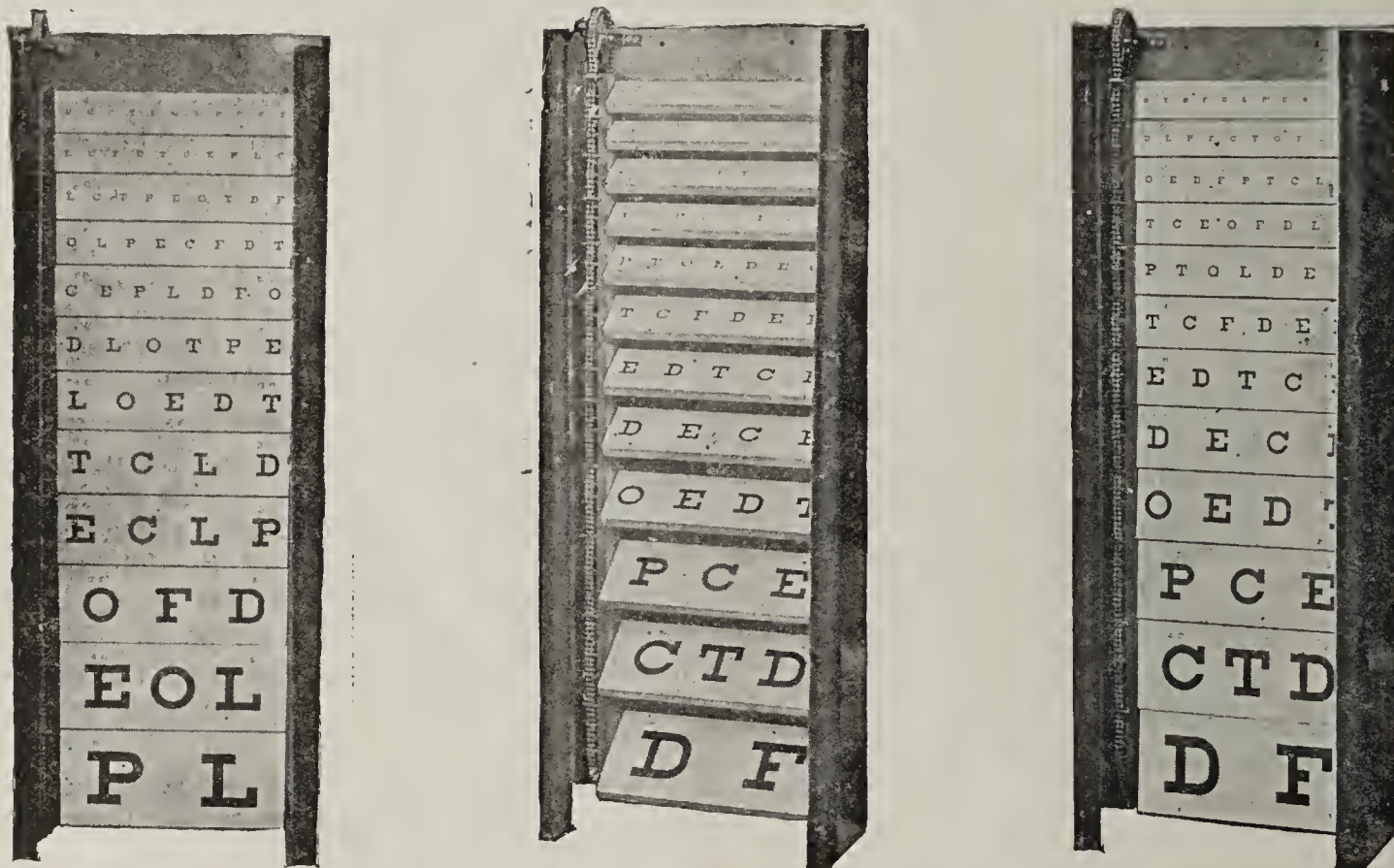
$6.3 : x = 1 : 1.26$ .

$x = 8$ .

In this series of Javal there are not enough lines to get the finer differences needed between the different lines of test-types, especially in the smaller sizes of letters, also there are too many fractions, but this last could be improved by constructing a series with the same ratio, 1.41, but beginning with 3.5 instead of with 4. In this case the approximate series would be 3.5, 5, 7, 10, 14, 20, 28, 39, 55.

Snellen's series is 5, 6, 10, 15, 20, 30, 50. It will be seen that the ratio of Green gives a greater number of lines where most needed and is better adapted to the needs of every-day use, where small differences in acuteness of vision are to be tested.

In the series of test letters here presented, the shape of the Snellen block letter has been retained, only those letters have been used which could be drawn in a square with equal height and width, the height of each letter is five times the width of its different parts, and the height of each letter subtends the Snellen visual angle of five minutes at the distances in meters shown at the



It will be found that, beginning with 4, the fourth figure in such a series will be just double the first, and, as this rule applies throughout the series, the numbers are easily found as follows: 4, 5, 6.3, 8, 10, 12.6, 16, 20, 25.2, 32, 40, 50.

Again, if we apply Green's ratio for a descending series of  $1:\sqrt[3]{.5} = 1:0.7937$  (approximately 0.8), we get:

50 for the first line:

$40 : x = 1 : 0.8 = 40$  for the second line.

$40 : x = 1 : 0.8 = 32$  for the third line.

The fourth line will be one-half of the first, and so on through the series, giving a descending series of 50, 40, 32, 25, 20, 16, 12.5, 10, 8, 6.2, 5, 4, which is practically the same as the first series. The exact figures for such a series, beginning with 4 and taking Green's ratio of  $1:1.2599$ , are as follows: 4, 5.0396, 6.3494, 7.9996, 10.0787, 12.6982, 15.9985, 20.1565, 25.3952, 31.9954, 40.3110, 50.7878, but for practical purposes the approximate series already given is all that is needed, and the difference between the series, approximate and exact, is very small.

Javal's ratio of  $1:\sqrt{2} = 1.41$  gives the following series: 4, 5.6, 7.9, 11.2, 15.8, 22.3, 31.4, 44.3, 62.5,

left of each line in red numbers. The ratio is the geometrical ratio of Green:  $1:\sqrt[3]{2}$  ( $1:1.26$ ) for the ascending series, and  $1:\sqrt[3]{.5}$  ( $1:0.8$ ) for the descending series. The letters have been drawn with great care, and the plates have been engraved so that the printed height of the letters will not vary more than  $1/100$  of an inch from the calculated sizes. On the right hand side of each line is another number in red, giving the acuteness of vision in decimal notation, which will be found convenient by those who have used the Monoyer scale. These decimal numbers are adapted to a testing distance of five meters.

By using the numbers on the left hand of each line the letters can be used at any desired distance, since the ratio between the lines is a constant one and the Snellen formula of  $V. = d/D$  applies for each distance. Thus, at a distance of five meters the person who reads the five-meter line will have  $V. = 5/5$ , or  $5/10$  if he reads the third line below it; so at a distance of 4 meters, if a person reads the top line he will have  $V. = 4/4$ , or  $4/8$  if he can only read the third line below it, and so on through the series. The numerator of the fraction being the greatest distance in meters at which the letters are



read, and the denominator being the distance in meters at which the letters subtend the visual angle of five minutes, according to the Snellen formula  $V. = d/D$ .

In the series of letters now presented the reversible feature is new. Each line of letters is printed in duplicate, with a different arrangement of letters on each, these lines are pasted on slats and the slats mounted in a suitable frame so that they all can be rotated by pulling a cord from across the room near the trial case of glasses; in this way the series of letters can be changed at will and a new series used for each eye. The plan of the reversible slats having been found somewhat expensive in its mechanism, a simpler arrangement has been contrived; the same series of lines are pasted on two sides of a long card, the card is then suspended from a simple support that can be rotated either way by a cord from across the room, so that each side of the card can be exposed to view at will.

The different distances in meters at which the letters subtend the visual angle of five minutes, and the heights of the letters on each line, in fractions of an inch are given in the following table as calculated by the formula  $X = 2 AB \sin. \frac{1}{2}a$  in which  $X$  is the desired height of the letter.  $AB$  is the distance of the letter from the eye, and  $a$  is the visual angle of five minutes.

Distance in meters at which height of letters subtends a visual angle of five minutes.	Height of letters in fractions of an inch.
50.....	2.88
40.....	2.29
32.....	1.82
25.....	1.44
20.....	1.14
16.....	.91
13.....	.72
10.....	.57
8.....	.45
6.....	.36
5.....	.29
4.....	.23

The reason for giving the heights of letters in fractions of an inch instead of in metrical numbers is that our engravers are not accustomed to work with metrical measurements and errors are less likely if they use the units they are familiar with in preparing the plates. Another feature in connection with the arrangement of test letters on the slats is the constant illumination, which, in a set of test letters used to compare variations in vision from month to month or year to year, is important.

As far back as 1866 Dr. H. Derby of Boston wrote as follows in a paper read before the American Ophthalmological Society for that year: "Let the letters used as a test be placed in a room from which the daylight is excluded, and let them be illuminated by a steady flame, uniform in intensity of illuminating power, and placed always at the same distance from the letters." The letters now presented are illuminated by a series of sixteen eight-candle power incandescent lamps with frosted bulbs, placed on each side of the test letters at equal intervals, eight lamps on each side, and screened from the patient by a tin shield. In this way a very even and clear illumination of the test letters is obtained. The lamps are placed in a vertical row on each side of the letters and 25 cm. in front of the plane of the test card. Each line of letters is engraved on a separate plate, so that they can be arranged and printed with the larger letters at the top or at the bottom of the series as desired.

#### DISCUSSION.

DR. DUDLEY S. REYNOLDS, Louisville, said that at thirty-five feet he can see the letters in the second line, that would indicate acuity of vision  $= 8/5$ . In Snellen's test the basis of the

test is the establishment of positive infinity at six meters. A nearer approach than that, Dr. Reynolds thinks, would impair the value of the test. Then, too, this artificial light gives such intense illumination as to change the visual angle; it establishes an unnatural condition. No one has such illumination on the street or to read by, and it seems to him that the scientific value of the test is destroyed by this brilliant lighting.

DR. G. C. SAVAGE, Nashville, Tenn., said that there are two sets of corneal curves. The refractive curves pass through the center of the cornea. The corneo-retinal curves or meridians may pass through the center of the cornea or may not. If the anterior pole is five degrees to the nasal side of the corneal center, then it is impossible for a perfect focus to be on the macula in that eye. The anterior pole is a point on the cornea cut by the visual axis. The posterior pole is the center of the macula. If the axis cuts the cornea to one side of the corneal center, the best focus must be to one side or the other of the macula. It has saved him time and trouble, before sitting down to refract a patient, to take this into consideration. If the anterior pole corresponds to the center of the corneal curve, the patient will have 20/15 vision, but if the anterior pole is located to one side or other of the corneal curve the patient will not have more than 20/20, or perhaps not that.

DR. C. H. WILLIAMS said that Dr. Reynolds does not seem quite to appreciate the fact that the idea of these test types is to retain the Snellen standard angle of five minutes and his formula. Dr. Reynolds' statement that he can see the letters across the room at a greater distance than six meters demonstrates exactly what these types are intended for, and that is that there are a great number of patients who have a greater acuteness of vision than 6/6 of Snellen's standard, and it is desirable to have a form of types which will retain that standard and at the same time enable the ophthalmologist to measure vision of a little more than the six-sixths of his types. In reply to a question Dr. Williams stated the lights he uses in his office are a little less brilliant perhaps and he is not prepared to advocate such intense illumination, though he thinks it necessary to get at a standard illumination.

## Special Article

### IMMUNITY.

#### CHAPTER XXVII—(CONTINUED).

##### TUBERCULOSIS.

The tubercle bacillus undergoes no proliferation outside the body and its occurrence in nature depends on the distribution of the infected excretions, particularly the sputum, of man. Hence it is found most abundantly in the rooms and homes of patients and in tuberculous wards of hospitals. Reception of sputum on the handkerchief of the patient, where it subsequently dries, and its discharge on the floor in public places, where it quickly becomes pulverized, as in street cars, are conditions which favor dissemination and the infection of others. In unconfined places which are exposed to the action of light and sun, as the streets and sidewalks, the danger is less on account of the shorter life of the organism under these conditions and the greater volume of surrounding air. The calculation of Heller that a tuberculous patient may excrete 7,200,000,000 of bacilli in a day suggests the number which may lurk in a single misplaced portion of sputum. Sputum which is kept moist is not a source of particular danger, inasmuch as ordinary currents of air do not dissipate it in the form of infected drops. Droplets of sputum which are expelled by coughing contribute greatly to the infected dust which surrounds a patient.

Large quantities of bacilli are often excreted in the feces in intestinal tuberculosis and in the urine in genitourinary tuberculosis, or in general miliary tuberculosis with localization of the process in the urinary organs. The pus from tuberculous abscesses commonly is infectious.



Great interest attaches to the possibility of infection of man by the milk and meat of tuberculous cattle. Previous to 1901, through the work of Smith and others, the opinion had been gaining ground that the bacilli of human and bovine tuberculosis are not identical. It was not always possible to produce tuberculosis in cattle by feeding them or causing them to inhale tuberculous sputum or pure cultures which were highly infectious for other experiment animals, although bacilli of bovine origin invariably caused the disease in cattle when administered in a similar manner. It seemed then that the two bacilli are not identical in their pathogenic powers. Koch having repeated these experiments without being able to infect cattle with bacilli of human origin, expressed his belief that the converse also is true, i. e., that the bovine bacillus is not pathogenic for man. Perhaps the strongest argument in favor of this view is the circumstance that primary tuberculosis of the intestines and mesenteric glands is very rare in children, who drink a great deal of milk, in spite of the great prevalence of tuberculous cows. Many protests followed the announcement of Koch's views, and in a short time a number of investigators showed, first, that it is possible in some cases to produce tuberculosis in cattle with tuberculous material from man, and, second, that infection of man with the bovine bacillus is possible. Unquestionable proof of the latter consists in the development of localized tuberculosis in those who have performed autopsies on tuberculous cattle (Ravanel and others). These occurrences, of course, do not prove the identity of the two organisms, for there is still abundant reason to believe that the two bacilli are most pathogenic for their respective, natural hosts, and much less pathogenic for the alternative hosts. Theobald Smith has pointed out that many experiments in which the pathogenicity of the human bacillus for cattle was investigated by the feeding of tuberculous sputum, must be repeated, inasmuch as it was not determined in advance whether the organism contained in the sputum was of the human or bovine type. Naturally, absolute conclusions as to the pathogenicity of the human bacillus for cattle could not be drawn with this fact undetermined. In some cases the combined sputum from many patients has been fed to cattle, and since both human and bovine bacilli may have been administered, the results are valueless in relation to the point under discussion. In each instance the organism should be obtained in pure culture, its identity as a human or bovine bacillus determined and the experiment performed with such pure cultures. The following points serve to distinguish the bovine bacillus from the human: First, the bovine bacillus is shorter than the human; second, when first cultivated it grows feebly in media in which the human bacillus flourishes; third, it has a higher virulence for rabbits and guinea-pigs; and, fourth, it produces more extensive lesions in cattle. To these Smith has added a fifth point, which he has found to be distinctive in a large number of cultures. In bouillon which contains 5 per cent. of glycerin and which is 2 per cent. acid to phenol phthalein the bovine bacillus produces a neutral or faintly alkaline reaction in from three to several weeks, whereas the human bacillus, after causing temporary alkalinity, produces a terminal acidity of from 0.5 to 1.5 per cent. On the basis of this test and other points the bacilli of two cases of mesenteric tuberculosis in man were recognized as bovine in type. In view of the fact that infection of man with the bovine bacillus has been shown to be possible, we are still justified in considering the meat and especially the milk of tuberculous cattle as the probable sources of infection in a limited number of cases.

**Differences in the Bacilli.** The following points serve to distinguish the bovine bacillus from the human: First, the bovine bacillus is shorter than the human; second, when first cultivated it grows feebly in media in which the human bacillus flourishes; third, it has a higher virulence for rabbits and guinea-pigs; and, fourth, it produces more extensive lesions in cattle. To these Smith has added a fifth point, which he has found to be distinctive in a large number of cultures. In bouillon which contains 5 per cent. of glycerin and which is 2 per cent. acid to phenol phthalein the bovine bacillus produces a neutral or faintly alkaline reaction in from three to several weeks, whereas the human bacillus, after causing temporary alkalinity, produces a terminal acidity of from 0.5 to 1.5 per cent. On the basis of this test and other points the bacilli of two cases of mesenteric tuberculosis in man were recognized as bovine in type. In view of the fact that infection of man with the bovine bacillus has been shown to be possible, we are still justified in considering the meat and especially the milk of tuberculous cattle as the probable sources of infection in a limited number of cases.

Comparatively few cases of undoubted congenital tuberculosis have been observed, and in such cases the mothers are usually in an advanced stage of the disease. It is probable that the organisms reach the fetus following metastatic invasion of the placenta. In a number of cases in which the mother had advanced tuberculosis the organs and blood of the fetus (stillborn or dying soon after birth), contained very many bacilli, although histologic lesions had not as yet been produced. Warthin and Cowie suggest that the tissues

of the fetus may possess considerable immunity in such cases. Baumgarten is a strong believer in the possibility that tubercle bacilli may pass to the fetus during pregnancy and, remaining latent in some of the tissues (lymph glands) for a long period, cause active tuberculosis later in life. Others who are less radical still admit that we should consider this as a possibility (Warthin and Cowie, Harbitz).

Pulmonary tuberculosis is by far the most common form of the disease in man, and without doubt this is due to inhalation of the dried and pulverized sputum of tuberculous patients. Direct drop infection may well occur in the case of those who are in prolonged and intimate contact with the sick. In kissing direct infection from mouth to mouth is a dangerous possibility.

The reason for the inception of pulmonary tuberculosis in the apex in so many cases is not clearly recognized, although it is often referred to the relative immobility of this tissue, which renders excretion more difficult and affords improper aëration. These conditions not only allow the organisms to accumulate and to proliferate, but the insufficient oxygenation probably causes a low tissue resistance. The suggestion which has been made that apical tuberculosis is the result of extension of the disease from the cervical glands does not correspond with the condition seen in tuberculosis of adults in whom the cervical adenitis is commonly wanting.

The "anatomic tubercle" is a primary infection of the skin; lupus vulgaris, it is supposed, may be either a primary infection or secondary to tuberculosis in some other organ; ulcerative tuberculosis is usually a secondary lesion, often occurring by direct extension from tuberculous lymph glands. Tuberculosis of the nose is uncommon. Infection of the tonsils is not infrequent and probably is a common cause of secondary tuberculosis of the cervical lymph glands. Primary infection of the pharynx sometimes occurs and large, coarse granulations of this surface have been proved in some cases to be of a tuberculous nature. Tuberculosis of the pharynx and larynx, however, most often arises from infection with tuberculous sputum.

In the process of dust infection of the lungs, and also by other means, many organisms lodge on the mucous membranes of the nose, mouth, pharynx, trachea and larger bronchi, but usually without producing a tuberculous infection. The conditions at these points, on account of the movement of the ciliated epithelium, tortuosity of the nasal channels, excretion of the bacilli with mucus are not favorable for infection.

Tuberculous ulcers of the esophagus and stomach are very rare, as is primary tuberculosis of the intestines. Secondary tuberculosis of the intestines is not infrequently caused by the infected sputum which the patient swallows. Primary infection of the genital organs may be caused by direct contact.

That tubercle bacilli have often been found on the hands and finger nails of the sick as well as on those who are intimately associated with them, is a significant fact in relation to the possibility of infection by direct contact.

From a given focus tubercle bacilli extend to other structures in several ways. On more or less theoretical grounds one speaks of "extension by growth" of the organism into contiguous tissues. The commonest method of extension, however, is that of metastasis by way of the lymph channels. When bacilli penetrate a surface, with or without formation of a lesion at the point of entrance, as in the mouth cavity,

**Lymphatic Metastases.** intestinal canal, or bronchial surface, they are carried to the lymph glands of the region in which the tuberculous process is instituted. As in plague, the infection atrium at

times is indicated by the set of glands which is involved. In certain localities the secondary invasion of other structures takes place directly without the intermediate involvement of lymph glands, as in tuberculous meningitis caused by extension from the middle ear, and tuberculous peritonitis or pericarditis by extension from the pleura. Very frequently tuberculosis of the lymph glands and other tissues heals spontaneously, as described below. In case such healing does not occur, metastases eventually continue from one lymph gland to another and to new sets of glands until the larger lymph chan-



nels are reached, as a consequence of which extensive regional or general tuberculosis results. Accidental localization of a focus often causes a wide departure from the slow development just described. Not infrequently tuberculosis in a lymph gland, which is contiguous to a large lymph channel, as the thoracic duct, invades the wall of the latter, the surface softens from caseation or liquefaction and the contents, impregnated with countless bacilli, are gradually thrown into the circulation. Miliary tuberculosis, first of the lungs and then of other tissues, through the arterial circulation, follows such an accident. A similar course, with variations in localization, follows invasion of the walls of branches of the pulmonary artery or vein. Rupture of a focus into a bronchus is followed by regional or more extensive dissemination of the bacilli throughout the lungs by respiratory forces. A slower eccentric extension is seen, particularly in the lungs, in which smaller and larger areas of consolidation occur. By means of short lymphatic metastases into contiguous territory new foci are instituted, which eventually fuse with the original lesion. It is suggested and generally believed that bacilli may be carried longer or shorter distances by wandering phagocytic cells. When tuberculosis once involves a surface like that of the pleura, peritoneum, pericardium or pelvis of the kidney, the whole surface frequently becomes involved in thickly studded miliary tubercles. It is probable that a great deal of dissemination is accomplished by the movements of the fluids and the surfaces of these cavities. In other instances, as in the ureters, Fallopian tubes and spermatic cords, extension seems to occur in the submucous tissue by means of the lymphatics. The autopsy often discloses that tuberculosis which appeared to be "primary" in such organs as bones, suprarenal glands, and meninges was preceded by an old process in a lymph gland from which metastases occurred to the tissues in question.

Certain anatomic conditions produced in tuberculosis which are associated with recovery from the disease, or contrary, may be referred to. The tubercle, the histologic unit of the tuberculous process, is produced as follows, according to the interpretations of Baumgarten: When a bacillus reaches a lymph gland, for example, it multiplies slowly and partly through its presence as a foreign body, but particularly through its toxic secretions, injures the surrounding connective tissue and endothelial cells to a certain degree. Under some circumstances, especially in the parenchymatous organs and lymph glands, this injury may be so great as to cause the death of the adjacent cells (focal necrosis). When it is of a lower order the connective tissue and endothelial cells respond to the stimulus by dividing mitotically and eventually accumulate in large numbers within a limited area surrounding the micro-organisms. Not only the endothelial cells of the lymph spaces, but also those of the adjacent blood vessels, take part in the proliferation, many of the vessels being obliterated in consequence. Not infrequently bacilli are ingested by the new cells, although the ability of the latter to destroy the organisms is not clearly established. Metchnikoff says that tubercle bacilli may remain intracellular for many months and although not killed, the pathogenicity is decreased or destroyed. The new cells are of polygonal shape, are fairly rich in cytoplasm, contain large vesicular nuclei and are termed "epithelioid" cells.

Certain of the epithelioid cells, usually those in the center of the tubercle, where the bacilli are most numerous, undergo atypical proliferation in that repeated nuclear division takes place without corresponding division of the cytoplasm. This process results in the formation of the multinuclear giant cell which is so characteristic of the well-developed tubercle, although not distinctive of the disease. According to Weigert, the failure of complete cell division is due to injury to the cytoplasm (partial necrosis) by the bacteria which the cell contains. Metchnikoff and others take a different view of the formation of giant cells, considering that they represent individual epi-

thelioid cells which have fused to form a multinuclear mass.<sup>1</sup>

Still more remote from the center of the tubercle, that is, surrounding the epithelioid cells, wandering lymphoid and plasmal cells accumulate. Certain retrogressive changes, especially necrosis and caseation, characterize the further history of the tubercle, although these changes do not occur

equally early nor with equal intensity in all cases. Necrosis begins in the center of the lesion, and the view is often expressed that the formation of the giant cell is the first indication of the retrogressive change. Cell degenerations, however, with karyorrhexis may occur before giant cells have formed. With the death of the central tissue there occurs sooner or later the death of many of the bacilli in this portion of the tubercle. The progressive formation of new tissue continues in the periphery as the degenerative changes take place toward the center; the tubercle enlarges, both epithelioid and the surrounding lymphoid cells increase correspondingly, and new giant cells form at the periphery of the necrotic center, only to be included in the degenerated area as the latter extends. In favorable cases, in which the virulence of the organism is low or the resistance of the individual strong, new connective tissue is formed in the periphery of the tubercle and surrounding it. This new tissue is produced by the maturation of the epithelioid cells, the lymphoid and plasmal cells participating in the process, directly or indirectly. With the further growth of the connective tissue the tuberculous area is eventually surrounded by adult fibrous tissue which in a sense accomplishes the isolation of the infected area. Without question such a capsule of scar tissue is an obstacle to the extension of the tuberculous process, whether it surrounds a nodule in a lymph gland, a cold abscess or a tuberculous sinus. Further steps in the healing consist of caseation of the entire area, its partial or complete substitution by connective tissue (tuberculous scars), or partial impregnation with lime salts (calcification). Not infrequently the caseous portion of a nodule undergoes liquefaction, which some have referred to the action of proteolytic ferments. The contents of such foci finally become sterile. In the event that healing of this nature does not occur, the infection is transmitted to other organs as described above.

**Formation of Fibrous Tissue.** This new tissue is produced by the maturation of the epithelioid cells, the lymphoid and plasmal cells participating in the process, directly or indirectly. With the further growth of the connective tissue the tuberculous area is eventually surrounded by adult fibrous tissue which in a sense accomplishes the isolation of the infected area. Without question such a capsule of scar tissue is an obstacle to the extension of the tuberculous process, whether it surrounds a nodule in a lymph gland, a cold abscess or a tuberculous sinus. Further steps in the healing consist of caseation of the entire area, its partial or complete substitution by connective tissue (tuberculous scars), or partial impregnation with lime salts (calcification). Not infrequently the caseous portion of a nodule undergoes liquefaction, which some have referred to the action of proteolytic ferments. The contents of such foci finally become sterile. In the event that healing of this nature does not occur, the infection is transmitted to other organs as described above.

**Caseation, Calcification and Liquefaction.** Not infrequently the caseous portion of a nodule undergoes liquefaction, which some have referred to the action of proteolytic ferments. The contents of such foci finally become sterile. In the event that healing of this nature does not occur, the infection is transmitted to other organs as described above.

The temperature, loss of weight, fever, increased cardiac action, and arteriosclerosis which are seen in tuberculosis indicate that the products of the bacillus have a profound effect on the functions of the body, and produce great disturbances in metabolism, although they seem to have no marked selective action for particular tissues.

Many disturbances are secondary to changes produced in particular organs and not referable to specific action of the toxins, such as those which are consequent on poor oxygenation in pulmonary tuberculosis, and the amyloid degeneration which follows prolonged suppurative tuberculosis.

Mixed infection, especially with the streptococcus, plays a very important part in the course of pulmonary tuberculosis, especially in the caseous and cavernous forms.

**Mixed Infections.** Staphylococci, *B. pyocyaneus*, various diplococci, the pneumococcus, bacillus of Friedlander, diphtheria and pseudo-diphtheria bacilli, and the influenza bacillus are also found as secondary organisms in pulmonary tuberculosis. Some of them invade the surrounding healthy tissue, cause lobular consolidations, and in this way probably prepare a favorable soil for further extension of the tuberculous process. They doubtless hasten the liquefaction of caseated tissue, a step in the formation of abscesses. The high and irregular fever often seen in advanced tuberculosis is commonly septic in its cause, and a terminal streptococcus septicemia is not infrequent. It is evident that mixed infections may complicate attempts at serum therapy.

1. A formation analogous to the latter process is seen in the peritoneal cavity of the guinea-pig, in which leucocytes fuse to form a plasmodial mass around yeast cells which are injected.



## Clinical Notes

### THE METHOD OF GIEMSA FOR STAINING THE SPIROCHÆTA PALLIDA.

LEONARD K. HIRSCHBERG, A.B., M.D.

BALTIMORE.

Under the direction of Professor Charles F. Bevan, of the College of Physicians and Surgeons, considerable study is being given to the *Spirochæta pallida* of Schaudinn and Hoffman. The results of these studies will shortly be published by Professor Bevan and myself. In this search we have been fortunate enough to find *Spirochæta pallida* in the urine of one patient, with active secondary manifestations.

In the meanwhile, since there has as yet been no English or American publication of the stain which has proved so effective in elucidating these organisms, I do not think it out of place or premature to publish Dr. Giemsa's method, somewhat modified from his first description.<sup>1</sup>

#### GIEMSA'S STAIN.

Azur II—Eosin, 3.00 gms.

Azur II.—0.8 gms.

Glycerin (C. P.), 250 c.c.

Methyl alcohol, 250 c.c.

1. Fix by spreading the specimen very thinly over the cover-slip; dry it in the air.

2. Harden it in absolute alcohol for from 25 to 60 minutes and blot with filter paper.

3. Dilute the stain with distilled water. Pour it into a wide graduated reagent glass by shaking 1 drop of the stain to each c.c. of water out of a drop bottle which first has been rinsed in absolute alcohol.

4. Cover the preparation with the diluted stain for from 10 to 15 minutes.

5. Wash off with running water.

6. Blot with filter paper, dry, and mount in Canada balsam.

7. Overstained specimens may be differentiated in distilled water for from one to five minutes.

8. It is often advisable to make the diluting water alkaline by 1 to 10 drops of a 0.01 per cent. potassium carbonate solution.

9. It is doubtful if staining the *Spirochæta pallida* of Schaudinn for more than one hour will define it any more clearly than staining for that period.

### UNTOWARD EFFECT OF ADRENALIN IN THE URETHRA.

W. S. JOHNSON, M.D.,

SAN FRANCISCO.

A patient whom I have been treating for stricture of the urethra, and in whom I have passed sounds for several months, came to my office in his usual good spirits, and in perfect health. After passing a No. 27 French sound, there was some little bleeding from the urethra, which I attempted to check with a solution of adrenalin chlorid, 1-4000, injected in the urethra with an ordinary glass syringe, filling the entire anterior urethra. The following symptoms occurred instantaneously: Lividity or pale lead color of the skin; the eyes set and glassy, the patient crying out, complaining of a bursting sensation in his abdomen, chest, neck and head, saying the top of his head would burst open; a tingling and pressure in hands, arms, legs and feet; vomiting of a projectile character, followed by complete collapse, without loss of consciousness, lasting for a period of ten minutes; respiration shallow, pulse imperceptible and heart sounds inaudible; the patient having the appearance of a case of acute anemia. Restoratives, such as strychnin, 1/20 gr., whisky and aromatic spirits of ammonia were used hypodermically and the patient gradually recovered, but was unable to stand on his feet for three hours. The dizziness lasted until bedtime.

### A RETENTIVE APPARATUS FOR FRACTURES OF THE CLAVICLE.

RAYMOND RUSS, M.D.

Instructor in Surgery in the University of California.

SAN FRANCISCO.

In the clinical work at the surgical dispensary of the University of California the Sayre adhesive plaster dressing has been used for some time as a routine treatment for fractures of the clavicle. In many cases the results attained were good, but the method of treatment failed in a number of instances. It was not until several of these failures followed closely on one another that the necessity for a better method of treatment became imperative. The most pronounced failures were in those rare cases of fractured clavicle which presented great overlapping of the fragments and in which it was impossible to maintain reduction by the ordinary methods.

A glance over the literature was not reassuring. More methods of treatment have probably been suggested for this fracture than for any other. Pilcher sums up the matter by saying: "The fact remains that those methods which are

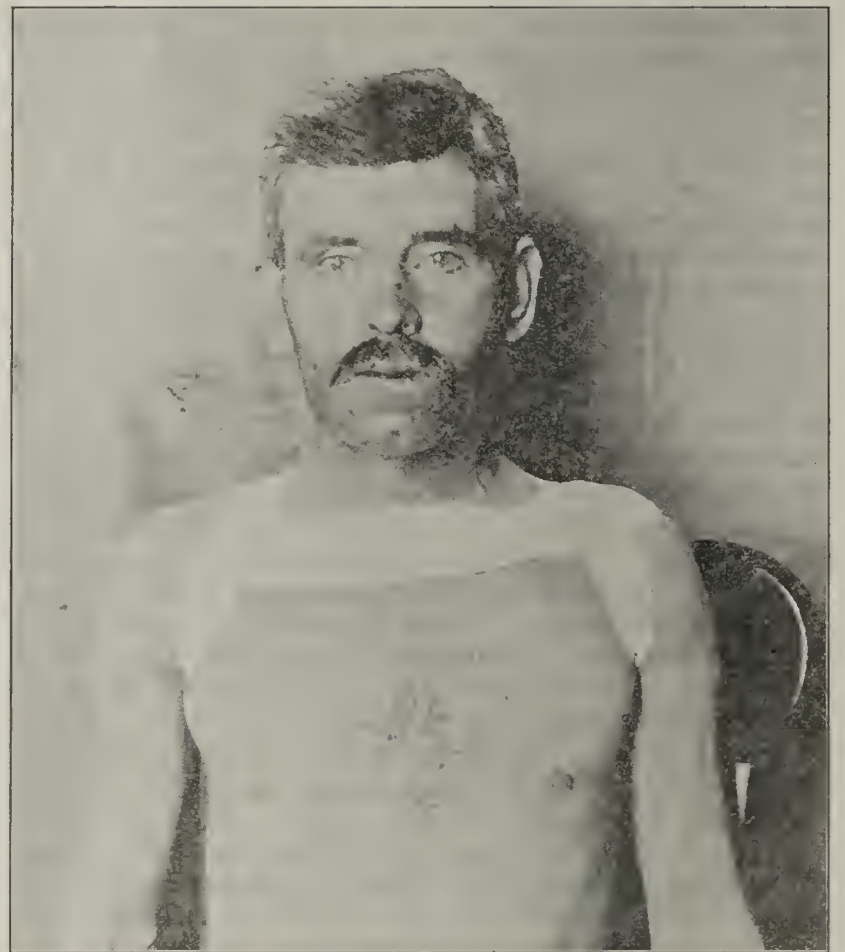


Figure 1.

efficient are intolerable and those which are tolerable are inefficient." Gurlt makes the statement that there have been about seventy dressings devised for the purpose of drawing the shoulder upward, outward and backward, this being the manipulation for reducing the fracture and maintaining reduction which has been adopted by most authors.

As the success of methods of detention depends directly on a knowledge of the displacement and the muscular forces which cause it, a consideration of these subjects will not be out of place.

Deformity following fractures of the clavicle is evidently produced by the weight of the shoulder combined with muscular action. This destroys the juxtaposition of the fragments unless impaction has taken place. The serratus magnus and pectoralis minor muscles pull the scapula forward and inward as pointed out by Gordon of Belfast, and by Packard. But the pull of the serratus magnus is probably counteracted to a certain extent by the action of the trapezius. The acromion is thus carried toward the median line and tilted downward, this movement carrying the proximal end of the distal fragment inward so that many times it lies directly below and behind the inner fragment.

This new position of the outer fragment may force the

1. Deutsche med. Wochft.



inner fragment somewhat upward, the action being aided by the resiliency of the sternal end of the clavicle and probably by a certain amount of pull by the sterno-cleido-mastoid. The subclavius muscle very possibly aids in the production of the malposition of the outer fragment. The excursion of the scapula, however, is almost immediately checked by the levator anguli scapulæ which exerts a strong pull on the superior angle of the scapula, resulting in an approximation to the spine and a slight prominence of the inferior angle.

It is true that the shoulder changes its position after fracture of the clavicle, falling downward, forward and inward, but it must be borne in mind in the treatment that this deformity can not be corrected in all cases by simply lifting the shoulder upward, backward and outward, as recommended by many authors. Not until the scapulæ are brought well back will the fracture be reduced. This fact has long been recognized. It is commented on by Hippocrates, who suggests that the patient be placed on his back, with a small, hard pillow resting between his shoulders. Guy de Chauliac placed his knee between the patient's shoulders and in this way drew them backward.

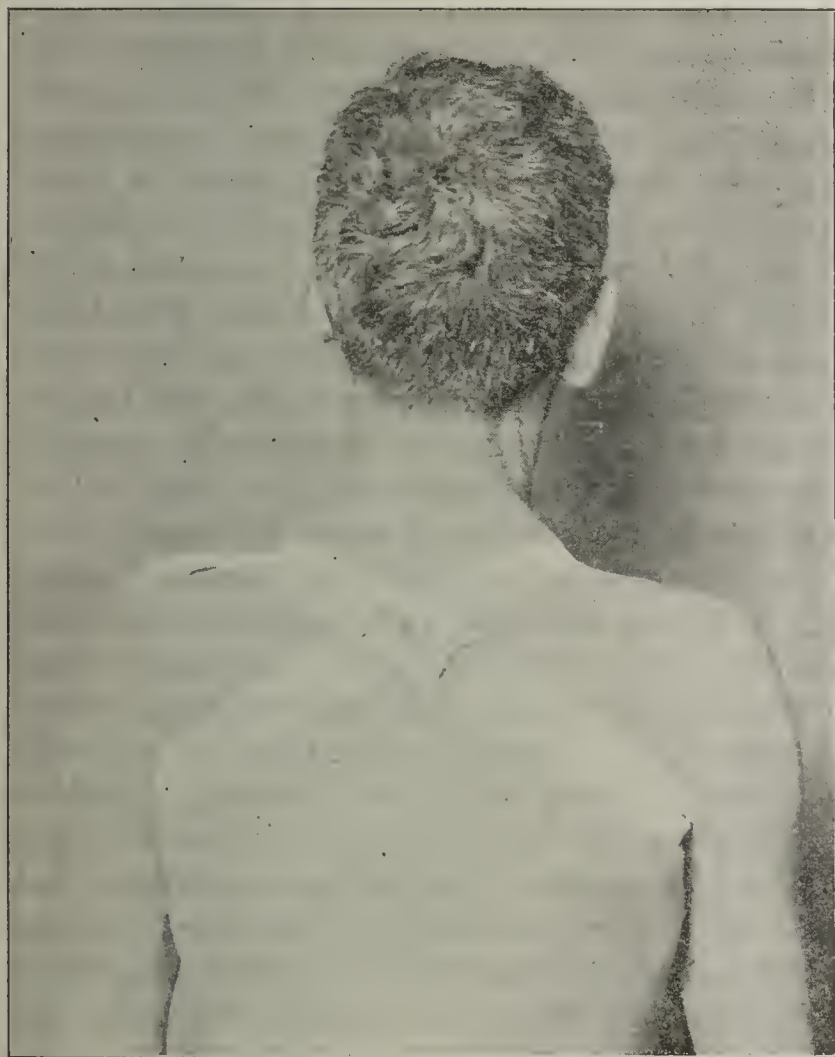


Figure 2.

I have never failed to accomplish reduction, in cases of great overriding, by placing the patient in the position of Hippocrates. Sometimes, however, one must bring the scapula back very forcibly while the patient is lying in this position, and in one of my cases it was found necessary to exert considerable pressure over the point of fracture in order to maintain reduction. This fact has been commented on by Maligne, who suggested that double hooks, such as he had used in fracture of the patella, might be employed for this purpose. I can find no record of this idea being carried out.

These facts have been emphasized because the underlying principles have been forgotten in many of the dressings which have been proposed. From practical considerations, it would seem that a retentive apparatus should exert firm pressure over the seat of fracture and at the same time should retain the scapulæ in the positions which they assume in the method of Hippocrates.

Plaster-of-paris as a means of maintaining reduction has been used by Davis, O'Connor, Stimson and several others. The following method is designed more especially for those

obstinate cases which have been commented on, although it may be adopted as a routine measure. The patient is placed on his back in the position of Hippocrates and, the fracture having been reduced, the limitations of the plaster-of-paris splint are marked on the skin. The dressing should extend a little above and below the clavicles, as shown in Figure 1. It should cover the injured shoulder and should not interfere with free motion of the arm on the uninjured side. The skin is covered with vaselin and a two-inch plaster-of-paris bandage is applied directly, the turns being held down by an assistant so as to secure accurate coaptation, especially about the site of the fractured bone. The bandage can be made to lie smoothly by reversing each turn over the sternum. When a number of layers have been applied a pair of suspenders are incorporated into the dressing. These have previously been prepared by ripping apart the webbing at the point of crossing in the back and cutting away the leather pieces which fasten to the buttons. Each suspender is then slipped through its buckle. There are now two long pieces of suspender webbing, each provided with a buckle at one end. The buckles are thrown over the patient's shoulders, the finished side of the suspender being turned down and the webbing passed under the axillæ. The plaster-of-paris bandage is rapidly turned over the suspenders so as to secure them to the cast, and when enough turns have been taken to make the cast sufficiently strong to resist muscular action, it is finished by

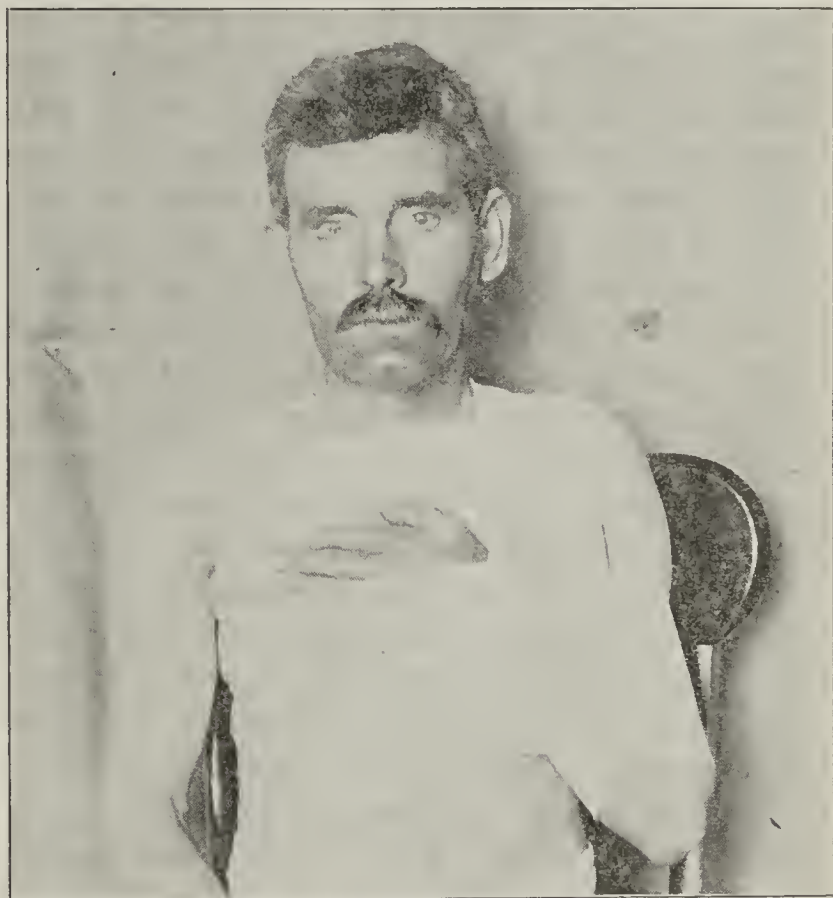


Figure 3.

rubbing in a little dry plaster. It is then removed and trimmed to the desired shape, the edges being smoothed by rubbing in plaster-of-paris. With the patient in the position of Hippocrates the splint is reapplied, a layer of cotton, several layers of sheet wadding or a thin layer of felt being interposed. It is secured in position by buckling tightly so as to form a figure-of-eight posteriorly (Fig. 2). It is essential that the dressing be applied tight enough to resist muscular action. The arm on the injured side is then supported by applying a figure-of-eight cravat as shown in Figure 3.

In certain selected cases the time of functional disability may be greatly shortened by employing a modification of this splint. For this purpose the plaster-of-paris should well clear the injured shoulder. The patient may be given free use of the injured arm after a few days' time. It is evident that if this be done slight movement at the seat of fracture will occur, no matter how tight the apparatus be made. In those patients who do not object to a slight callus deformity and in whom disability is a great hardship, I deem it a proper procedure.



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SATURDAY, OCTOBER 7, 1905.

## HEMOPTYSIS AND THE PNEUMOCOCCUS.

An interesting point in regard to pulmonary hemorrhage which has been known for many years but has not received the attention it deserves is the fact that when patients suffering from tuberculosis are collected together, and pulmonary hemorrhage occurs in one, it is almost certain to be noted in other patients during the course of the next week. As a rule, this association of symptoms has been considered to be due either to coincidence or to the psychic effect of an event like this on susceptible patients. Usually the subject is dismissed thus without more ado. The older practitioners of medicine frequently referred to this association of pulmonary hemorrhages and attributed it to atmospheric conditions. It was not long ago, however, that most disease changes were attributed to variations in meteorologic conditions, but the tendency recently has been to get away from the supposed effects of the atmosphere on patients, except for minor changes in the sufferer's condition. One striking bit of evidence that impaired the value of atmospheric changes as a reason for pulmonary hemorrhage was the observation that the admission of a patient suffering from pulmonary hemorrhage into a ward containing other patients who had not recently suffered from this symptom, was so frequently followed by the occurrence of hemoptysis in one or two others as to make the event more than a coincidence.

This subject of the concurrence of pulmonary hemorrhage in patients closely associated with one another, has recently been investigated by the Phipps Institute, of Philadelphia, for the study and treatment of tuberculosis, with very practical results. In a preliminary report<sup>1</sup> it is noted that in the ejected blood of a number of cases of pulmonary hemorrhage pneumococci in large numbers were found. The reason for investigating as to the presence or absence of this micro-organism was the fact that even in normally healthy individuals who contract pneumonia, there is a well-known tendency for exudation of blood from the pulmonary vessels manifested by the characteristic rusty sputum of the disease. In four cases of pulmonary hemorrhage carefully investigated the presence of pneumococci seemed to point to some definite etiologic relation between the presence of this micro-organism and the special symptoms noted in the cases.

In two of the cases, there was a history of exposure to pneumonia, and in one a history of contact with a just previously hemorrhagic patient. In three of the cases, pneumococci were found in the blood from the patient. Streptococci were associated with the pneumococci, but there was a definite preponderance of the latter, and in some of the cases it was found in practically pure culture. Only four cases were investigated so completely as to make them available for absolute conclusions, but observations made in other cases point to the same conclusion, that the pneumococcus, if it does not play the only rôle, at least plays a very important one in the production of pulmonary hemorrhage, even during the progress of what seems to be an ordinary case of pulmonary tuberculosis.

All this investigation is, as the authors, Drs. Flick, Ravenell and Erwin, state, of great suggestive value. It opens up one of the most practically interesting fields for investigation that has presented itself in recent years. The New York City committee, investigating the present prevalence of pneumonia, stated as one of its conclusions, that pneumonia was probably contagious to a limited degree and that proper precautions should be taken, therefore, to prevent its spread. This Philadelphia investigation seems to point out one of the most important phases of pneumonia contagion, and suggests also the necessity for careful prophylaxis, especially with regard to patients whose lungs have been rendered susceptible by the presence of active pulmonary tuberculosis. The question of considering pulmonary hemorrhage itself as a manifestation of pneumonia, and consequently of insisting on definite precautions against the possibility of other patients suffering from pulmonary tuberculosis, coming in contact in any way with such patients directly or indirectly, commends itself as an advisable precaution. If this should put an end to what has been considered the curious coincidence of pulmonary hemorrhage occurring in associated patients about the same time, we should have the explanation of a very interesting problem in medicine, and at the same time have made a very distinct advance in the investigation of the occurrence of one of the most serious symptoms that disturb the progress toward health of sufferers from pulmonary tuberculosis.

## DIGESTION LEUCOCYTOSIS AND CANCER OF THE STOMACH.

The observation that the leucocytes in the circulating blood are increased after eating is an old one. First noted by Nasse in the middle of last century, the observation was then incapable of rigorous scientific proof, but was finally subjected to accurate tests by Linbeck in 1890. Since then numerous hematologists have convinced themselves that a digestion leucocytosis occurs, though there have been doubters who claimed that the varying counts at different times of the day are due to a normal fluctuation independent of the consump-

1. Med. News, New York, Sept. 9, 1905, p. 492; abstracted in THE JOURNAL, Sept. 23, 1905, p. 944.



tion of food. It was natural that some attempt should be made to apply this observation in the physiology of the blood to the study of the pathology of digestion. It was fair to assume that lesions of the stomach might be followed by changes in this digestive leucocytosis, and Muller, in 1890, was the first to announce that this was the case. His observation, that in cancer of the stomach the normal digestion leucocytosis is lacking, has been investigated by numerous observers and, in the main, has been upheld. Vanstenberghe and Breton,<sup>1</sup> in connection with an investigation of their own, have collected the published results on the subject, showing that of one hundred and sixty-three cases of carcinoma of the stomach a digestion leucocytosis was present in only twenty-nine. Their observations support the view that a distinct digestion leucocytosis exists, reaches its acme about two hours after the first meal, and is independent of the normal variation of the leucocytes at different times of the day.

The value of digestion leucocytosis in the diagnosis of carcinoma of the stomach has been differently stated by different observers. Some have stated that it is of no value, but a glance at the table of Vanstenberghe and Breton shows that this opinion has been based on altogether too small a number of cases—two in the case of Hassmann, three in the case of Burian and Schürr. Where large numbers of cases have been observed, the conclusion reached has generally been that the test is at least of confirmatory value. In the largest series of cases reported, those of Cabot and Capps, thirty-four out of thirty-seven cases showed the absence of a digestion leucocytosis. The twenty-two cases of Osler and McCrae, however, showed absence of digestion leucocytosis in only a little over one-half. Control tests of the leucocytosis in new growths of neighboring organs, as the liver and pancreas, show that in these cases also there may be an absence of the digestion leucocytosis. New growths of distant organs, as the uterus and intestine, do not cause an absence of the digestive leucocytosis, nor do other gastric disturbances, such as ulcer. Vanstenberghe and Breton have shown that there is a difference in the character of the digestion leucocytosis as compared with that due to the normal daily range. In the digestion leucocytosis it is the mononuclear elements which are relatively increased, while in the normal daily range it is the polynuclears which fluctuate.

The conclusion which is to be drawn from these observations seems obvious. The figures collected by Vanstenberghe and Breton are large enough to show that carcinoma of the stomach has a decided effect on the digestion leucocytosis in a great majority of cases. The sign is, of course, not a pathognomonic one, but must be of value nearly as frequently as the examination of the stomach juice. It seems as if it must be of considerable use as confirmatory evidence in a great

many cases, and on this account, as well as on account of its simplicity, it should be used more extensively than it has been.

#### ASEPSIS BEFORE BATTLE.

Surgeon-General Suzuki of the Japanese Navy, in his address<sup>1</sup> last week before the Fourteenth Annual Association of Military Surgeons of the United States told of two customs that were introduced into the Japanese navy during the recent war, which were of extreme interest and likely to be far-reaching in their influence, because they are simple and, as a rule, possible. It is no wonder that a distinguished medical authority in the United States Navy is reported to have said in comment that the Japanese surgeon-general had made perhaps the most valuable contribution of modern times to naval surgery. The suggestions that were carried into effect under his directions, however, are so obvious that it is rather difficult to understand how they did not occur to martial surgeons before this. Although the suddenness of the attack would often prevent their use in land engagements, naval combatants usually have sufficient warning of a battle to allow at least a brief preparation. Dr. Suzuki considers that much of the Japanese success in the treatment of wounds must be ascribed to the order issued before every engagement, that each member of the crew should take a bath and put on perfectly clean underclothing.

His idea is that gunshot wounds are likely to be contaminated by portions of clothing carried into the wounds. The bullet itself may be considered perfectly sterile because of the high temperature to which it has been exposed, and which has continued during its course through the air, thus making it practically impossible for it to collect any virulent germs from the atmosphere. If then the clothing be reasonably sterile, the hope of a sterile wound resulting is greatly increased. As a matter of fact, very few of the sailors and marines wounded during the Japanese naval battles and sieges suffered from septic complications. Very severe wounds, even those which penetrated joints, healed as kindly, as a rule, as those which might be made by the surgeon's knife, under careful asepsis in an operating room.

A corresponding set of aseptic precautions was long since adopted by French duellists and has saved many a peppery Frenchman from septic complications that might have resulted under other conditions even from slight wounds. This, however, is not the only improvement worthy of note in the medical care of their sailors and marines that the Japanese surgeon-general has introduced. He considers that the vision of the men who aim the guns on a warship must be of the very best if their shots are to reach the target. Before every engagement, therefore, the naval surgeons carefully examined the eyes of all the gunners. Even the slightest impairment of vision was considered suffi-

1. Arch. de Méd. Expér., 1905, xvii, 471.

1. An abstract of this address is crowded out this week; it will appear next week.



cient to require prompt treatment and if the treatment was not likely to improve vision in a few days, substitutes were selected to fill the places of the ailing ones. During naval engagements, the crew of every battery was furnished with a 1 per cent. solution of boric acid, with which the men were instructed to wash out their eyes should they become affected by powder, smoke or dust or dirt of any kind, or be irritated for any other reason.

There is no doubt that the Japanese military and naval surgeons have been extremely ingenious in inventing methods of preventing complications of all kinds. Their application of the asepsis of the French duelists to the many combatants of a naval engagement is a triumph of enterprising application of simple knowledge that stamps them as much more than the mere imitators they are sometimes said to be, and sets them in the rank of the most progressive of modern nations.

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#### YELLOW FEVER.

There is now indisputable evidence that the epidemic is well under control. In New Orleans the improvement has been marked. During the entire week ending October 1, only 193 new cases were reported, with 24 deaths. In Louisiana, outside of New Orleans, not over 150 new cases were reported in the same period. The infected points in Mississippi reported an equal number, and Pensacola 75. Scientific methods have won at every point where they have been thoroughly applied. At Vicksburg and Pensacola the populace is more or less hostile, due to the active opposition of men who should know better. Right-thinking men are astonished at the spectacle of substantial men, in time of crises, actively opposing the efforts of science to conserve human life. All during the epidemic the town of Harriston, Miss., has had an absolute non-intercourse quarantine—so-called—not admitting either freight or passengers, yet it recently has had two cases of yellow fever. It has been demonstrated that there need never again be another epidemic of yellow fever if the first cases are promptly discovered, honestly reported and carefully screened.

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#### SOCIETY CONVERSAZIONE.

At a recent meeting the Pennsylvania State Medical Society introduced what it announced as a new departure, familiar enough at medical conventions in England, but not often attempted in this country, and perhaps never before at a state medical society meeting. In addition to the refreshments and music by a full orchestra, at a general reception given to members, a series of popular addresses was announced for later in the evening. While the younger members of the society and their friends might enjoy the dancing and the music, the more serious-minded attendants at the function had the opportunity to hear various authorities speak on scientific subjects that are of special interest at the present time. Dr. Kellicott, of Columbia, New York, for instance, talked on mimicry and protective coloration,

with illustrations of this ever-interesting subject. Mr. Kelsey, of Philadelphia, the well-known architect and landscape gardener and the designer of the model city at the St. Louis Fair, delivered an illustrated lecture on methods of beautifying cities. There was a demonstration of radium and of the mercury-tube light invented by Mr. Cooper Hewitt, of New York. Besides this, there were less special features, as a lecture on travel by a well-known popular lecturer, a presentation of methods of mining by means of stereopticon views, special attention being given to the process of anthracite coal mining and the dangers involved in them. Dr. Hollister's collection of Indian relics of various kinds, one of the most noteworthy collections in the country, was on exhibition, as well as Dr. Everhart's collection of native woods and other interesting specimens. No little anxiety to the members of the committee of arrangements is often caused in their endeavors to fill up an evening. This is certainly an interesting way and it is worth considering by other state societies. Under the busy conditions in which they live, physicians seldom have the time to keep abreast of recent scientific developments, though they may desire very much to do so.

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#### FIRST AID IN RAILROAD ACCIDENTS.

In view of the great and rapidly increasing number of fatal and disabling railroad accidents the proposal by certain railroads to drill their train crews in first aid instruction and to establish frequent small hospitals along its line is worthy of commendation. If accidents must happen, and some of them are probably unavoidable, it is really criminal to leave them unprovided for. That a great many more occur than should, makes the need a still more urgent one. It might not be policy to advertise hospital advantages with excursion rates, but to have first aid and hospitals at hand when needed would be one of the best things possible—next to preventing the accidents.

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#### THE PURE FOOD QUESTION.

While Congress is inexcusably dilatory in legislation, Uncle Sam himself in his personal transactions is wide awake as to the importance of pure foods. Adulterated sausages were recently found among the supplies at one of our navy yards and the seller has been arrested and put under bonds, and the matter is to be brought before the federal prosecuting authorities. While there is said to be no federal special statute against selling adulterated food to the government, it is thought that the general law against fraud of any kind will cover the case. It is a pity that corrupt commercialism can avoid penalties under such laws for the public generally, but such seems to be the case. If the medical profession will do its duty and use all its influence we do not believe that the enactment of a federal pure food law can be long prevented. We trust that our leaders will look up the records of their senators and congressmen and act when opportunity offers to insure so far as possible the election of those who are on the right side in this matter.



## AN INTERESTING STUDY OF TYPHOID.

It is to be hoped that the outbreaks of typhoid fever, which occur from time to time in various localities and which are usually carefully analyzed in relation to cause, are making a strong impression on the public. The infection is usually due to carelessness—often in either water or milk supply. An instructive report<sup>1</sup> of a study of the Palo Alto epidemic is just received; the milk was at fault in this case. Of the total 236 cases in the epidemic, 216 used milk supplied by one dairyman; 16 others may have been secondary infection, although they used milk supplied by the same milkman; 2 cases were infected while away, and only 2 cases occurred without known connection with the objectionable milk or with previous cases. The portion of the pamphlet by Dr. W. F. Snow on the source of infection in the milk supply shows careful analysis and contains an interesting topographic diagram on which is marked all the movements of milk and of those involved in its contamination. The pamphlet is published as a public document by the Palo Alto Board of Health and the facts brought out—particularly the diagrams—ought to be effective for good.

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“SCIENTIFIC WORK MISREPRESENTED AND COMMERCIALIZED.”

Two weeks ago we published in our Pharmacology department an exposé of the manner in which the M. J. Breitenbach Company, for advertising purposes, had made an abstract of the official report of the Porto Rico Anemia Commission and had totally misrepresented the conclusions reached by the commission in regard to the value of a preparation which the Breitenbach Company are selling, called “pepto-mangan (Gude).” This week we publish an official statement from the Porto Rico Anemia Commission, which corroborates the statement we made two weeks ago, except in unimportant particulars. There is one sentence in the letter from members of the commission which is worth noting: Speaking of the fact that had they found the pepto-manganates of superior value as blood regenerators they would have said so, they add: “As it is, we have said the contrary and wrote this company to that effect at the time we became convinced of it.” If the Breitenbach Company received this letter, then they must have deliberately, not ignorantly, misrepresented the commissioners’ report.

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MEDICAL ADVICE IN LAY PAPERS.

It is a pleasure to note an exception to the questionable character of the departments which appear in various lay publications giving advice on medical subjects. One that has just come to our notice<sup>2</sup> is worthy of commendation—if the initial number is a criterion of what is to follow. In introducing the department the editor remarks that, unless he is mistaken, “there are thous-

ands of things which the people ought to know, which the strictest ethics of the medical profession will approve. . . . We are not among those who think that the medical fraternity is composed of men and women who are entirely mercenary, and while we do not desire or expect them to teach us how to do without a doctor, we do believe, as a rule, that they are ready to co-operate with us in things connected with our every-day life essentially affecting our health and well-being.” The physician chosen as editor of the department says that he proposes to conduct the department strictly on ethical lines and makes the following most appropriate quotation from the Principles of Ethics:<sup>2</sup> It is the duty of physicians who are frequent witnesses of the great wrongs committed by charlatans and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects and to make known the injuries sustained by the unwary from the services and pretensions of artful impostors.” He therefore gives the following good advice: “Choose your physician instead of letting him choose you” (by making a display in the community to attract attention). “He should, first of all, be a Christian gentleman. He should be a graduate of an accredited medical school, and if he should happen to have a college degree, all the better, as that is some evidence that he has had additional mental training. He should be temperate; God pity the man, woman or child who has to submit to the ministrations of a doctor whose brain is clouded by liquor or narcotics. . . . We have had considerable to say about doctors, now a word about their remedies: That the American people have become a nation of drug guzzlers is, alas, too true, and a fact greatly to be deplored. The daily press is not without sin in regard to the habits of self-drugging by the people. They recommend—at so much per line—the use of this or that drug without knowing themselves the possible evil effects which may be produced. The public ought to be impressed with the fact ‘that drugs are tools by which the physician accomplishes a given end; and, like all other experts’ tools, should be handled by experts.’” This and much more on the same subjects. The physician in charge has laid a good series of premises and we shall expect to see more solid sense in future issues.

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THE DIRTY RESTAURANT KITCHEN.

It is commonly said that every man must eat his peck of dirt. If the truth were known, this might be found a very mild statement. Some of us are unconsciously habitual dirt eaters. If we could inspect the places where our food is prepared, many of us would require powerful appetites to meet the occasion. This is particularly true of those who have to depend more or less on public eating places. While there are undoubtedly clean restaurant kitchens, there are a very great many more that are far from meeting the simplest requirements of tidiness and sanitation. Of course, the most comfortable thing to do is to eat what is set before one and ask no questions, but the possibilities for reform

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1. “Typhoid Fever Epidemic at Palo Alto, Cal. A report made to the Palo Alto Board of Health.” By J. C. L. Flsh, Assoc. M. Am. Soc. C. E., president of the board. Including an Analysis of Reported Cases by Clelia Ducl Mosher, M.D., and Source of Infection of the Milk Supply by William Freeman Snow, M.D.

2. Word and Works, St. Louis, October, 1905.

2. The Principles of Medical Ethics of the American Medical Association, Chap. iii, Sec. 4.



should not be neglected. The suggestion that municipal authorities inspect and enforce proper cleanliness and sanitary requirements in public restaurants is well worthy of attention. Moreover, the reform ought to be easy. If it were known which restaurants are worthy of public patronage in this respect, they would be likely to get it to the disadvantage of those that are not. There is a wide field for reform here not only in the methods and material outfit of these establishments, but also in their personnel.

#### THE HARVEY SOCIETY.

The Harvey Society of New York is described in its constitution as "a society for the diffusion of the knowledge of the medical sciences." The particular object, judging from the program of its first course of lectures, appears to be to bring the results of investigations in the medical sciences directly to those engaged in the practice of medicine as well as to others. The lectures are given under the auspices of the New York Academy of Medicine. The program<sup>1</sup> of the course for 1905-6 includes lectures by Professor Hans Meyer on "Die Theorie der Nareose;" Professor Carl von Noorden, "Modern Problems in Metabolism;" Professor F. G. Novy, "Trypanosomes;" Dr. R. A. Levene, "Autolysis;" Professor W. H. Park, "A Critical Study of Serum Therapy;" Professor L. F. Barker, "The Neurones;" Professor F. S. Lee, "Fatigue;" Professor L. B. Mendel, "The Formation of Uric Acid;" Professor T. H. Morgan, "Regeneration in Man and Other Vertebrates;" Professor C. S. Minot, "The Nature and Cause of Old Age;" Professor J. C. Webster, "Modern Views Regarding Placentation;" Professor Theobald Smith, "Some Phases of Tuberculosis," and Professor W. H. Howell, "The Cause of the Heart Beat." This is certainly a distinguished company, and the Harvey Society is congratulated on the solid attractiveness of its first annual program. It was a happy idea to establish a society of this kind and purpose. It means a new agency for the popularization, especially among the medical men of New York city, of the results of scientific investigation in various fields of medical and also general interest. Perhaps other medical centers may find it advantageous to establish somewhat similar means for the same general purpose.

1. For dates, etc., see General News, this issue.

**Physicians' Fees.**—There is, it seems to me, one just plan by which fees should be regulated. It is that the physician should have an estimate of the value of his services, operative or otherwise, fixed in his mind. The amount should be based on his experience and skill. It should not be so low as to coax away unjustly the patients of the younger and less experienced men of the profession. This fee should be lessened when the financial position of the patient would make its payment a serious burden. A well-to-do patient should pay the full fee, which should be generous in order to recompense the physician for his expensive education and hazardous life. This fee, however, should not be increased because the services of the physician are utilized by a very wealthy person, unless an unusual time is given to the service or an additional responsibility is placed on the physician by reason of the man's position.—John B. Roberts.

## Medical News

### GEORGIA.

**Changes in Atlanta College Faculties.**—Dr. William S. Elkin has been elected dean of the Atlanta College of Physicians and Surgeons, to succeed Dr. William S. Kendrick, and Dr. Stephen T. Barnett, registrar; Dr. James B. Baird has been appointed professor of principles and practice of medicine; Dr. Charles G. Giddings, professor of clinical medicine; Dr. E. Bates Block, professor of clinical medicine, and Dr. Cyrus W. Strickler, associate professor of principles and practice of medicine. The faculty proposes to erect a new building to cost \$75,000, of which \$30,000 has already been subscribed.

**New Medical School.**—The Atlanta School of Medicine opened October 3 in its temporary quarters in the Masons' Annuity Building with the following faculty: Dr. Howard J. Williams, Macon, special lecturer on surgery; Dr. William S. Kendrick, professor of medicine; Dr. Charles D. Hurt, professor of therapeutics; Dr. George H. Noble, professor of abdominal surgery and clinical gynecology, dean of the faculty; Dr. James M. Crawford, professor of diseases of the eye, ear, nose and throat; Dr. Edward C. Davis, professor of gynecology and obstetrics; Dr. Luther C. Fischer, professor of anatomy and clinical surgery; Dr. Edward G. Jones, professor of gynecology and obstetrics, proctor of the faculty; Dr. Frank K. Boland, professor of operative and clinical surgery and demonstrator of anatomy; Dr. Hansell Crenshaw, professor of materia medica and chemistry; Dr. Stewart R. Roberts, professor of physiology; Dr. James L. Campbell, professor of surgical anatomy and clinical surgery; Dr. William L. Champion, clinical professor of genitourinary diseases; Dr. Robert B. Ridley, Jr., clinical professor of diseases of the eye, ear, nose and throat; Dr. L. Benjamin Clarke, lecturer on diseases of children, and Dr. James H. Crawford, assistant to chair of diseases of the eye, ear, nose and throat.

### IDAHO.

**State Society Meets.**—The Idaho State Medical Society held its annual meeting in Boise, October 5 and 6, under the presidency of Dr. Robert L. Nourse, Hailey.

**Personal.**—Dr. Adolph Blitz, Boise, who has been ill at St. Luke's Hospital with erysipelas, has recovered.—Dr. John H. Messner, Lewiston, has been extradited to the state of Washington, where he has been charged with arson.

**Decides Against State Board.**—The Supreme Court has decided that the refusal of the Board of Medical Examiners to grant a license to Dr. J. B. Cooper, Blackfoot, was illegal, as the applicant was legally engaged in the practice of medicine and surgery under the law of 1887, and in accordance with this decision Dr. Cooper was given a license.

### ILLINOIS.

**Diphtheria Epidemic.**—An epidemic of diphtheria is reported to have broken out at Carpentersville, Kane County.

**Examination Postponed.**—The examination of candidates for the Cook County Hospital staff, which was to have been held September 27, has been postponed.

**Donates Hospital Site.**—Dr. John W. Tope, Oak Park, has agreed to purchase a site for the proposed Oak Park Hospital, consisting of six acres in Fair Oaks, in the northern part of the village.

**Doctors Ill.**—Dr. J. H. Porter, Clinton, has gone to Chicago to be operated on for cholelithiasis.—Dr. Lorenzo A. Snyder, Chicago Heights, is critically ill in a Chicago hospital from appendicitis.

**Maternity for Evanston Hospital.**—A maternity hospital adjoining the Evanston Hospital is to be built as a memorial for the late Mrs. Elizabeth Williams, whose six children have contributed \$25,000 to the building fund.

**Rattlesnakes as Security.**—"Dr." White Eagle, an Indian itinerant, who was recently fined \$100 in Blandinsville for illegally dispensing medicine, left a box of rattlesnakes with the authorities as security and has disappeared.

**Family Blamed for Death.**—In the case of the late Hartford Wiltse, Momence, who died from typhoid fever, the mother and sisters of the deceased, who are "eddyrists," were censured by the coroner's jury, whose verdict declared that the man came to his death from typhoid fever and that the evidence showed lack of proper attention.

**Antitoxin Agents Appointed.**—The secretary of the State Board of Health has appointed antitoxin agents in various counties of the state under the provision of the new law.



The duties of these agents are to distribute antitoxin certified by the State Board of Health to the poor on order of the supervisor, to be paid for by the county, and to sell to those who apply at a fair price.

**The Work of the Coroner.**—During September 36 more deaths were reported to the coroner than for the preceding month. The total number of deaths requiring investigation was 330. Of this number 40 were suicides, 38 of whom were white and 2 negroes; 31 were men and 9 women, one being a schoolgirl 15 years old; 21 left wives or husbands, 10 were unmarried, 4 were widowers, 1 was a widow and 3 were divorced. The pistol was the favorite means of suicide and carbolic acid held the first place among the poisons employed.

#### Chicago.

**No Smallpox.**—For the first time in fourteen years the Isolation Hospital was without a smallpox patient September 26.

**Buys Land for Hospital.**—Max Eichberg has purchased the building and ground at 3040 Calumet Avenue for \$40,000 and will turn it over to the Calumet Hospital.

**Asks for More Inspectors.**—The commissioner of health has asked the finance committee of the City Council for an appropriation of \$8,000 so that he may add six food inspectors and six sanitary inspectors to his present force.

**Hospital Reorganized.**—St. Ann's Hospital, formerly limited to the treatment of tuberculosis, has been reorganized as a general hospital and a new medical staff has been appointed consisting of Drs. Helga Ruud, John T. Milnamow, Charles E. Humiston, John J. Meany, B. Mack, Fred L. Glenn and Gustavus P. Head.

**The Polyclinic Transferred.**—The Chicago Polyclinic Hospital has transferred its property to the Chicago Polyclinic for a consideration of \$61,000. The latter organization is preparing to erect its new hospital at Oak Street and La Salle Avenue and has obtained a building loan of \$300,000 through its president, Dr. Fernand Henrotin, for this purpose.

**September Mortality.**—The deaths from all causes for September were 2,101, equivalent to an annual rate of 12.78 per 1,000. This is the lowest, with one exception, on record, and the average rate for the decade was 13.95 per 1,000. Acute intestinal disease still heads the list with 451 deaths, followed by consumption with 219, violence including suicide with 180, heart diseases with 163, nephritis with 144, and pneumonia with 122.

**Deaths of the Week.**—During the week ended September 30, 481 deaths occurred, equivalent to an annual death rate of 12.54 per 1,000. This compares favorably with the death rate of the corresponding week of the previous year, 12.61, and with that of the previous week, 13.40. Acute intestinal disease still holds the lead in death causes with 75, followed by consumption with 57, violence including suicide with 37, heart diseases with 35, nephritis and pneumonia, each with 34, and cancer with 28.

#### INDIANA.

**Health Officers Resigned.**—Owing to dissension with the city council, the Board of Health of Columbus, composed of Drs. Richard E. Holder, W. D. Treadway and J. R. Dunlop, has resigned.

**Consolidation of Medical Colleges.**—Formal announcement has been made of the consolidation of the Central College of Physicians and Surgeons, Indianapolis, with the Indiana Medical College of the same city, and of the incorporation of the two schools as an integral part of Purdue University.—It is reported that the directors of the Fort Wayne College of Medicine will meet in a few days for the purpose of discussing the advisability of merging that institution with the medical department of Purdue University.

#### IOWA.

**College Opens.**—The Sioux City College of Medicine opened for its annual session September 19. Dr. George S. Browning delivered the address. Dr. E. A. Jenkinson has been elected professor of embryology, Dr. George S. Browning professor of electro-therapeutics, Dr. Isaac E. Nervig instructor in anatomy, and Dr. E. Ruel Wheeler assistant to the chair of physiology.

**Railway Surgeons' Meeting.**—At the annual meeting of the State Association of Railway Surgeons, Des Moines, September 21-23, Dr. William Van Werden, Des Moines, was elected president; Dr. Smith A. Spillman, Ottumwa, vice-president; Dr. Albert B. Deering, Boone, secretary (re-elected), and Dr.

E. C. McMeel, Delmar, treasurer (re-elected). The next meeting will be held in Des Moines.

**Personal.**—Dr. John N. Warren, Sioux City, returned from Europe September 27.—Dr. Albert P. Johnson, Sigourney, who was injured several days ago at Rock Island, Ill., in a railroad wreck, is now convalescent.—Dr. Kurt Jacnecke, Clinton, has sailed for Europe.—Dr. Willis W. Dean, Sioux City, left September 20 for the state of Washington.—Dr. Walter A. Sternberg has been elected city physician of Mount Pleasant, vice Dr. John Elliott, resigned.—Dr. John F. Harp, Prairie City, has been reappointed local surgeon for the Des Moines Valley Railway.—Dr. Maxwell E. Silver, Sioux City, has located in Detroit, and is demonstrator of anatomy and lecturer of osteology in the Michigan College of Medicine and Surgery.

#### MARYLAND.

**Ravages of Typhoid.**—A family in Caroline County (Eastern Shore), has been attacked with a virulent form of typhoid fever. The father, mother, two daughters and a son are dead; another son is in the hospital, while two daughters and one son are convalescing.

**Diphtheria at Naval Academy.**—Owing to the prevalence of diphtheria among members of the new fourth class at Annapolis, the opening of the United States Naval Academy has been postponed until October 7. Meanwhile Bancroft Hall will be thoroughly fumigated. Members of the fourth class are forbidden to leave the limits of the academy. The first, second and third year classes are now on vacation. The members of the football team have returned and are domiciled in Carvel Hall Hotel. There are nine midshipmen affected, and about a dozen others have shown symptoms and are under observation. None of the patients is in a dangerous condition.

#### Baltimore.

**The First Appeal.**—The first appeal for aid to the fund for the relief of widows and orphans of deceased physicians was made last week by a physician's widow, aged 70, without support.

**Much Tuberculosis.**—The reports of the health commissioner show three times as many cases of consumption reported as last year. Consumption caused 29 of the 197 deaths in Baltimore last week.

**Physician Wins Suit.**—In the case of Dr. J. William Funck, in which damages of \$10,000 were claimed for alleged unskillful treatment of fracture of the wrist, a verdict was rendered for the defendant September 27.

**Naval Secretary as Auctioneer.**—Hon. Charles J. Bonaparte, Secretary of the Navy, announces that he will act as auctioneer at the sale of autographed books to be held in November by the Quarter Club for the benefit of the Hospital for Consumptives.

**Personal.**—Prof. Hans Meyer of Vienna will lecture October 4 and 5 on pharmacology in the Herter course at Johns Hopkins University.—Dr. H. Barton Jacobs has been named as one of the delegates to represent the United States at the Tuberculosis Congress in Paris, October 2 to 7.—Drs. T. Caspar Gilchrist and William H. Welch have returned from Europe.—Dr. Ira Remsen returned from Northeast Harbor, Maine, September 27.

**After Many Days.**—The mayor has signed the ordinance providing for the erection of an infectious diseases hospital on ground owned by the city near the Almshouse (Bayview Asylum). Plans will be prepared at once so that the building can be occupied as soon as possible. Thus at last, after twenty-five years or more, the authorities are about to provide for this so greatly needed institution.

#### MASSACHUSETTS.

**Health Board Appointed.**—Drs. Albert C. Lane, J. Henry Hutchings and Charles T. O'Brien have been appointed a Board of Health for Woburn.

**Chronic Hospital Patients.**—The latest report shows that there are 803 patients in the Boston Chronic Hospital, located on Long Island, Boston harbor.

**Bequests.**—By the will of Mrs. Marcia A. Norris, Boston, \$5,000 is left to the Children's Hospital, \$5,000 to the New England Hospital, and \$4,000 to the Wellesley Convalescent Home for Children.

**Hospital Music.**—The hospital music fund, under the direction of Dr. John Dixwell, begins its work in October. Concerts will begin October 1 at the Home for Aged Women; October



8, at Channing Hospital; October 15, at Vincent Memorial Hospital; October 22, at Home for Aged Colored Women; October 27, at Franklin Square House, and October 29, at the House of the Good Samaritan.

**Tuberculosis Camp a Success.**—The camp on Parker Hill, Roxbury, maintained by the Boston Association for the Relief and Control of Tuberculosis, and started early in July, has proved a great success. It will be continued till about November 1. The total expense has been about \$1,300. For this sum about forty-five patients have been cared for each day, returning to their homes to sleep.

**Boston's Consumption of Water.**—The city of Boston consumed during the month of August an average of 87,999,600 gallons of water each day. From the same metropolitan system there was furnished to seventeen other adjacent towns and cities a daily average of 27,433,200 gallons. This total daily average supply of 115,432,800 gallons exceeded the daily average consumption of August, 1904, by 6,412,300 gallons.

**Sanitary Measures in Progress.**—The big cofferdam, the first step in the construction of the great water park which is to be between Boston and Cambridge, so long urgently sought for by the Massachusetts Board of Health, is finished. So, too, is the cleansing of the ponds of the Back Bay fens where the foulness of sewers has for many years collected. Both of these will greatly promote the health of the neighboring residential portions of the city.

#### MICHIGAN.

**Colleges Opened.**—The formal dedication and opening of the new building of the Michigan College of Medicine and Surgery, Detroit, took place Sept. 19. On behalf of the alumni of the Association of the college, its chairman, Dr. Charles F. Kuhn, presented to the institution an oil painting of the dean, Dr. Hal C. Wyman. The Grand Rapids Medical College opened for the fall and winter term September 26.

**Personal.**—Dr. A. Arthur McLarty, Manistee, has returned from Europe. Dr. James Wright, formerly a practitioner of Jennings, has been committed to the Northern Michigan Asylum, Traverse City. Dr. William K. West, Calumet, has been appointed head physician of the Copper Range Consolidated Company. Dr. Joseph Foster has been appointed oculist and aurist, and Dr. Harry A. Haze medical examiner for the Lansing Suburban Traction Company.

#### NEW YORK.

**College Opens.**—The University of Buffalo Medical Department began the winter sessions Monday, September 25. Dr. George F. Cott delivered the opening address, in which he advocated a six-year course, saying that the present course of four years is not sufficient.

**Personal.**—Dr. H. Ernest Schmidt, White Plains, has returned from Germany much improved in health. Dr. Albert E. Woehnert, Buffalo, has recovered from an operation for appendicitis. Dr. Frank W. Hinkel, Buffalo, has returned from abroad. Dr. Patrick A. Hourigan, Buffalo, who has been ill with blood poisoning, is recovering. Dr. Bernard Bartov has returned from Wanakah.

**The Water Supply.**—The state water supply commission has asked the attorney-general whether the 200 private water companies in this state are subject to the control of the commission in like manner as are the municipal boards. One hundred questions relating to purity of water supply and disposal of sewage have been formulated, to be asked of the 906 villages, towns and cities of the state. The best water and filtration plants will be visited and the water supply of Buffalo and Niagara Falls will be investigated.

**Many Consumptives Helped.**—The trustees for the New York State Hospital for Incipient Pulmonary Tuberculosis, located at Ray Brook, have issued their completed statistics for the first year, which show an excellent percentage of recoveries and improvements. There were admitted 207 patients, more than half of whom were incipients. There were no deaths. Of 105 patients discharged, 52 were apparently recovered. There were reported 26 arrested cases, 16 improved, and 11 without improvement. These latter cases remained but a few weeks. Of the 105, 90 gained an average of 10.57 pounds each. The trustees of the hospital are Dr. Willis G. MacDonald, Albany; William A. Douglass, Buffalo; Dr. Elmer E. Larkin, Plattsburg; W. E. McClary, Malone.

#### New York City.

**More Yellow Fever at Quarantine.**—A coal passer aboard the steamer *Havana*, from Colon September 24, died from yellow fever on Swinburne Island September 26. Five of the crew

of the British steamship *Lindisfarne*, from Cienfuegos, have been held for observation. The vessel had been at Colon and several of the crew had been ill with the fever.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended September 23, 350 cases of tuberculosis, with 142 deaths; 155 cases of diphtheria, with 18 deaths; 124 cases of typhoid fever, with 15 deaths; 69 cases of measles, with 1 death; 62 cases of scarlet fever, with 1 death; 11 cases of cerebrospinal meningitis, with 15 deaths, and 20 cases of varicella.

**Herter Lectures.**—The Herter Lectures, established by Dr. C. A. Herter at the New York University and Bellevue Hospital Medical College, will be given this year by Prof. Carl von Noorden, chief of the City Hospital of Frankfurt, Germany. His subject will be "Diabetes." The six lectures will be given in English in the large auditorium of the Carnegie Laboratory, 338 East Twenty-sixth Street, from Monday, October 9, to Saturday, October 14, inclusive, at 4 o'clock in the afternoon. Visitors are welcome.

**Fear an Eye Epidemic.**—Several eye specialists declare that ophthalmia will follow the Mardi Gras carnival at Coney Island. Influence was brought to bear on the carnival committee which resulted in posters being freely displayed about Coney Island to warn confetti throwers that any person who gathers the torn bits of paper from the pavement and throws them at another person will be arrested and, if found guilty, will be punished by either a fine of \$100 or six months' imprisonment. Physicians have treated several cases of iritis at the Coney Island Reception Hospital which have resulted directly from throwing confetti.

**Personal.**—Dr. Thomas Darlington, health commissioner of New York, addressed the workmen of Hartford, Conn., September 25 on the subject of "Tuberculosis," treating his topic from the economic standpoint. Dr. and Mrs. Morris L. King, who are making a journey around the world, have left India and started for London en route for New York. Dr. John W. Robie returned from Europe on the *Ryndam* September 26. Dr. E. Harrison Griffin returned on the *Minneapolis* September 26. Dr. Milton J. Ballin returned on the *Hamburg* September 27. Dr. Alma Vedin sailed for Europe on the *Finland* September 30.

**Some Results of Food Inspection.**—During the year 1904 food inspectors condemned and destroyed 2,000,000 pounds of meat. The small dealers and push-cart men are closely watched and frequently 5,000 pounds or more of their wares are destroyed in a single day. During the past year 848 samples of food-stuffs were subjected to analysis and this resulted in nearly 8,500,000 pounds being destroyed. There are about 1,500,000 quarts of milk shipped to New York daily and more than 30,000 samples are collected and analyzed in the course of a year. The fines last year amounted to over \$10,000 and over 75,000 quarts were destroyed. It is said that the system of inspection of fruits is so rigid that it is next to impossible for a barrel of apples, a case of oranges or a bunch of bananas to slip through unnoticed.

**Cripples Become Self-supporting.**—The New York City visiting committee of the State Charities Aid Association reports that the inmates of one ward of the Home for the Aged and Infirm on Blackwell's Island, which is devoted to paralyzed, rheumatic and epileptic, were induced to take up bead work. The interest spread until 20 out of 60 men in the ward were at work. The Brooklyn division of the home has also taken up the work. Improvements have been installed in the farm colony on Staten Island. The dormitory has been enlarged and three cottages completed, providing room for about 500 inmates. The value of the farm products has increased from \$5,000 in 1902 to \$12,000 in 1904. In Brooklyn the committee found that present hospital facilities are inadequate and that there is great need for increased capacity in existing plants as well as for the establishment of several smaller hospitals.

**College Opens.**—At the opening of the College of Physicians and Surgeons in the City of New York, September 28, Dr. Samuel Lambert, dean of the college, delivered an address on "Some Present Fallacies in Medical Education." He declared that four months of vacation was too much. As most professors and students took up work during vacation it was surprising that the summer session was not better attended. The cause probably was that the subjects taken, except in two cases, were not counted for degrees. He suggested that the university change this. Another fallacy was trades unionism in medical education, inasmuch as the curriculum, like trades unions, limited the work to be done by its members. Another fallacy was the confirmed habit of the medical student to modify the existing curriculum to meet his individual ideas and his commonest error was to run away from the required



duties to enter some hospital as a substitute for one of the house staff. The college should supply such work as a part of the curriculum.

#### OKLAHOMA.

**Meeting of Southwestern Tri-state Medical Association Postponed.**—Owing to the quarantine restrictions, the meeting of the Southwestern Tri-state Medical Association of Oklahoma, Indian Territory and Texas, at Oklahoma City, has been postponed from October 17-18 to November 8-9.

#### PENNSYLVANIA.

**District Censors Chosen.**—At the September meeting of the Huntingdon County Medical Society Dr. Charles A. R. McClain, Mount Union, was recommended for district censor.—Dr. W. D. Hamaker, Meadville, was chosen district censor by the Crawford County Medical Society.

**National Guard Appointments.**—Capt. Louis P. McCormick, Connellsville, has been commissioned major-surgeon in the N. G. Pa., and assigned to the Tenth Infantry.—Dr. James F. Elder, New Brighton, has been commissioned first lieutenant and assistant surgeon in the same command.

#### Philadelphia.

**Personal.**—Drs. Francis Packard and J. Norman Henry have returned from Europe.—Dr. Frank W. Lally was severely bruised in an automobile accident near Allentown, September 24.

**Hospital Reports.**—From August 24 to September 21 the German Hospital admitted 239 patients and discharged 200; 19 patients died and the number remaining on the latter date was 167.—The report of the Jewish Maternity Hospital shows that an unusual amount of work was done in the hospital during the three months ended August 31, as 182 patients, including 19 remaining from May, were cared for in the hospital, receiving 2,204 days' support. In the out obstetric service 25 infants were born, necessitating 152 visits from physicians. Patients paid 447 visits to the several clinics and 417 prescriptions were compounded.

**Health Report.**—The total number of deaths reported for the week ended September 30 was 384, being a decrease of 25 from the preceding week and a decrease of 14 from the corresponding week of last year. Among the deaths 193 were of men, 191 of women, 73 of boys and 59 of girls. The principal causes of death were as follows: Typhoid fever, 14; tuberculosis, 45; cancer, 22; apoplexy, 18; paralysis, 10; heart disease, 38; acute respiratory diseases, 38; gastritis, 34; diarrhea, 31; Bright's disease, 17; premature birth, 14; congenital debility, 13; old age, 8; accidental injuries, 25; marasmus, 9. The number of cases of contagious disease reported for the week were: Diphtheria, 34; scarlet fever, 32; typhoid fever, 95, making a total of 161 cases, with 18 deaths, as compared with 184 cases and 13 deaths for the previous week.

**Medical Colleges Open.**—The opening exercises of the one hundred and fortieth annual session of the Department of Medicine of the University of Pennsylvania were held in the new medical laboratory, September 29. The principal address was delivered by Prof. Alfred Stengel. No important changes have been made in the courses, although the school has lost, by resignation, Dr. Alfred W. Miller, assistant professor of materia medica; Dr. Robert J. Formad, demonstrator of normal histology; Dr. John M. Swan, demonstrator and students' physician; Dr. George P. La Roque, assistant in surgery, and Dr. Samuel McClary, assistant demonstrator of normal histology. The following new men have been added to the teaching staff: Dr. Ewing Taylor, associate in anatomy; Dr. Henry L. Bates, assistant in physiology, and Dr. Rufus B. Searlet, voluntary assistant demonstrator of pathology.—The annual session of the Medico-Chirurgical College convened September 25.—The annual opening of Jefferson Medical College was held September 25, and the annual address to the students was delivered by Hon. William Potter, president of the board of trustees.

**Suppressing Abortionists.**—No more serious duty has in recent years confronted regular practitioners than that of the enforced removal of the band of abortionists who seem to have made Philadelphia their headquarters. With this object in view a committee of three was appointed by the Philadelphia County Medical Society April 20, 1904, to aid the coroner, the director of public safety and the district attorney in the securing of evidence against and in the prosecuting of those performing criminal abortions. At the meeting of the society September 13 Drs. Francis M. Perkins, Charles W. Burr and Henry W. Cattell submitted the following report of their labors:

Your committee begs leave to report that it has investigated over thirty persons making a practice of performing criminal abortions in the city of Philadelphia and that at the present time each one of these has either left the city, is under police surveillance (6), is a fugitive from justice (7), is awaiting trial (7), or is in prison serving time (8).

Your committee in its entirety or individually has paid frequent visits to Coroner Dugan, District Attorney Bell, Director Smyth, and Director Potter, and have been most courteously received by these gentlemen and believe the support of the society in assisting them in the performance of their duties has been much appreciated.

As an additional example of what has been done may be cited the case of one of the Philadelphia newspapers which formerly carried in its Sunday edition 10 to 17 advertisements of criminal abortionists, and which now no longer prints this objectionable kind of matter.

So much having been accomplished it is hoped that the County Medical Society will never permit this nefarious business again to assume such vast proportions in Philadelphia as was the case in the early part of 1904. It would seem to the committee that the only way to prevent this now that the city is largely freed from criminal abortionists, is to have the matter taken up by the State Medical Society and the American Medical Association, so that when the abortionists are driven from one city they will not immediately go to another place and carry on work of a similar nature. Thus several years ago an earnest endeavor was made to drive this class of persons out of Boston and as a result Philadelphia received several of the worst specimens with which the authorities have had to deal. Then, too, it is so easy to live in New York or New Jersey and to come over to Philadelphia a certain number of days each week. If a central committee of the American Medical Association could be established with affiliating committees in the various large centers, your committee believes that much good could be accomplished thereby.

#### VIRGINIA.

**Hospital Association Formed.**—An association has been formed at Leesburg for the purpose of establishing a hospital. It will start with a capital of \$2,000, to be later increased. Dr. Rebeka Wright of Washington, is at its head. The movement is receiving the active support of physicians in Leesburg and vicinity.

**Doctors Object to Special License.**—The *Medical Legislator*, published by the Medical Society of Virginia, contains articles condemnatory of the special license tax varying from \$10 to \$25 a year, which is now imposed on physicians. The aim of the society is to compel the repeal of this act. It is claimed that the medical is the only profession from which such license tax is exacted.

#### GENERAL.

**Yellow Fever in Panama.**—During the week ended September 9 four new cases of yellow fever were reported in the city of Panama, three of which were fatal. No cases have occurred in either Colon or Cristobal since August 26, and there have been no suspicious cases observed in the hospital since that date.

**Health Report of the Isthmian Canal Commission.**—The report for August calls attention to the continued excellent health conditions among the laborers working on the canal. It is stated that yellow fever is steadily decreasing; during August there were only 27 cases. This is the smallest number of cases since April. In May there were 33, in June 62, in July 42. The report also includes a description of the methods employed in inspecting houses and of notifying tenants that houses are in an insanitary condition. There is a detailed account of the general sanitary work done and of the results accomplished.

**Death of Mr. W. B. Saunders.**—Mr. W. B. Saunders, the well-known medical book publisher of Philadelphia, aged 47, died Monday, October 2. Mr. Saunders started medical book publishing in 1891, and in the short time since then, has built up one of the largest medical book publishing concerns in the country, if not in the world. His energy, his honesty of purpose and his genial disposition won him success and many friends in the medical profession. He leaves a wife and two children, the latter aged, respectively, 12 and 16. Mr. Saunders has been ill and unable to attend to his business for several months. We understand that the business will be conducted as heretofore.

**Health of the Non-immune Employees of the Canal Commission.**—The Public Health and Marine-Hospital Service reports that the health of the non-immune employees of the canal commission residing at Cristobal is at present exceptionally good, no cases of yellow fever having occurred among them during the past month, and the number of cases of malaria having greatly diminished. This is undoubtedly due to the improved sanitary conditions, mosquito work and screening of the living quarters. Strong westerly winds have also contributed to keeping the town comparatively free from the swarms of mosquitoes from the surrounding swamps. A general feeling of encouragement prevails, but the efforts and vigilance of the sanitary department are in no wise being relaxed. It is proposed by the sanitary department to keep the large numbers



of non-immunes arriving on the isthmus out of the sphere of infection as far as possible. A camp in the canal zone along the line of the railroad is to be established, to which the new arrivals are to be taken and where they will be held until they can be distributed to points outside the cities of Colon and Panama. This is considered especially advisable in the case of the Colombian laborers, many of whom come from the mountainous interior.

**Health in the Philippine Islands.**—The report of the Board of Health of the Philippine Islands for June shows that 600 births were registered during the month. Of these 326 were males and 274 females. The report states that if these were the only births that occurred the birth rate would be 32.67 per thousand, but as it is positively known that many births were not reported it is impossible to state the exact birth rate. During the month 583 deaths were reported, of which 526 were of residents and 57 of transients. Convulsions of children caused 108 deaths, the largest number from any one disease; pulmonary tuberculosis caused 90; diarrhea and enteritis (under 2 years), 32; chronic enteritis, 30; dysentery, 29; congenital debility, 26; meningitis, 24; bronchitis (acute and chronic), 42; beriberi, 14; cerebral congestion and hemorrhage, 14; other diseases, 88. The mortality among children belonging to the groups of under thirty days and from thirty days to a year is the lowest proportion which has been observed up to the present time. Three deaths were registered in Cebu and one in Cavite from bubonic plague. The prophylactic measures which have been carried on with perseverance and activity have yielded the expected results and the archipelago has been practically freed from the former yearly epidemic of this disease.

**Yellow Fever.**—The figures are as follows in New Orleans: Total cases to October 2, 3,042; total deaths, 394; death rate, 12.9; new cases week September 26 to October 2, 185; deaths, 23; cases under treatment October 2, 204. In Louisiana, outside New Orleans, twenty infected points for the week September 25 to October 1 report 121 new cases. In Mississippi, week September 26 to October 2, Natchez has 29 new cases, making to October 2 a total of 102 cases and 6 deaths—a death rate of 5.8 per cent. Vicksburg has 43 new cases, 5 deaths, making to October 2 a total of 115 cases and 14 deaths—a death rate of 12 per cent. Eight other infected Mississippi towns report for the week September 25 to October 1, 66 new cases and 1 death. In Florida, Pensacola has: Total cases to October 2, 163; deaths, 27; death rate, 16.6 per cent.; new cases September 26 to October 2, 58; deaths, 9. Under the charge of Dr. Chassaingnac, the situation at Tallulah, La., has very greatly improved. Armed with a permit from the Mississippi Board of Health, Dr. Chassaingnac set out to visit his home in New Orleans. In passing through Jackson, Miss., local quarantine guards refused to recognize his permit and even used physical violence to keep him from changing cars.—Business and pleasure in New Orleans are resuming normal activity.—Three additional cases of yellow fever have occurred among refugees in Cincinnati.—A death from yellow fever occurred at the New York quarantine.—The Arkansas quarantine is being slightly relaxed.—Georgia has quarantined against the whole state of Mississippi.

#### FOREIGN.

**Royal Medical and Chirurgical Society of London.**—The hundred and first session of this society will commence Oct. 24, 1905.

**Enteric Fever in Germany.**—During the early part of September enteric fever was practically epidemic in Posen. The total cases reported till the end of the month was 305.

**Cholera in India.**—The cholera epidemic in Madras seems to continue unabated, the daily returns being still very high. It is reported, according to *Public Health Reports*, that outbreaks have occurred in both the general hospital and the government lunatic asylum. A number of schools and colleges are closed.

**Simple Test for Blood in Urine.**—Sabrazès adds 10 drops of hydrogen dioxid to 10 c.c. of the urine to be examined. In the presence of even microscopic amounts of blood the fluid bubbles up and the froth is more abundant and lasts longer than when the bubbling is due to the presence of pus or alkaline salts. In normal urine only a very few bubbles are observed.—*Nord Médical*, September 15.

**Openings for Physicians in Foreign Countries.**—A committee was appointed by the medical society at Liège, Belgium, to investigate the chances for openings for Belgian physicians in other countries. The only lands that offer any chances for success, according to the report recently presented by the committee, are the East Indies, Persia, Asiatic

Turkey, Egypt, Morocco, Haiti, Mexico, San Domingo, New South Wales and Southern Australia. Even in these countries the foreign physician can not rely much on any resources except his private means. The report urges the establishment of a postgraduate clinic on tropical diseases at Antwerp.

**Smallpox Epidemic in Southern Africa.**—Johannesburg is facing an epidemic of smallpox attributed to infection from letters sorted out by a mail clerk suffering from smallpox. Over 2,000 persons received letters which had passed through his hands, according to cable reports, and the persons affected are mainly Europeans. The more crowded native quarters have been comparatively exempt so far.

**French Physicians' Finances.**—At the inauguration of the Normandy Medicolegal Society Professor Brouardel of Paris stated that the pecuniary condition of physicians in Paris was worse than it was 30 years ago. When he was elected president of the Association of Physicians of the Seine district, 18 years ago, only \$6,000 had to be disbursed for the assistance of orphans and widows of members during the year, while last year the disbursements for this purpose were over \$12,400 and the amounts had been reduced from \$180 to \$140.

**Russian Physicians Delay Return from War.**—After the Russo-Turkish War fully eighteen months elapsed before the majority of the physicians of the campaign had returned home. They did not feel at liberty to return as long as their hospitals contained severely sick and wounded patients. The *St. Petersburg. med. Wochts.*, commenting on this fact, remarks that it will probably be more than two years before the physicians in the far East can return to their home duties in Russia. Many parts of Russia are suffering from a lack of medical attendance owing to the absence of the regular physicians in the East.

**International Radiology Congress.**—The Roentgen Congress had but scarcely closed its doors at Berlin when a congress devoted to radium and radiology in general was planned. The Belgian government has perfected its organization, in connection with the international exposition now being held at Liège. Radium, radioactivity, the radium rays and their application in therapeutics, etc., are to be the main subjects discussed. The list of speakers includes Henri Becquerel, the discoverer of the radioactive substances; Svante Arrhenius, the great authority on physical chemistry; Birkeland of Christiania; Sir William Ramsay of London; Himstedt, Riecke, Righi of Bologna; Lassar of Berlin, and others.

**New Biophysical Journal.**—The publishing house of Gebriider Borntraeger, Berlin, announces the publication of the *Biophysikalisches Centralblatt*, an organ devoted to collecting summaries of what is written on the subjects of biology, physiology and pathology, excluding biochemistry. It is to form the second part of the *Centralblatt f. d. gesamte Biologie*. The volume is to cost \$7.50, except to those already subscribers to the *Biochemischen Centralblatt*, who can obtain it at reduced rates. The editors are C. Oppenheimer and L. Michaelis of Berlin, with collaboration of Hertwig, von Leyden, Kraus and Orth of Berlin, Tigerstedt of Helsingfors, Hering of Leipzig and Biedermann of Jena.

**Infant Mortality in Various Countries and International "Drop of Milk" Congress.**—The percentage of deaths of infants under one year in the general mortality is 42 in Saxony, 38 in Bavaria, 33.9 in Prussia, 31.8 in Austria, 26.1 in Cuba, 19.2 in the United States, 17.4 in Sweden, and only 15 in France. The low infant mortality in France is due in large part to the Roussel law, the law passed in 1874 by the efforts of the physician and senator, Dr. Roussel, which ensures medical and police surveillance of every child less than 2 years of age who is boarded out. This custom of giving infants out to nurse and be cared for is very prevalent in France. The infants are generally placed in country homes, and are supposed to have the benefit of pure air and milk. Another factor in the low infant mortality in France is the "infant consultations" frequently mentioned in these columns (see page 1033), with their milk supply departments. An international conference of all interested in these "infant consultations" is to convene at Paris October 20-21. The secretary and treasurer is Dr. Paul Roger, 39 rue de Berry, Paris.

**An International Congress Where All Spoke the Same Tongue.**—International congresses are generally a confusion of tongues, discounting the Tower of Babel for the effect produced, but a congress was held recently at Boulogne, France, where all spoke esperanto. This is the artificial language invented by a Polish physician in 1887, which has been slowly gaining ground during the years since in spite of numerous criticisms of its defects. A French exchange describes the con-



gress as a gathering of 1,500 members who were able to converse with each other on the common ground of esperanto, although coming from the remotest corners of the civilized world. Dr. Zamenhof's grammar of esperanto has been translated into 28 languages, and there are 20 monthly journals devoted to its propaganda. At Paris alone 30 public courses of lectures on esperanto were held last winter. The jealousy of the various nations prevents the general adoption of any one language for the common tongue for scientists of all lands. It actually seems as if some artificial language might answer the purpose, but it should be one based on the terms common to all the tongues in current use and not an arbitrary coining of uncouth sounds which has been the defect of the various artificial languages hitherto proposed.

**Antituberculosis Congress.**—Elaborate preparations have been made for the great antituberculosis congress which opens this week at Paris. More than 3,500 members are said to have registered, coming from all quarters of the globe, 33 countries having organized national committees of propaganda for the congress and appointed delegates. The delegates represent the leading authorities not only of medicine, but also of organized charities, of sickness and life insurance interests, of hygiene and of sociology. France has been divided into districts in which the question of tuberculosis among the population has been studied along the most improved lines, the data collected presenting several new features. The antituberculosis museum is to remain as a permanent exhibition. One of the exhibits is two contrasting rooms. One is fitted up by the Touring Club and shows a model hygienic and attractive room. The other, with curtains, carpets, poor lighting and ventilation, shows what not to do to avoid tuberculosis. Our French medical exchanges regard the congress as a week destined to mark history. The fee of \$5 entitles to the transactions with 46 addresses, the preliminary report with abstracts of the addresses in English, French and German, to a pamphlet containing all the data in regard to the battle against tuberculosis in France, with other publications and the insignia of the congress, a beautiful little souvenir by a prominent artist.

**Epidemics in Europe.**—Cable dispatches dated October 3 state that no new cases of cholera developed during the preceding twenty-four hours, and only four in the twenty-four hours before that. The German authorities are much gratified at the workings of the measures taken against the disease. Although cases have occurred in more than fifty different localities, yet none has developed into a local focus. All can be traced to river traffic, and the rivers have been subjected to vigilant supervision. Every vessel is inspected by a physician once a day at least. The prophylactic measures have proved practicable and efficient, and the policy of absolute openness in regard to the cases has proved very reassuring to the public. The Moabite Hospital at Berlin has had a special building set apart for cholera patients, with a second barracks for the suspicious cases and a third for the attendants. In case of an epidemic, the entire hospital is to be devoted to cholera patients. The people are warned to boil the water, particularly as a number of cases of typhoid have occurred. The *St. Petersb. med. Wochft.* for September 16 reiterates that no cases of cholera have been reported in the Russian Empire. Our German exchanges have ceased to mention the epidemic of cerebrospinal meningitis, which seems to have died out, no new cases having been reported for some time. The total number of cases since the first was reported last November has been 3,250, with 1,750 deaths.

**Early Diagnosis of Pregnancy.**—Weissenberg writes from southern Russia to the *Allg. med. Ct.-Ztg.* for September 16, to call attention to the difference in the consistency of the two halves of the uterus in the first months of pregnancy. He has examined 120 pregnant women to determine the frequency of this variability in the consistency of the halves, and found the left side soft and the right hard in 6 women by the fifth week, in 28 by the sixth week, in 7 by the seventh week, in 12 by the eighth week, in 12 by the tenth, in 7 by the twelfth and in 1 by the fourteenth week. He found the right side soft and the left hard in 2 women in the fifth week, in 11 in the sixth week, in 3 in the seventh week, in 10 in the eighth week, in 5 in the tenth week, in 3 in the twelfth and in 1 in the fourteenth week. The livid aspect of the vagina mentioned by some writers as an early sign of pregnancy was observed very pronounced in 5 women in the sixth week, in 1 in the seventh, in 10 in the eighth week, in 8 in the tenth week, in 7 in the twelfth week and not afterward, while there was no livid appearance in 5 by the fifth week, in 20 by the sixth week, in 4 by the seventh week, in 6 by the eighth week and in the same number in the tenth

week. The introitus was slightly livid in 2 women in the fifth week, in 13 in the sixth, in 10 in the seventh, in 6 in the eighth, in 3 in the tenth, in 2 in the twelfth and in 2 in the fourteenth week. The women were examined from week to week. He adds that the peasants are now as averse to large families as the dwellers in city flats, and the women are becoming ingenious in devising excuses for curettement, etc., to trap the physician into terminating the pregnancy.

**Third Scientific Latin-American Congress.**—This congress opened under favorable auspices August 6, at Montevideo, Uruguay, the presence of the president of the republic and of the entire diplomatic corps lending brilliancy to the inauguration. Delegates from all the Latin-American countries were in attendance, and much attention was devoted to interstate sanitary co-operation, measures to curb the white slave trade, arrest the spread of alcoholism and of various diseases, etc. The *Brazil-Medico* has already begun to publish summaries of some of the addresses, among them of Carrasquilla's article on leprosy. He preaches that leprosy is not contagious, but that it is infectious, and that it is transmitted by the flea. The first manifestation of the disease is a pustule, similar to the bubo of syphilis and of plague. It is not transmitted by the secretions nor by water nor by direct contact, but only by the intermediation of the flea. Isolation is absolutely unnecessary, freedom from vermin ensuring non-infection of others. J. Novaes described a form of beri-beri, accompanied by anesthesia to heat and pain in certain regions. He has always obtained good results from copious venesection and saline infusion, with dietetic and diuretic measures, sometimes applying leeches along the spine, in the triangle of Petit and in the popliteal space. The forms with anesthesia display a tendency to a more chronic course. In regard to plague, Moniz remarked in regard to the prevalent opinion that the plague patient recovers if the bubo suppurates, that suppuration occurs because the patient has survived long enough for this to happen. Moniz of Bahia' proclaimed the great value of serotherapy of the plague as an adjuvant.

#### LONDON LETTER.

##### Self-supporting Sanatoria for the Treatment of Consumption Among the Working Classes.

An organization has been formed to carry out this object. Its importance is shown by the fact stated at the last annual meeting of the Hospital Saturday Fund that in London alone 16,000 persons, whose lives might be saved by proper treatment, annually die from consumption. It is computed also that in London 80,000 persons suffer from one or other form of tuberculosis. A national committee of which the Princess Christian is president has been established under the auspices of the Hospital Saturday Fund for the establishment of sanatoria for workers suffering from tuberculosis. It is an exceptionally representative body and includes delegates from practically all the great friendly societies and trade unions. An appeal is being made to the public for \$250,000 to provide a building and to acquire a site for the first sanatorium for the accommodation of 200 patients. About \$30,000 has already been promised and a suitable site has been secured at Benenden in Kent. The various societies and trade unions guarantee the cost of maintenance, but under the terms of their constitutions they can make only small donations toward the building. The sanatorium will thus be self-supporting and no appeal will ever again be made to the public for funds. An investigation made by the Ancient Order of Foresters is interesting in this connection: The average cost of sick pay to a consumptive is three times as great as that to a person dying from another disease.

##### Outbreak of Typhoid Fever Due to Shellfish.

In the neighborhood of the Teign in Devonshire an outbreak of typhoid fever has occurred which has been proved to have been caused by the consumption of cockles taken from that river. The local health officer has issued a notice advising people to refrain from eating shellfish, most of which is collected from the rivers into which large quantities of sewage are poured. The pollution has been going on for years and every year about the months of August and September a number of cases of typhoid fever occur.

##### Penalty for Facilitating the Spread of Disease.

A young man was charged before a magistrate with walking about and mixing with the public while suffering from diphtheria. He suffered from sore throat and went to a hospital, where the house physician told him he was suffering from diphtheria and must be at once isolated and sent to the fever hospital. He, however, left the hospital, promising to return in an hour, which he did not do. The house physician had no



power to detain him, but reported the case to the sanitary authorities. The diagnosis was verified by the culture test. Three days later the man went to a physician who at that stage failed to recognize the disease and told the man he might go to work. The patient did not tell him that diphtheria had been diagnosed. The magistrate severely admonished the man and fined him \$25.

#### The Open-air Treatment of Acute Disease in Children.

At the Northeastern Hospital for Children, situated in one of the poorest districts of London, an advance has been made beyond that of similar institutions in the open-air treatment of both acute and chronic diseases in children. A striking feature of this hospital is the open-air balconies which front the main building. Here all through the summer months the sick children may be seen lying out of doors in their cots and the operations of the wards being conducted in the open air. Cases of pneumonia, typhoid fever, summer diarrhea and other acute diseases are being treated with the greatest benefit. It has been found, however, that certain diseases are not amenable to this treatment, for example, heart disease. This appears to be due to the noise and bustle of the traffic of the populous street below in its passage over the stone blocks of the roadway. But these cases have done remarkably well since the treatment has been conducted in the open air at the back of the hospital, removed from the sight and sounds of the traffic. It is suggested that the work of the hospital would be assisted if the roads were paved with wood instead of stone. The balconies have been found especially useful in the case of young children who are convalescing. These children would no doubt be better at the seaside or in the country, but, unfortunately, children under the age of 3 are not admitted to convalescent homes. On the balconies delicate, puny, wizened children put on flesh and become rosy and buoyant—a result which could not have been attained had they been drafted straight away to their homes in the slums. In Liverpool also the increasing need for the open-air treatment of disease in children has been realized. In 1899 a ward containing twenty beds was opened for this purpose at the West Kirby Home for Convalescent Children—a Cheshire seaside resort. Soon a permanent hospital containing 200 cots will be erected. During the greater part of the day the children at West Kirby are, when weather permits, in the open air. When it is wet and cold they are sent to a well appointed sun room. In the summer the doctors visit many of their patients in the grounds of the hospital. This scheme deals only with the more chronic cases of illness in children. The advantage of treating acute disease in children in the open air had not been put into practice before the London Northeastern Hospital adopted it. These results may be compared with those obtained in the floating hospitals of New York.

#### The Use of Boric Acid to Preserve Milk.

The vexed question as to the use of boric acid as a preservative of milk has again occupied the courts. As usual, the medical evidence was conflicting. At Wakefield a dairy company was charged with selling milk adulterated with boric acid to the amount of 4.8 grains to the pint. Dr. Kaye, the health officer, said that he thought that the use of boric acid was not only injurious to health, but was a dangerous cloak for insanitary conditions in connection with milking. For the defense Dr. Bradshaw of Liverpool stated that the disuse of milk preservatives in Liverpool during the last year greatly increased the infantile death rate, chiefly from diarrhea, as the milk without the use of preservatives rapidly became putrescent. Dr. Bradshaw held that the administration of small doses of boric acid was not injurious to health, while the conditions under which the milk is kept by the poor are such that if preservatives are not used decomposition with its attendant dangers is certain to occur. The case was dismissed, as the bench was not satisfied that boric acid in the quantity specified was injurious.

#### Research in Tropical Diseases in India.

A scheme for the provision of more adequate means of studying diseases in India has recently been considered by the government of that country. From time to time various plans have been discussed, but financial and other difficulties have prevented the adoption of a complete scheme. The brilliant work accomplished by some officers under circumstances of great difficulty and the successful administration of the Pasteur Institute at Kasauli, has led the government to hope that if the means are supplied they will obtain from among their officers a staff of scientific workers worthy of the problems that confront them. A new scheme is to be introduced which will render it unnecessary for officers to go from India to Europe to study the bacteriology and parasitology of tropical diseases. It is expected that workers from Europe will

seek Indian laboratories to use the unrivaled material which the country affords. The government scheme comprises the establishment of a central research institute at Kasauli and a laboratory for scientific, medical and sanitary work at the headquarters of each provincial government. The functions of the central laboratory will be original research, the preparation of curative sera and the training of scientific workers. The functions of the provincial laboratories will be primarily the provision of expert assistance for the provincial medical and sanitary officers, but the superintendents of these laboratories will be encouraged, as far as opportunities allow, to prosecute original research. Kasauli possesses great advantages for the central laboratory. Its climate is temperate, it is easy of access by rail, it is the site of the Pasteur Institute and large hospitals are near. The first director of the central research institute will be Lieut.-Col. Semple, M.D., whose successful administration of the Pasteur Institute has marked him as possessing the zeal and capacity necessary for the great task before him.

#### A New Departure in the Management of Outpatient Departments.

The complaints of the profession against the abuse of hospitals, particularly of the outpatient departments, by patients well able to pay for medical assistance, are as persistent as they are futile. A new system which has been adopted in one of the smaller London hospitals, the Bolinbroke at Wandsworth, however, seems to have solved the difficulty. Casualty patients are seen only once unless they bring a card signed by a physician. The same principle is observed in the outpatient department proper. Patients are not admitted unless they are accompanied by their physician or bring a card or letter from him. After the patient is examined he is given a letter addressed to his physician, containing the opinion of the hospital physician or surgeon on the case and his advice as to treatment. No medicines are dispensed and any that are required must be obtained through the patient's physician. This plan has been carried out for several years with success.

#### The Declining Birth Rate and Physical Degeneration.

Two topics are now furnishing standing subjects for discussion in the lay press and are attracting an enormous amount of attention—the declining birth rate and the physical degeneration of the working classes associated with town life. Medical authorities, church dignitaries and public men of all kinds are entering into the discussion, which is conducted largely in an alarmist spirit, many declaring that the empire is being endangered. As to the birth rate, in 1903 the London rate was 28.4 per 1,000—the lowest then recorded and 0.1 below the preceding year. Now it is announced that the birth rate for Great Britain in the second quarter of the present year was only 27.8—the lowest recorded in any second quarter since civil registration was established. In 1895 the birth rate was 30.3, and in every succeeding year a decline has been recorded; in 1904 it was 27.9. Among the causes assigned are the “no family” and the “limited family” creeds, which the desire for a higher standard of life has engendered, and the diseases of women. The selfishness and desire for luxury and pleasure of the people are attacked by the critics, but they do not grasp the fact that the declining birth rate is a phenomenon of advancing civilization and an inevitable one. As to the physical degeneration of the population, the obvious conclusion from reliable data is that there is no such thing. Hence, the topic furnishes a splendid subject for discussion for all sorts of theorists, on the general principle which holds in medicine that the less there is actually known about anything the more can be said on it. No doubt town life, especially in the slums, is attended with certain injurious physical tendencies, but, on the other hand, the people are better fed to-day than ever before and the hygienic conditions of towns is much improved. Some time ago, as reported in *THE JOURNAL*, the director general of the army medical service showed by figures that the classes which furnish our armies with recruits are individually broader, heavier, taller and better constituted than ten years ago.

**Correction in Footnote to Dr. Tiffany's Article.**—Through an error by the printer, a small portion of the copies printed of *THE JOURNAL*, September 30, contained, on page 957, a footnote stating that the article on “Differential Diagnosis of Intraorbital Tumors,” by Dr. Flavel B. Tiffany, Kansas City, was read in the Section on Ophthalmology of the American Medical Association at the Portland session, July, 1905. The article was prepared for that session, but the author was prevented from being present to read it.



Pharmacology

"Scientific Work Misrepresented and Commercialized."

PORTO RICO ANEMIA COMMISSION.

AIBONITO, P. R., Sept. 18, 1905.

To the Editor:—It has come to our notice that the report of this commission, published Dec. 1, 1904, is being used by the manufacturers of Gude's pepto-mangan to advertise their preparation of iron. As this advertisement puts us in a very unenviable and erroneous light before the medical profession generally, will you be kind enough to publish the following statement?

The advertisement in question purports to be a review of this report and, having attracted attention, proceeds by erroneous deductions and half-quotations in such a manner that one might believe that the commission indorsed their preparation of iron as the best hematic in the treatment of the anemia of uncinariasis.

As a matter of fact, the report (page 119) clearly states that we found the carbonate of iron to give the best results. Our report, on account of the limited edition, has never reached the majority of our professional brethren, and for this reason we quote the portion referred to:

"It will be noticed that slight cases readily recover without iron, and here the difference in the tables is more marked, while there is less difference among the marked cases in proportion to their number. In other words, the more resistant cases of all grades received iron, but even then did not generally recover as rapidly as those less rebellious without, for while ferruginous preparations seem to act readily in some instances, still, in the majority, its effect was not marked. The rapidity of cure is due, apparently, more to the personal equation of the patient and the rapidity with which the parasites are expelled, than to the amount of reconstructive treatment. Thus it is quite difficult accurately to judge the comparative value of different iron preparations, yet it was noticed, even by some patients, that Blaud's pills gave more rapid results."

We do not believe that a perusal of the histories of the eighteen cases which the advertisement quotes demonstrates the superiority of pepto-mangan (Gude), as these patients recovered more slowly than others of the same type who took Blaud's pills or Vallet's mass. In fact, on account of this slow recovery the carbonate of iron was substituted for pepto-mangan in five of the eighteen cases (Cases 8, 9, 10, 13 and 15). We ceased to use pepto-mangan and gave none to the later cases.

To support our statement we invite attention to the following figures taken from those given in the very report which the M. J. Breitenbach Co. cite as proving the superiority of their preparation:

There are sixty-one cases reported in full with complete blood records and clinical histories. In eighteen of them pepto-mangan was used save toward the termination of five of them, when Blaud's pills were substituted. In eleven cases Vallet's mass was used, supplemented by Blaud's pills. In twenty-nine cases Blaud's pills were used exclusively. Three cases have no bearing on the subject.

Reconstructive treatment.	Pepto mangan (Gude).	Blaud's pills.	Vallet's mass.
Average hemoglobin before treatment, per cent. ....	20.7	26.5	18.1
Average number days under treatment .....	80.7	47.9	69.8
Average gain in hemoglobin during treatment, per cent.	62.3	66.8	66.6

But to bring out the difference between these drugs more vividly eighteen pairs of cases of like type have been tabulated, whose initial hemoglobins absolutely or nearly correspond. One of each pair was treated by Blaud's pills, the other by pepto-mangan. The demonstration is all the more potent in that both drugs were used in their true rôle as blood regenerators, in conjunction with thymol administered to both alike.

Case No.	Form of Iron used.	Hemoglobin before treatment.	Days under treatment.	Total gain hemoglobin.
1.	Pepto-mangan ...	33	100	68
56.	Blaud's pills.....	33	56	70
3.	Pepto mangan ...	25	71	78
52.	Blaud's pills.....	25	36	75

4.	Pepto-mangan ...	28	97	72
50.	Blaud's pills.....	27	36	75
6.	Pepto-mangan ...	22	101	48
25.	Blaud's pills.....	22	43	78
7.	Pepto-mangan ...	10	63	93
28.	Blaud's pills.....	11	71	90
8.	Pepto-mangan ...	34	101	44
46.	Blaud's pills.....	35	36	69
9.	Pepto-mangan ...	20	99	83
43.	Blaud's pills.....	20	50	81
10.	Pepto-mangan ...	20	92	84
51.	Blaud's pills.....	20	50	63
11.	Pepto-mangan ...	32	95	48
47.	Blaud's pills.....	32	36	70
12.	Pepto-mangan ...	27	80	3
53.	Blaud's pills.....	25	50	84
13.	Pepto-mangan ...	14	94	95
23.	Blaud's pills.....	14	50	66
14.	Pepto-mangan ...	16	93	85
45.	Blaud's pills.....	16	57	46
15.	Pepto-mangan ...	11	84	99
22.	Blaud's pills.....	12	71	92
16.	Pepto-mangan ...	20	92	70
60.	Blaud's pills.....	19	28	71
17.	Pepto-mangan ...	9	36	6
21.	Blaud's pills.....	13	71	89
18.	Pepto-mangan ...	16	98	66
59.	Blaud's pills.....	18	53	57
19.	Pepto-mangan ...	28	49	75
42.	Blaud's pills.....	31	57	3
33.	Pepto-mangan ...	9	8	6
20.	Blaud's pills.....	22	27	48

That is to say, of eighteen pairs of almost identical cases, the initial average of hemoglobin percentage in the cases treated by Blaud's pills was 21.9; in those treated by pepto-mangan (Gude), 20.7; the average number of days under treatment was 48.7 in the cases treated by Blaud's pills; in those treated by pepto-mangan (Gude), 80.7; the average gain in hemoglobin under Blaud's pills was 68.1 per cent; under pepto-mangan (Gude), 62.3 per cent.

We tried to use a variety of iron preparations and were offered the pepto-manganates made by this company. We had no idea that this preparation differed essentially from any other pepto-manganate of iron, and it certainly may not, but had we considered the pepto-manganates of superior value as blood regenerators we would have said so. As it is, we have said the contrary and wrote this company to that effect at the time we became convinced of it.

This commission does not wish to be understood to consider the use of reconstructive treatment as a necessity in the anemia of uncinariasis. Such an idea is all the more absurd in view of the fact that in the 12,000 cases treated under its direction since June 1, 1905, comparatively little reconstructive treatment has been used, many cases receiving none at all. As our experience with this disease widens, our opinion is strengthened that anthelmintic treatment is not only curative, but promptly so, in the vast majority of cases, iron or no iron. Thanking you in advance for the use of your columns,

We are, very truly yours,  
BAILEY K. ASHFORD,  
W. W. KING,  
PEDRO GUTIERREZ YGARAVIDEZ,  
Members of the Commission.

The following resolutions were adopted at the annual session of the Washington County (Iowa) Medical Society, September 19:

Resolved, That this society express its hearty appreciation and commendation to the Council on Pharmacy and Chemistry and to the Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for the stand they have taken and for the valuable work already done in the analysis of proprietary remedies and the publication of the same in THE JOURNAL. We promise our support and co-operation to the Association toward the attainment of the desired results.

CLYDE A. BOICE, M.D., Secretary.

No False Labels.

But in my opinion the most objectionable form of food adulteration is that which seeks to deceive the consumer. This deception is practiced for the sole purpose of getting a higher price for a food product than could be had if the true composition of the substance were known. Mixtures of sweets and flavoring matters are sold as maple syrup, glucose as honey, oleomargarin as butter. Orange marmalade, straw-



berry jam, etc., often contain little or none of the material whose name they bear. Wines are misbranded both as to their true character and the place where they were made. Whisky is sometimes a mixture of neutral alcohol, essences and coloring matters, with sometimes a bit of straight whisky for conscience sake. Jams, jellies and marmalades contain glucose, coloring matters and antiseptics, and preserved meats and sausages are colored artificially and preserved with borax.

This whole system of deception strikes at the very heart of honest trade. It is one of the strange things of commercial ethics that men are found who support such a system and yet would be quick to resent any imputation on their honesty. What should the public require?

1. Good laws, state and national, forbidding the addition of deleterious substances to foods.

2. Requiring each label to convey to the consumer a correct and complete list of all the substances not natural to the food in question which the package contains.

In other words: NO FALSE LABELS!—H. W. Wiley, M.D., in *Collier's Weekly*, September 30.

#### "Try Our Remedy, Doctor, Please."

This is always the final argument of the promoters of new drugs and serums. "We do not expect you to accept the claims made for the serum," writes one firm in urging a trial. The argument is a convincing one to many physicians who do "try" the remedy on the agent's say-so, especially if they receive, as is commonly the case, free samples. There is such an apparent show of fairness in the request.

Yet the reflecting physician must see that he does himself and his patients an injustice to "try" all the remedies he is requested to "try" by the manufacturers thereof. Certainly is unknown to him, or remedies made by houses unknown are unknown to him, or remedies made by houses unknown to him; and especially is this true of serum remedies.

A serum made against syphilis which the makers claim "absolutely eradicates the syphilitic infection" is now being extensively advertised and the physician is asked to "try" it, although he has no means of knowing what it contains save the say-so of those financially interested in its sale. Is it not worse than folly for the physician to "try" such a remedy made by a laboratory unknown to him? He might as well "try" a remedy handed to him by a barker at a county fair because assured by him in a loud voice that it absolutely eradicates syphilis and that there will be no recurrence of symptoms.

The physician should not "try" remedies merely because he is asked to do so, or to oblige a plausible agent, but only when they come to him well introduced by firms and physicians well known to him for their intelligence and honesty. It may be said that he should never try a new remedy brought to his attention by an unknown firm and of which he has no knowledge save that given him by the interested firm. As a matter of fact it is better for him to accept no free samples from traveling agents. He should be prepared to buy what remedies he desires to try. This plan at once places him on an independent footing and reduces to a minimum his temptations to "try" a new remedy simply because it costs him nothing.

The physician may be perfectly certain of one thing, viz., that chemical firms furnish free samples because and only because it is to their interest to do so; and very often the object of these firms is to use the physician as a medium or cat's paw to enable them to sell their remedies afterward directly to the public. The physician who good naturedly "tries" the remedy which the agent of an unknown firm leaves never knows when he is acting such a regrettable part.

It behooves us all to examine well into the credentials of any remedy we propose to "try" if we are to do justice to our patients and to retain our own self-respect.

Pittsburg, Pa.

THEODORE DILLER, M.D.

Dr. E. E. Glover, Terre Haute, Ind., writes that he has the page from the *Ladies' Home Journal* for September, entitled "Pictures that Tell Their Own Stories," neatly framed and hung in his office. He says that it "excites a surprising amount of interest and comment."

## Correspondence

### The Mosquito Theory in Text-Books.

WASHINGTON, D. C., Sept. 29, 1905.

*To the Editor:*—The proof that yellow fever is transmitted by the bite of infected mosquitoes of a particular variety was so promptly accepted by the medical profession of America and Europe, and time has so amply demonstrated the truth and completeness of Walter Reed's conclusions that it seems almost incredible that American text-books for students and practitioners of medicine in the present year should teach the theory of Sanarelli and either omit or fail to make clear what is one of the greatest medical discoveries of the age.

From the splendid "Medical Diagnosis" of Musser, last edition, Lea Brothers & Co., I quote:

"Yellow Fever.—The infection which we are about to consider is the latest of the epidemic and contagious disorders for which a definite causal micro-organism has been discovered. . . . The specific micro-organism is *B. icteroides* described by Sanarelli."

A brief description of Sanarelli's germ, and of the serum diagnosis of yellow fever is given, but not a word about the transmission of disease by mosquitoes, or the work of Reed and his associates.

The entire discussion of yellow fever is taken without change from a previous edition of the work, and we have here evidently an unintentional failure to bring a few paragraphs of this most excellent book up to date in the new edition.

In "A Text-Book on the Practice of Medicine," etc., by Dr. James Magoffin French, William Wood & Co., 1905, the author, in describing yellow fever, states: "The *Bacillus icteroides* of Sanarelli is now generally accepted as the cause," but he appears to believe that the said bacillus is carried by *Stegomyia fasciata*!!!

I write this in no spirit of criticism, but because I believe that the future safety of our southern states from this terrible disease can only be obtained by a universal acceptance by the people of the fact of mosquito transmission of the malady, and, therefore, that a statement of another and an exploded theory of causation in an important text-book of medicine is a serious blow to popular education in a matter of very great moment to our country.

WALTER D. McCaw,

Major-Surgeon, U. S. Army.

### Warning—Fraudulent Magazine Agent.

NIAGARA FALLS, N. Y., Sept. 26, 1905.

*To the Editor:*—I would like to warn physicians through THE JOURNAL of a man by the name of Charles Croft, who pretends to be an agent for the World's Clubbing and Subscription Co., of New York City. Mr. Croft's method is to offer several magazines at an exceedingly low price so that nearly every man that he approached in this city bought magazines of him. He sold me *McClure's*, the *Cosmopolitan*, *Everybody's* and the *Black Cat* for \$2.00 a year. Mr. Croft is a man about 26 years of age, would weigh about 165 pounds, smooth face, light brown hair, is well dressed and has a very pleasing manner. I have communicated with the publishers of the magazines which he sold me and they inform me that no subscription has been received and that Mr. Croft is a swindler.

F. N. C. JERAULD.

### Embryo Specimens Wanted.

COLUMBIA, Mo., Sept. 26, 1905.

*To the Editor:*—I am making a collection of human embryos, which are preserved permanently for research work in human embryology. Any specimens (especially of the earlier stages), which your readers may be able to contribute would be thankfully received. The best general preservative is 10 per cent. formalin or the strongest alcohol.

C. M. JACKSON, M.D., Prof. Anatomy, Univ. of Missouri.

### The Arkansas Board of Health.

LITTLE ROCK, ARK., Sept. 18, 1905.

*To the Editor:*—That part of the editorial in THE JOURNAL of September 16 on yellow fever which referred to the situation



in Arkansas has suggested that a few facts be submitted concerning the recent state board of health episode.

For the last ten or fifteen years the Arkansas State Board of Health has had only a nominal existence, and has existed by law, but not by any material support from the state. Physicians accepting appointments thereon have done so as a courtesy to the governor making the appointment and as an acknowledgment of the honor which he thus sought to bestow. The hope, too, was indulged in by those interested that by keeping up the semblance of a state board of health the matter of obtaining proper recognition on the part of the legislature would be facilitated, and the board which only existed in name would then become one in reality and effectiveness. On July 31, 1905, the board met at the mayor's office in Little Rock. At this meeting the board consisted of the following members: Drs. G. M. D. Cantrell, president, R. B. Christian, secretary, W. H. Miller and W. B. Hughes, all of Little Rock, Drs. W. W. Jackson of Jonesboro, and J. R. Lynn of Hazen. The four members from Little Rock, constituting a quorum, were present.

At this meeting a state quarantine was declared against New Orleans and all other infected points. This was done with the understanding that all the rules and regulations of the quarantine thus announced would be strictly and rigidly enforced on the part of the governor of the state by the employment for this purpose of the Arkansas guard, or militia. The board received positive assurance through his private secretary, who was present, that this would be done. A conservative, but effective, quarantine along the southern and eastern borders of the state was thus instituted and successfully operated for nearly a month.

On August 27, at a conference in the governor's office, there being present the governor, the commander of the state guard and the president of the state board of health, the rulings and all authority of the state board were virtually set aside and the governor seemed to arrogate to himself entire control of the quarantine situation.

On August 28 the state board of health met and unanimously adopted, and ordered to be dispatched to the governor immediately, the following resignations of the four members present, constituting a quorum of the board:

LITTLE ROCK, ARK., AUG. 28, 1905.

Gov. Jeff Davis.

Dear Sir:

We, the undersigned members, constituting a quorum of the Arkansas State Board of Health, hereby tender to you our resignation and request your acceptance of same, to take effect at once.

This action is taken because we do not desire longer to occupy positions of responsibility and at the same time to be interfered with and shorn of our authority as the state board of health. We instituted and, with the aid of the state militia, have successfully conducted until recently an effective and reasonable state quarantine. Not a case of yellow fever has made its appearance in Arkansas. We have earnestly advised the raising of all local quarantines within the state and the reliance altogether on the state quarantine, so that the business and social interests of the state might be as little interfered with as possible and the use of health certificates thus be largely obviated. We do not wish longer to be responsible for a quarantine we can not control, and one which, at first both effective and conservative, is now fast becoming a wild frenzied shotgun affair.

G. M. D. CANTRELL, *President*.

R. B. CHRISTIAN, *Secretary*.

W. H. MILLER,

W. B. HUGHES.

A day or two after this action was taken Dr. W. W. Jackson of Jonesboro sent to the governor his resignation. Dr. J. R. Lynn of Hazen, at the request of the governor, it is supposed, had resigned several days before. The resignations thus sent in were promptly accepted, and the following physicians were immediately appointed as members to constitute a new board

of health for Arkansas and all accepted without delay: Drs. Joseph P. Runyan, president, Little Rock; Joseph P. Shephard, secretary, Little Rock; John R. Dibrell, Little Rock; Robert A. Hilton, Eldorado; Ben L. Harrison, Jonesboro, and Eugene H. Abbingtion, Beebe.

R. B. CHRISTIAN.

## Marriages

T. ROSS PAYNE, M.D., Corbett, Md., to Miss Gent.

LOUIS R. PADBERG, M.D., to Miss Mary Ring, at St. Louis, September 6.

MORTIMER FRANK, M.D., to Miss Donie Katz, both of Chicago, October 4.

CHARLES F. BUCKLEY, M.D., to Miss Alice H. Osborne, both of Brooklyn, October 3.

LOUIS H. FRIEDRICH, M.D., Chicago, to Miss Rose Rudolph of Milwaukee, October 5.

WILLIAM H. FREEBURGER, M.D., to Miss Clara E. Pubbs, at Baltimore, September 19.

JOHN E. JANES, M.D., Pasadena, Cal., to Miss Mary Marvin of Seattle, Wash., September 5.

WILLIAM JOHNSON WEST, M.D., to Miss Marian Cottrell, both of Richmond, Va., October 3.

OSWALD H. MAGARET, M.D., Papillon, Neb., to Miss Malinda Leist of Lincoln, Neb., September 26.

LEWIS W. BREMERMAN, M.D., New York City, to Miss Helen Tope of Oak Park, Ill., September 28.

WILLIAM F. BERRY, M.D., Glenwood, Mich., to Miss Harriet Alling of Evanston, Ill., September 16.

JOHN REYNOLDS PATTEN, M.D., to Miss Augusta Eugenie Soule, both of Fairfield, Vt., October 3.

JOHN BATTLE CARTER, M.D., Milledgeville, Ga., to Miss Nellie Ferris of Augusta, Ga., September 21.

CLARENCE S. LATHAM, M.D., Hilliards, Ohio, to Miss Marie De Bolt of Columbus, Ohio, August 29.

J. A. CHRISTENSON, M.D., Manistee, Mich., to Miss Selma Rundquist of Ophiem, Ill., September 14.

DOUGLAS SCHOOLFIELD, M.D., Bellevue, Ky., to Mrs. Clara Belle Gaff of Dayton, Ky., September 20.

JOHN E. DORMAN, M.D., Fayette, Iowa, to Miss Aurilla Cassidy of Raymond, Iowa, September 19.

WILLIAM WORDSWORTH RIHA, M.D., New York City, to Miss Emily L. Yursik of Baltimore, September 30.

HARMAN T. HAESSIG, M.D., to Miss Essie Graham, both of Padueah, Ky., at Metropolis, Ill., September 19.

EDMUND R. LAPE, M.D., Benson, Vt., to Miss Agnes Evangeline Peck of Fair Haven, Vt., September 20.

FREDERICK PHILIP SCHULTZE, M.D., Marengo, Iowa, to Miss Mary Canon of Fremont, Iowa, September 27.

R. B. COCHRANE, M.D., to Mrs. Lillian Griffith, both of Columbus, Ohio, in Covington, Ky., September 11.

LAKE LOUIS STARKEY, M.D., West Greene, Ala., to Miss Mary Bosworth of Birmingham, Ala., October 1.

WILLIAM C. PUMPELLY, M.D., Macon, Ga., to Miss Anne Altha Singleton of Fort Valley, Ga., September 14.

CASSIUS M. CLAY BUCHANAN, M.D., Easton, Ill., to Miss Marguerite M. Saffer of Mason City, Ill., August 31.

WILLIAM WHITNEY KITCHEN, M.D., Buffalo, N. Y., to Miss Mabel Claire Money of Washington, D. C., October 4.

WILLIAM J. BENNER, M.D., Willow Lake, N. D., to Miss Etta Peeler of St. Louis, at Anna, Ill., September 21.

MOULTON KISSINGER JOHNSON, M.D., surgeon U. S. Navy, to Miss Schroeder, at Jamestown, R. I., September 16.

JULIUS MALBY DUTTON, M.D., Tewkesbury, Mass., to Miss Charlotte Helena Coye of Livonia, N. Y., September 12.

CLINTON BEECHAM KNAPP, M.D., New York City, to Miss Mary A. Atwater, at Southington, Conn., September 20.

WILLIAM FOSTER HUFF, M.D., Los Angeles, Cal., to Miss Fannie Elizabeth Shallish of Riverside, Cal., September 28.

FREDERICK N. HENDERSON, M.D., to Miss Nellie F. Rayer, both of Philadelphia, at Mount Carmel, Pa., September 18.

FREDERICK WILLIAM HARVEY, M.D., Montreal, P. Q., to Miss Helen Margaret Ewing Riddel of Newark, N. J., at Newton, N. J.



CONRAD BELL, M.D., Waltham, Mass., to Miss Elizabeth Prentiss Dudley of North Cambridge, Mass., September 21.

ALLEN D. McLEAN, M.D., passed assistant surgeon United States Navy, to Miss Sarah Moore of Detroit, Mich., October 2.

JOSEPH ARTHUR McCLINTOCK, M.D., New York City, to Miss Joseph Gilfelter of Wyoming, Pa., in New York City, September 19.

ROBERT KNIGHT, M.D., Seneca Falls, N. Y., to Miss Clara Louise Carpenter of Greece, N. Y., at Rochester, N. Y., September 20.

FRANCIS MERTON MUNSON, M.D., passed assistant surgeon United States Navy, to Miss Katherine Glass, at San Francisco, October 3.

ARCHIBALD WILLIAM TAVES, M.D., to Miss Isabel Brydon, both of New York City, in the Royal Chapel of the Tower of London, September 21.

## Deaths

James Read Chadwick, M.D. Harvard University Medical School, Boston, 1871, a prominent obstetrician and gynecologist of Boston; a founder and fellow of the American Gynecological Society, secretary from 1876 to 1882, and president in 1897; instructor in gynecology Harvard Medical School from 1873 to 1880, and from 1883 to 1887; physician to outpatient gynecological department of the Boston City Hospital from 1875 to 1882; president of the Harvard Medical Alumni Association from 1890 to 1893; vice-president of the Massachusetts Crematory Society since 1894; founder and librarian of the Boston Medical Library since 1875; a frequent contributor to gynecologic literature and for several years editor of the Transactions of the American Gynecological Society; corresponding fellow of the London Obstetrical Society from 1876 to 1900 and honorary fellow since 1900; honorary member of the Detroit Academy of Medicine since 1876, and of the Medical and Chirurgical Faculty of Maryland since 1896, was found dead just outside his summer home at Chocoma, N. H., September 24, aged 60. It is supposed that he became ill in the night and went out on the roof of the piazza to obtain fresh air, fainted and fell.

Josiah Hale, M.D. University of Louisville (Ky.) Medical Department, 1856, the oldest practitioner of Daviess County, Ky., delegates in 1876 and 1882 to the International Medical Congress; formerly a member of the American Medical Association, a member of the Tri-state Medical Society and of the Owensboro Medical Society, died at his home in Owensboro, September 14, after an invalidism of one year, from senile debility, aged 76. At a special meeting of the Owensboro Medical Society, September 14, a committee was appointed to draft resolutions regarding the death of Dr. Hale.

Arthur Weir Johnstone, M.D. New York University, New York City, 1876, of Cincinnati, a fellow of the American Gynecological Society; member of the Kentucky State Medical Society, Ohio State Medical Society, Cincinnati Academy of Medicine, Cincinnati Obstetrical Society and British Gynecological Society, prominent as an abdominal surgeon, died at his private hospital, Walnut Halls, Cincinnati, September 28, two days after an operation for appendicitis, aged 52.

Robert Brown Hammer, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1881, of Greensburg, Pa., coroner of Westmoreland County in 1884 and 1887; for several years state quarantine officer and president of the local board of health, died at the East End Hospital, Pittsburgh, September 17, from septic peritonitis, one day after an operation for intestinal obstruction, aged 46. He had been ill for four years with disease of the intestines and had had several operations performed.

Peter J. Kirschner, M.D. Bellevue Hospital Medical College, New York City, 1879, physician of Buchanan County, Mo., 1880-1881 and 1889-1891; coroner of Buchanan County from 1882 to 1886; mayor of St. Joseph in 1898; president of the board of managers of State Hospital No. 2, St. Joseph, from 1889 to 1892, died at his home, September 22, from a nervous disease from which he had suffered for three years, aged 52.

Louis E. Hanmore, M.D. College of Physicians and Surgeons in the City of New York, 1884; a member of the Orange County (N. Y.) Medical Society; for eight years physician at the Newburgh city jail, and for three years surgeon to St. Luke's Hospital, died at the home of his mother in Newburgh, September 19, from pulmonary tuberculosis, after an illness of four years, aged 46.

Edward F. Galligan, M.D. Harvard University Medical School, Boston, 1881, a member of the American Medical Association, the Taunton (Mass.) Physicians' Club, and the Clover Club of Boston; city physician of Taunton in 1884, a member of the board of pension examiners for the district, died at his home in Taunton, September 25, after an illness of two years, aged 48.

John L. Long, M.D. University of Louisville Medical Department, 1878, formerly assistant physician at the Eastern Kentucky Asylum for the Insane, Lexington, and afterward superintendent of the Institution for the Education of Feeble-minded Children, Frankfort, died from heart disease at his home in Normandy, Ky., after an illness of four days, September 27, aged 50.

Harry D. Hull, M.D. Bellevue Hospital Medical College, New York City, 1877; for three years city physician of Adrian, Mich.; for several years a member of the board of pension examiners and surgeon of the Wabash Railroad, died at his home, September 24, from locomotor ataxia, after an illness of several years, aged 51.

James Laws, M.D. Jefferson Medical College, Philadelphia, 1854; surgeon United States Navy during the Civil War; surgeon on one of Dr. Kane's Arctic relief expeditions; examining surgeon in the pension office, Washington, died at his home in that city September 11, after an illness of several months, aged 77.

George Burritt Nichols, M.D. Long Island College Hospital, Brooklyn, 1871, the oldest and best known practitioner in the San Luis Obispo County, Cal., at one time mayor of San Luis Obispo and coroner of the county for seventeen years, died at his home September 21 from cancer of the ear and throat, aged 65.

William Patterson Hereford, M.D. University of Georgetown (D. C.) Medical Department, a highly respected practitioner of Prince George County, Va., the last survivor of the Seminole War, and a veteran of the Mexican and Civil Wars, died at his home near Wellington, Va., September 3, aged 89.

James Harrison Moore, M.D. Transylvania University Medical Department, Lexington, Ky., 1841, of Mercer County, Ky., representative from that county in the constitutional convention, died at the home of his son in Harrodsburg, Ky., September 16, after a protracted illness, aged 85.

John H. Sloane, M.D. Detroit (Mich.) College of Medicine, 1895, a promising young physician of Detroit, ruined by indulgence in alcoholics and morphin, died in an ambulance while being taken to St. Mary's Hospital, Detroit, September 26, aged about 38.

J. C. Gilbert, M.D. Barnes Medical College, St. Louis, 1899, an honor graduate of that institution; a member of the American Medical Association and of the Rockwall County (Texas) Medical Society, died at his home in Commerce, Texas, May 20, aged 36.

John Harrison Hunter, M.D. University of Maryland School of Medicine, Baltimore, 1855, a veteran of the Mexican War, and surgeon in the Confederate service during the Civil War, died at his home in Berkeley Springs, W. Va., September 26, aged 76.

William A. McPheeters, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1855, said to have been the oldest practitioner of Natchez, Miss., died suddenly on a train near Memphis, Tenn., September 27.

Thomas S. McKenna, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1880, of Manning, Iowa, died at St. Anthony's Hospital, Carroll, Iowa, September 22, two hours after an operation for urethral obstruction, aged 60.

John B. Hardeman, M.D. University of Nashville (Tenn.) Medical Department, 1872, died at his home in Henderson, Tenn., September 10, from jaundice, after a short illness, aged 69.

Charles W. Hamisfar, M.D. Ohio, 1871, died at his home in Fayetteville, Ark., September 10, from cancer of the intestines, aged 76.

Stephen J. Keyes, M.D. Long Island College Hospital, Brooklyn, N. Y., 1894, died at his home in Brooklyn, N. Y., September 14.

Arthur J. Harris, M.D. Chicago, 1887, died suddenly at his home in Grinnell, Iowa, September 18, from heart disease.

William J. Judd, M.D. St. Louis Medical College, 1861, died at his home in Henderson, N. C., September 7.

William W. Gray, M.D. Cincinnati, 1863, died at his home in Pasadena, Cal., September 21, aged 70.

Joseph H. Holloway, M.D. Cincinnati, 1878, died at his home in Auburn, Ind., September 12.



## Book Notices

**MANUAL OF PSYCHIATRY.** By J. Rogues de Fursac, M.D., Formerly Chief of Clinic of the Medical Faculty of Paris. Authorized Translation from the French by A. J. Rosanoff, M.D., Junior Assistant Physician, L. I. State Hospital, Kings Park, N. Y. Edited by Joseph Collins, M.D., Professor of Diseases of the Mind and Nervous System in the New York Postgraduate Medical School. First Edition. Cloth. Pp. 352. Price, \$2.50. New York: John Wiley & Sons. 1905.

To put all of modern psychiatry into a little manual of 350 pages is obviously impossible. A reasonably full handbook would have to be at least twice as large. But given this limit, it is hard to see how the author could have done better. He surely has the art of the text-book writer. That is, he has that peculiar sense of proportion which enables him to select from the immense mass of the known what is essential and what is important, and he knows how to present his matter simply and clearly. The defects of the work are those inherent in brevity; First, paucity of detail and lack of exceptions; second, absence of adequate discussion of unsettled questions (and in psychiatry their name is legion); third, unwarranted dogmatism of statement or want of qualification.

These defects granted, the book is a thoroughly commendable one; an excellent text-book for students and guide for practitioners who do not know a great deal and do not aspire to know a great deal of mental disease. The style is so simple and direct that the work is well adapted for the use of psychologists, lawyers, teachers and other non-medical persons who may have occasion to learn something of insanity. Even for those already well versed in psychiatry, it is far from being a barren manual. It is up to date, and contains especially good presentations of three subjects now of particular interest in the world of psychopathy: dementia præcox, Korsakoff's (or Korsakow's) psychosis and manic-depressive insanity. And this brings us to the question of classification. Presumably no review of a work on insanity is complete without a criticism of the author's classification. And, frankly, we do not agree with the author. The latter follows Kraepelin, but has chosen to do so with modifications which appear to us not always happy. However, in the text, he several times begs the question and, besides, for the practitioner the matter of classification is far from being the most important.

The book is divided into two parts: general psychiatry (120 pages) and special psychiatry (216 pages). There is an appendix containing an excellent guiding scheme for the investigation of insane patients (6 pages). Part I, embodying etiology, symptomatology, examination of patients and general therapeutics, is as good as anything we have seen on the subject. Hallucinations, delusions, amnesia, disorders of reaction, etc., are treated very briefly, but very clearly. In Part II the descriptions of disease are good. In addition to the chapters on dementia præcox, Korsakoff's psychosis and manic-depressive insanity already mentioned, that on senile dementia is particularly satisfactory. Diagnosis and prognosis receive rather scant space, and in many instances the consideration of treatment is too meager to be useful. Throughout the second part a landable effort is made to supplement the brevity of the text with bibliographic references, and these are well chosen and sufficiently numerous. Unfortunately for English readers, they are all French and German. It would seem to us that the editor might easily have supplied, what really should have been in the original, some references to British and American literature. In fact, we have been unable to discover any *raison d'être* of the aforesaid editor except to cumber the title page with the inverted pyramid of his numerous titles. If he really contributed to the proper construction of this translation of a first-rate book, we should be made aware of the fact. Otherwise, many will assume that he is introduced for purely ornamental purposes.

The translation has been well done, although there is room here and there for a bit of discussion. For instance, the literal translation of the word *moral(e)* is sure to mislead some readers unacquainted with French. To say that the obstacles to the home treatment of the insane are "both material and moral" is not an exact statement. The "moral

pain" of the melancholice has no necessary relation to right and wrong. The book is well printed on good paper.

**ABDOMINAL PAIN.** Its Causes and Clinical Significance. By A. Ernest Maylard, M.B., B.S., London. Cloth. Pp. 304. Price, \$2.50 net. Philadelphia: P. Blakiston's Sons & Co. 1905.

This is a most interesting monograph on the diagnosis of diseases within the abdomen. Pain is the chief symptom in most of these diseases and therefore has been considered in great detail by this author. The early chapters in the book are devoted to a consideration of the distribution of nerves to the organs within the abdomen and to the walls of the abdomen, and to the general causes of pain.

Pain in affections of the alimentary tract, liver, bile ducts, pancreas, urinary system, reproductive organs, spleen, aorta, etc., is treated of in succeeding chapters. The last chapters are devoted to a regional pain and will be of much assistance to the practitioner in locating the organ which gives rise to pain. The subject of differential diagnosis is fully discussed. Although pain is the chief symptom all others are considered. This book brings together in convenient form our knowledge of this subject. We cannot agree with the author that his last chapters on the performance of laparotomy are in place. He pleads that "so much has been gleaned from abdominal surgery in recent years, I did not think it would be out of place to conclude with a chapter or two on the performance of laparotomy." These chapters are not in place. However, they do not lessen the value of the book which we gladly commend to our readers.

**SYSTEM OF PHYSIOLOGIC THERAPEUTICS.** Under the General Editorial Charge of S. Solis-Cohen. Vol. VII—Mechanotherapy and Physical Education, Including Massage and Exercise, by J. K. Mitchell, M.D., and Physical Education by Muscular Exercise by L. H. Gulick, M.D. Pp. 420. With 299 Illustrations. Vol. VIII—Rest, Mental Therapeutics, Suggestion, by F. X. Dercum, M.D., Ph.D. Pp. 332. Vol. XI—Serumtherapy, by J. McFarland; Organotherapy, O. T. Osborne, M.A., M.D.; Radium, Thorium and Radioactivity, by S. G. Tracy, B.Sc., M.D.; Counterirritation, External Applications, Bloodletting, F. A. Packard, M.D. An Outline of the Principles of Therapeutics, with Especial Reference to Physiologic Therapeutics by the Editor and an Index-digest of the Complete System of Eleven Volumes. Illustrated. Pp. 388. Price, \$2.50 per volume. Philadelphia: P. Blakiston's Son & Co. 1905.

On the whole it must be said that this ambitious undertaking has been brought to a successful issue. The three volumes mentioned can not but prove valuable additions to the physician's library. The subjects considered are presented in an interesting and instructive manner. The editor's discussion of the principles of physiologic therapeutics is clear and thoughtful and should be read by all physicians who wish to substitute rationalism for blind empiricism in their treatment of disease. Probably the introduction of such words as toxolysin and toxolysis for antitoxin and its action on toxin must be regarded as rather ill-chosen innovations because they do not express correctly the nature and actions of antitoxin. The whole system merits wide distribution because it certainly represents a strong and successful effort to give an exposition of the very important methods of treatment, preventive and curative, now available other than drug giving.

**DIETETICS FOR NURSES.** By J. Friedenwald, M.D., and J. Ruhräh, M.D. Cloth. Pp. 363. Price, \$1.50 net. Philadelphia: W. B. Saunders & Co. 1905.

In this work the essential points in dietetics are given in a clear and concise way. The introductory chapters on the chemistry and physiology of digestion are well and intelligibly written. The chapters on "Various Factors in Their Bearing on Diet" and "The Feeding of Infants and Children" are very practical, the formulas for modifying milk being especially so. The diet in special diseases is reviewed in some detail and the book concludes with recipes for many appetizing dishes. The book should be of value to physicians as well as to nurses.

**A REFERENCE HANDBOOK FOR NURSES.** By Amanda K. Beck of Chicago. Bound in Flexible Morocco. Pp. 150. Price, \$1.25 net. Philadelphia: W. B. Saunders & Co. 1905.

The notes taken by a student while in school or college may be invaluable to him but of little use to anyone else, and the same rule applies to the notes taken by a probationer or undergraduate nurse while in the hospital training school. It has been said that well trained nurses never diagnose and never prescribe, but Miss Beck's book implies that they do both. It contains a chapter on "Miscellaneous Formulae" in



which the first formula given is for "Semmola's mixture" "to eliminate the kidneys." We trust that Miss Beck seldom finds it necessary to eliminate these useful organs. Many of the formulas given are practical and should be helpful in preparing the various "stock solutions" of disinfectants. We thought that the onion poultice mentioned on page 47 was a thing of the past. The chapters on general nursing are good, and that on diet is perhaps the best in the book; it contains recipes for many appetizing dishes to tempt the capricious appetite of a sick or convalescent patient.

### Miscellany

**Lumbar Puncture in Treatment of Uremia.**—Prof. G. Carrière of Lille writes to the *Archives Gen. de Méd.* of September 12 that he found lumbar puncture actually a lifesaving measure in two cases of uremia. It failed to show any benefit in four cases, but was useful in two others, and is liable to be beneficial in all cases. It acts by reducing the pressure of the cerebrospinal fluid and reducing the tendency to edema, while it removes the poisonous fluid that is irritating the cells of the cortex. He found that the cerebrospinal fluid in cases of nervous uremia was invariably hypertoxic. In some other cases the trouble was evidently due to compression, and in others to edema of the brain, all being conditions liable to benefit by lumbar puncture.

**Carbolic-Acid Burn.**—Commenting on the use of alcohol in burns from carbolic acid, Dr. F. P. Minton, East Toledo, Ohio, refers to the length of time which elapsed between the occurrence of the injury and the application of the alcohol in the case reported by Dr. T. J. Swisher, Rawlins, Wyo., in *THE JOURNAL*, Sept. 2, 1905, page 717, and reports an interesting case which came under his observation. In dressing an extensive wound of the face, after the stitches were removed, a 95 per cent. solution of carbolic acid was accidentally poured on the wound instead of peroxid of hydrogen. The mistake was discovered almost instantly, and as no alcohol was at hand, the surgeon washed off the wound with fluid extract of ergot, tincture of opium, paregoric and other preparations in his valise containing alcohol. He then applied a dressing of antiseptic cotton saturated with whisky. The results were entirely satisfactory, and the patient never knew of the accident.

**"The Feminine Peril."**—Lutaud has a breezy editorial in the last *Jour. de Méd. de Paris* on the way in which women are supplanting men in the business world. No law, no human force can stop the progress of this revolution, he says, which he regards as of much more moment than a possible "yellow peril." Within a few years, he remarks, the conditions of social life will have been revolutionized. The directing force will be inevitably feminine, and men, having nothing more than the superiority conferred by greater physical strength, will be utilized only in rough work requiring such strength. He adds that the female natality is increasing and the female mortality rate is diminishing, the latter due to the absence of the vices and excesses which are the prerogative of "the superior animal," man. Fifty years from now the healthy, vigorous man will find no outlet for his faculties except in the rare manual professions which require physical strength. All of which is very funny.

**The First Postmortem in Montreal.**—According to the *Montreal Medical Journal* there is to be found in the description of "Hakluyt's Voyages," of the travels of Jacques Cartier, the following record of the earliest reported autopsy performed in that city. It took place in Montreal, then known as Hochelaga, in the winter of 1535, when many sailors died of an epidemic disease. "That day Philip Rougement, born in Ambroise, died, being 22 yeeres olde and because the sickness was to us unknown, our Captaine caused him to be ripped to see if by any means possible we might know what it was, and so seeke meanes to save and preserve the rest of the company. He was found to have his heart white, but rotten, and more than a quart of red water about it; his liver was indifferent faire, but his lungs black and mortified, his blood was altogether shrunk about the heart, so that when he was opened great quantitie of rotten blood issued out from about his heart; his milt (spleen, Ed.) toward the back was

somewhat perished, rough as if it had bene rubbed against a stone. Moreover, because one of his thighs was very blacke without, it was opened, but within it was whole and sound, that done as well as we could, he was buried."

**Growing Youth, Health and the Nervous System.**—No subject is of more importance than the mental, moral and physical training of the child and growing youth of our land. History indicates that body, mind and morals are the trinity of essentials for the welfare of individuals and nations. This being the case, and viewing facts from a utilitarian standpoint alone, it behooves physicians, parents and educators to face the matter of parenthood in its broadest aspects. The child is being overworked by present day methods of education. The rapid advances in all avenues of thought and science to-day, and the failure to remember that the human body has not changed materially the while is the basic reason for the degeneration of our methods of education and the defeat of our aims for an ideal higher growth of the race. Time has come to call a halt. Ways and means of preventing overwrought nervous systems must come if we are to lead the cause of advance of humanity. Let us work it out carefully and at once.—*Wisconsin Medical Journal*.

**Medical Education in Italy.**—Carrara of Turin contributes an interesting sketch of the conditions of medical instruction and practice in Italy to the *Deutsche med. Wochft* of June 8. He states that there are 17 state universities in Italy, with 4 colleges, 3 independent universities, 3 obstetric training schools, and other colleges, a total of 30 higher institutions of learning. Fifteen of the above universities have a medical department. All are supported by the state except the three independents, which are maintained by the community. This scattering of the funds that might support handsomely a few higher institutions among such a number of small ones, is deplored by all writers. In Germany the state expenditures for its 22 universities and colleges are \$5,000,000, while Italy has only \$1,600,000 to distribute among its 17. The number of college-bred men to 100,000 inhabitants was, in 1891, in Germany, 48, in France 42, in Denmark 45, in Austria 55 and in Italy 51, while the proportion in Italy is constantly increasing. The number of physicians to the 100,000 inhabitants is also increasing, being 66 in 1898 and still higher now. Milan has recently founded an institute for postgraduate work in gynecology, occupation affections and communicable diseases. The state has appropriated nearly \$70,000 a year for the support of this postgraduate school.

**Medical Science in Turkey Under the Present Sultan.**—The *Lancet* in an editorial calls attention to the little known fact that the Sultan of Turkey has done much for his subjects in a medical and hygienic way, and states that he has always been eager to let his people benefit as much as possible by the latest discoveries of science. He has established a large number of charitable institutions in his dominions, and fountains of cool well water, which are such a boon in a distinctly warm country like Turkey, have been established at the expense of his private purse. In Constantinople every district in the city has such a fountain, which supplies drinkable water free of expense. In that city, too, asylums, lazarets and hospitals of various descriptions, receiving the personal endowments of the Sultan, keep their doors open for sufferers of every nation and give them free treatment. The Sultan is said to be especially interested in sick children, and for them has established the Hamidié Hospital, a first-class institution equipped with all the requirements of modern science. All the best medical men in the country are engaged in the service of this hospital, and they are assisted by a staff of German nurses. The large leper hospital on the Asiatic side of the Bosphorus also receives the attention of the Sultan, and a place of refuge for the poor and aged and an asylum for the insane have been created and are sustained by his large contributions. Through his initiative also Constantinople possesses a large medical school with an efficient staff of professors and lecturers. The Sultan is said to take an interest in all medical congresses. Recently he has set on foot a movement to create in Constantinople an establishment for the deaf and dumb. These things, says the *Lancet*, seem to prove that the popular estimate of the Sultan of Turkey is not wholly justified.



**The Medical Reprint.**—There is one form of medical literature which is particularly deserving of discontinuance. There was never much that could be urged as justification for sending out thousands of reprints of an article already published and read in a reputable medical journal. Undoubtedly the one thing which has served to keep the custom alive is the fact that such reprints are supposed to be highly valuable as a means of advertising the ability or the accomplishments of the man by whom they are sent out. The reprint occupies the same position in the field of medical advertising that the hand-bill does in the more common commercial walks. If any merchant could afford to pay for the amount of space for "pure reading matter" given the usual contributor to a medical journal for his article, he would not even dream that it was necessary to follow this excellent method of advertising by the cheaper and much less effective plan of reprinting his "pure reading matter" in the form of hand-bills and distributing them to the populace. For the men who have the handling of medical literature—publishers and librarians—the reprint is useless or worse. There are but few libraries in which any serious effort is made to catalogue or systematically care for the medical reprint. In nine cases out of ten the reprint is simply a duplication of what the library already possesses in some of its periodicals—to give time and labor to the care of duplicate matter is no part of the modern way of doing things. The day of the reprint is waning and it is to be expected as well as hoped that this particular method of overloading our mails and burdening our shelves will soon cease to be fashionable.—*Western Medical Review*.

**The County Medical Society.**—Physicians get together little enough; and do not really know one another except through the report of friends or patients. A closer intimacy between physicians would clear away much of the malicious gossip that passes as medical news. The social side of the country physician needs stimulating. He is too apt to depend on his practice and environment for his idea of the life of a physician. Unless he is ready and willing to meet his brother practitioner in a friendly spirit, and to exercise his mental faculties in medical and non-medical topics, he soon drops into a rut, from which there is no escape. His ideas narrow until he sees nothing but a thin and wavering medical line from which he dares not deviate. This brings discontent, discouragement, and failures, and the blame is frequently placed on innocent shoulders, when it actually should be borne by the physician himself. Every county society is a medical index, and insures to a greater or a lesser degree the standing of each member. Each meeting, however trite the papers and discussions, should contain some suggestion that can be profitably carried home by the members. True, some meetings are tiresome, but the inertia is due to the mental inertia of the members of the society, hence the blame is distributed over the entire society. The presiding officer or the committee in charge of the program are usually responsible for the character of the meeting. No medical society is a success unless its officers are determined to do their part of the work. There is no excuse for a poor medical society, particularly if it has had a few "experience" meetings. The fault can be easily located, and as easily remedied. Even in the small county societies the exhibition of a specimen with a clinical report of a case will call out discussion.

Physicians are reserved, shy, or embarrassed in medical societies. They hesitate to express their views for fear of exposing their lack of knowledge or for fear of criticism. It is better to attack a subject openly rather than let some loose statement go unchallenged. It is better to attempt to talk to the point, even though the speaker has opposite views from the essayist, rather than hide one's light under the cloak of indifference. The activity, interest, and competition is what makes the large county society or state organization a success. If you feel that your brother physician is too aggressive, display some aggression yourself; if you think the American Medical Association is conducted for the benefit of a few, get into line and be one of the pushers. Push is a force that is wholesome, and it is not flagrant advertising. Be modest if you please, but show what you know. If you know but little, you will learn by the criticism of others. The man who ex-

pects to succeed does not fear competition; he makes himself heard, and his reward is commensurate with his worth. The evil of many medical societies is the "knocking" proclivities of its members. Petty jealousies have no place, and gain no rewards, in medical societies. The best men do the best work, and the grumbler admits his failure. Medical men should come together for their own good, their social advancement, mental athletics, fraternalism, comparison of views, vigorous discussion, the recital of experiences, and exhibitions of their work. A clinic or a pathologic exhibit or the record of a case is sufficient reason for the congregating of medical men. A mediocre paper containing matter of common knowledge is usually a bore, but who knows but that one man may profit by it? A medical society without life or advancement should be rejuvenated by the injection of new blood into the committee, and the new material will awaken interest in spite of the old backsliders.—*Northwestern Lancet*.

**Satisfy Minimum Requirements.**—The following letter of a professor of clinical medicine speaks for itself, and more truly perhaps than the author intended. He says: \*

In order to sustain the excellent standing we are honored with by your board, we ask that you kindly furnish us with a copy of your latest schedules of minimum requirements for medical colleges in order that our next announcement may conform to the same.

To conform to *minimum* requirements is a modest ambition, and prevalent in all trades. In the trade of medical schooling the minimum requirements are easy enough, but their attainment is difficult for a good majority of medical schools. A few years ago the minimum requirements were easy enough to be contemptible, but that phase is passing. In another year or two the minimum requirements will be respectable, and their attainment will be for many schools impossible. Eventually it will be an honorable ambition to conform to the minimum requirements. That time indeed is coming all too swiftly, but it cannot be delayed. In medical education the improvement which has become possible through large endowments will no more falter in its advance than the earth in its orbit, and in that advance the doom of the small proprietary schools is inexorably sealed. Especially pitiable is the case of those who have misread the signs of the times and cast their lot with the purely commercial schools in an unavailing effort to slow the wheels of progress. More than one unendowed school having an honorable history, a competent faculty and a body of influential alumni, has foolishly allowed the gap ahead to widen and the gap behind to close, until they are lost in a ruck of disreputables marked for slaughter. Far different is the case of those few unendowed schools whose faculties early realized that their only salvation was to follow pace. These furnish the most inspiring spectacle in the field of medical education. It is a pity that any of them should be utterly spent in the unequal race. Some of them, and these are wise, have combined forces. This expedient is cruel, but not more cruel than the spur of necessity. Many men of weight in the medical affairs of the present generation will probably outlive the schools which launched them on honorable careers. The declining influence of some proprietary schools must be a matter of serious concern to their alumni, and an active intervention might in some instances restore such schools to enduring usefulness.—*American Medicine*.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

### FORMULA FOR BLOOD SOLVENTS.

MANCHESTER, N. H., Sept. 18, 1905.

*To the Editor:*—Will you kindly send me formulas for blood solvents that will keep the blood from coagulating in the veins during the process of embalming dead bodies? X. Z.

*ANSWER.*—The injection of albumose solutions, e. g., Witte's peptone, into the veins of the living animal, prevents the coagulation of the blood; an effusion of the mouth of the officinal leach has a similar effect. Potassium oxalate when mixed with blood in a concentration of 0.1 per cent. prevents coagulation by



combining with the soluble calcium salts. It is probable that concentrated solutions of other salts, as sodium or magnesium sulphate would have a similar effect, if used in large amounts. After death has occurred, it is difficult to obtain a uniform mixture of these substances with the blood, and they can be used to prevent clotting, but not to dissolve clots already formed. It is probable that they would be most effective when used to wash the blood out of the vessels before postmortem clotting has set in.

## State Boards of Registration

### COMING EXAMINATIONS.

Regular Board of Medical Examiners of Georgia, The Capitol, Atlanta, October 9. Secretary, F. D. Paterson, Cuthbert.

Michigan State Board of Registration in Medicine, Capitol Building, Lansing, October 10. Secretary, B. D. Harrison, Sault Ste. Marie.

State Medical Board of the Arkansas Medical Society, Little Rock, October 10. Secretary, J. P. Runyan, Little Rock.

Board of Medical Examiners of State of Florida, Jacksonville, Oct. 10-11. Secretary J. D. Fernaudez, Jacksonville.

Kansas State Board of Medical Registration and Examination, State House, Topeka, October 10-11. Secretary, G. F. Johnston, Lakin.

State Board of Medical Registration of Vermont, Y. M. C. A. Hall, Burlington, October 10-12. Secretary, W. S. Nay, Underhill.

Board of Medical Supervisors of Washington, D. C., Washington, D. C., October 12. Secretary, W. C. Woodward, Washington, D. C.

Board of Medical Examiners of State of Texas, San Antonio, October 17. Secretary, T. T. Jackson, San Antonio.

State Board of Medical Examiners of New Jersey, Trenton, October 17-18. Secretary, E. L. B. Godfrey, Camden.

State Board of Health of Illinois, The Great Northern Hotel, Chicago, October 18. Secretary, J. A. Egan, Springfield.

Louisiana State Board, New Orleans, October 20-21. Secretary, F. A. Larue, New Orleans.

State Board of Health of Kentucky, Louisville, October 24. Secretary, J. N. McCormack, Bowling Green.

**Virginia June Report.**—Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports the written examination held in Richmond, June 20-24, 1905. The number of subjects examined in was 9; total number of questions asked, 75; percentage required to pass, 75. The total number of persons examined was 206, of whom 107 passed and 33 failed; 62 non-graduates took partial examination, 4 incomplete. Two candidates presented certificates from reciprocating boards and were granted licenses to practice, without examination. After oral examinations licenses were granted to four individuals who had been in active practice for five years or more, as is the custom of the board. No percentages were assigned. Representatives of the following colleges passed the examination:

College.	PASSED.	Year.	Per
		Grad.	Cent.
University College of Medicine, (1902) 75; (1903) 77; (1904) 85, 88; (1905) 75, 83; the grade of 77 was reached by four; 78, 79 and 80 by two each; 81, by seven; 82, by five; 85, by three; 86, by two.			
University of South, (1904) 76; 75, 75			
University of Virginia, (1903) 76; (1904) 83; (1905) 76, 77, 80, 84, 89; the grades of 78, 79 and 81 were reached by three each; 82 by two.			
Kentucky University (1905)			85
Maryland Medical College (1903), 75, 75; (1904)			78
Johns Hopkins University (1904)			81
University of Maryland (1905)			78
Boston University (1904)			75
Leonard Medical College (1902) 75; (1904) 75, 77; (1905) 78			
College of P and S, Baltimore (1905) 78, 80			
Medical College of Virginia (1904) 77, 83 and ?; the grade of 76 was reached by two; (1905) 76, 80, 85, 87, 89; 75, 77, 79 and 83 by three each; 81 by four.			
Howard University (1904)			76
Baltimore Medical College (1905)			77
University of Naples, Italy (1899)			77
College of P. and S., New York (1903)			89
Tennessee Medical College (1901)			75
Kentucky School of Medicine (1904)			75
Memphis Hosp. Med. Coll. (1904)			75
University of Pennsylvania (1903) 90; (1905)			84

**North Dakota July Report.**—Dr. H. M. Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, July 5-7, 1905. The number of subjects examined in was 14; percentage required to pass, 75. The total number of individuals examined was 30, of whom 29 passed and 1 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
University of Minnesota (1905) 92, 82, 86, 78; (1902)			82, 87
University of Michigan (1903), 88; (1905)			85
College of P. and S. Milwaukee* (1905)			75
Keokuk Med. Coll. (1905)			89
University of Toronto (1905)			76, 86
College of P. and S., Chicago (1905) 91; (1903) 76; (1902)			75

Northwestern University (1904)	79, 80
Hamline University (1905)	81, 79, 85
Johns Hopkins University (1905)	85
University of Winnipeg (1903)	87
Jenner Med. Coll. (1904)	75
University of Pennsylvania (1894)	80
McGill University (1903)	82, 79
Rush Med. Coll. (1897)	84
Lavall University (1892)	76
Washington University (1905)	89

FAILED.

Barnes Med. Coll. (1905) 45  
\*This candidate took the examination under the old law, which did not require a diploma.

**Tennessee April Report.**—Dr. T. J. Happel, secretary of the State Board of Medical Examiners of Tennessee, reports the written examinations at Memphis, Nashville and Knoxville, April 5-6, 1905. The number of subjects examined in was 8; total number of questions asked, 64; percentage required to pass, 75. The total number of applicants examined was 121, of whom 86 passed and 35 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Memphis Hosp. Med. Coll., (1895) 75; (1904) 82, 83; (1905) 75, 80, 82, 89, 93.5.			
Birmingham Med. Coll., Alabama (1899) 94; (1904)			85.5
University of Virginia (1900) 80; (1901)			96
College of P. & S., St. Louis (1903)			80.5
Louisville Med. Coll. (1891) 75; (1896)			80
Kentucky School of Medicine (1894) 75; (1897) 75; (1904)			90.5
University of Baltimore (1893)			85
University of Maryland (1899)			91
Meharry Med. Coll., Nashville, (1894) 75; (1904) 85; (1905) 80, 81.5.			
Vanderbilt University, (1877) 75; (1883) 75; (1905) 81.3, 85, 86, 86.25, 87, 92.			
Columbian Med. Coll., Washington, D. C. (1904)			80
Chattanooga Med. Coll. (1892) 75; (1902) 75; (1903) 76; (1905) 75, 75, 81, 90.6.			
Baltimore Med. Coll. (1904)			75
University of the South (1904)			79.25
Atlanta Med. Coll. (1892) 75; (1894)			75
Northwestern University (1904)			87.5
Jefferson Med. Coll. (1904)			92
Hosp. Coll. of Med., Louisville (1904)			75
Tennessee Med. Coll., (1904) 75; (1905) 73.25, 75, 75, 75.7, 75.25, 77, 78.1, 78.6, 79.1, 79.75.			
University College of Medicine (1903)			79.5
University of Louisville (1904) 78.25, 86.5			
University of Nashville, (1896) 75.1; (1905) 78, 75, 80.6, 81.1, 83.5, 83.8, 84, 85.3, 86.3, 86.75, 88, 88.3, 90, 94.3.			
Pulte Med. Coll. (1900)			75
University of Pennsylvania (1903)			88
University of Tennessee, (1904) 86; (1905) 75.3, 76.5, 80.1, 80.25, 83, 87.6.			
Georgia Coll. Ecl. Med. and Surg., Atlanta (1888)			75
Med. Coll. of Indiana (1901)			79.6

**Illinois July Report.**—Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examination held at Chicago, July 19-21, 1905. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 119, of whom 111 passed, 7 failed and 1 took an incomplete examination. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per
		Grad.	Cent.
American Coll. of Med. and Surgery, Chicago (1904) 82; (1905) 80			
Baltimore Med. Coll. (1903)			80
Bennett Med. Coll., Chicago (1905)			84, 86
Cleveland Homeo. Med. Coll. (1877) 79; (1897)			85
College of Med. and Surg., Chicago (1905)			85
University of Southern California (1905)			85
College of P. and S., Baltimore (1905)			84
College of P. and S., Chicago (1897) 91; (1904) 86; (1905) 79, 82, 83, 84, 84, 87, 87, 88, 89, 91.			
College of P. and S. St. Louis (1905)			75
Colorado School of Medicine (1895)			88
Dearborn Med. Coll., Chicago (1905). The grade of 79 was reached by one, 78, by two; 81, by two; 82, by four; 83, by three; 84, by four; 85, by one; 86, by two; 87, by two and 88 by one.			
Eclectic Med. Inst., Cincinnati (1905)			78
Harvey Med. Coll., Chicago, (1905) 75, 75, 77, 79, 82, 83, 83, 85, 85, 88, 90.			
Hahnemann Med. Coll., Chicago (1905)			79, 81
Hering Med. Coll., Chicago (1904)			79
Illinois Med. Coll., (1905) 82, 86, 86			
Jefferson Med. Coll., Philadelphia (1905)			84, 89
Jenner Med. Coll., Chicago (1904) 83; 1905, 78, 82			
Kentucky School of Med. (1905)			82
Louisville Med. Coll. (1905)			83
Marion-Sims-Beaumont Med. Coll. (1905)			77, 79
Meharry Med. Coll., Nashville (1903)			83
University of Kentucky (1905)			88
McGill University (1904)			91
University of Louisville (1905)			85
University of Michigan (1904)			85
Willamette University (1889)			77
National Med. Coll., Chicago (1903) 76; (1905) 83			
Northwestern University, Chicago (1904) 86; (1905) 79, 81, 81, 83, 84, 84, 84, 86, 88, 89, 89, 91.			
Rush Med. Coll., (1903) 82, 87; (1904) 82, 88, 91; (1905) the grades of 84, 85, 87 and 89 were reached by one each; 88 was reached by four.			
University Med. Coll., Kansas City (1895)			83
Western Penn. Med. Coll., Pittsburg (1905) 85, 87, 89			



**West Virginia July Report.**—Dr. H. A. Barbec, secretary of the State Board of Health of West Virginia, reports the oral and written examination held at Charleston, July 18-20, 1905. The number of subjects examined in was 14; total number of questions asked, 180; percentage required to pass, 75. The total number of candidates examined was 106, of whom 57 passed, including two undergraduates, and 49 failed. Representatives of the following colleges passed:

College.	PASSED.	Year. Grad.	Per Cent.
Maryland Med. Coll. (1905)	76, 77, 78, 80, 80, 82, 84, 85, 85, 86, 86.	(1905)	88, 89
Ohio Med. University	.....	(1905)	83, 89
University of Maryland	.....(1904)	86; (1905)	86
Barnes Med. Coll.	.....	(1893)	86
Kentucky University	.....	(1905)	86
Medical College of Ohio	.....	(1904)	79
Hosp. Coll. of Medicine	.....	(1905)	80
Baltimore Med. Coll.	..... (1900)	75; (1905)	82, 82
Kentucky School of Medicine	.....(1898)	75; (1905)	75, 84, 86
University Med. Coll., Missouri	.....	(1904)	78
Cornell University, New York	.....	(1903)	90
University of Louisville	.....	(1905)	76, 83
University of Virginia	....(1899)	83; (1905)	83, 83, 86, 88, 92
Howard University	.....	(1904)	77, 81
University College of Medicine, (1901)	85; (1904)	96; (1905)	78, 84.
Med. Coll. of Virginia	.....	(1905)	83, 86
Jefferson Med. Coll.	.....	(1905)	93
College of P. and S., Baltimore	.....(1905)	83, 85, 85,	87, 90
University of Baltimore	.....(1903)	77; (1905)	80
University of Kentucky	.....	(1905)	78
University of Colorado	.....	(1904)	85

**Nebraska August Report.**—Dr. George H. Brash, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Aug. 9-10, 1905. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 18, of whom 9 passed and 9 failed. Representatives of the following colleges passed:

College.	PASSED.	Year. Grad.	Per Cent.
Lincoln Med. Coll.*	.....	(1905)	75.25
Barnes Med. Coll.*	.....	(1905)	81.5
Northwestern University	.....(1905)	88.3, 90.75,	92.8
Denver and Gross Med. Coll.	.....	(1905)	75.25
College of P. and S., Chicago	.....	(1905)	87.3
University of Kentucky	.....	(1905)	90.8
Ohio Med. University	.....	(1900)	77.6

\*Second examination.

**California August Report.**—Dr. Charles L. Tisdale, secretary of the State Board of Medical Examiners of California, reports the written examination held at San Francisco, August 15-17, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. Forty-two candidates were examined, of whom 20 passed and 22 failed. Representatives of the following colleges passed:

College.	PASSED.	Year. Grad.	Per Cent.
Johns Hopkins University, Baltimore	.....	(1905)	83.2
University of California	.....	(1905)	80, 84.4
Northwestern University	.....	(1905)	76.6
University of Missouri	.....	(1905)	75.6
University of Michigan	.....(1884)	83.1; (1894)	75
Trinity University, Canada	.....	(1897)	88.4
Hahnemann Med. Coll., San Francisco	(1905)	75, 75.2, 76.3, 77, 78.1, 79, 79.5.	
College of P. and S., Baltimore	.....	(1904)	75
Cooper Med. Coll., San Francisco	.....	(1905)	75.6, 78.5
College of P. and S., San Francisco	.....	(1905)	86.8
Society of Apothecaries, England	.....	(1889)	77.3

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending Sept. 30, 1905:

Arthur, Wm. H., McCaw, W. D., Glennan, James D., surgeons, appointed members of a board of officers, to meet at the Army Medical Museum Building, Washington, D. C., for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion or advancement.

Bratton, Thomas S., asst.-surgeon, ordered to report to Major William H. Arthur, surgeon, president, examining board, Washington, D. C., on Oct. 10, 1905, for examination to determine his fitness for promotion.

Connor, C. H., asst.-surgeon, relieved from duty on the transport *Sheridan*, and will proceed without delay to Fort Stevens, Ore., for duty at that post.

Bratton, Thomas S., asst.-surgeon, granted seven days' leave of absence.

Marrow, Charles E., asst.-surgeon, ordered to temporary duty in charge of office of attending surgeon and examiner of recruits, Chicago, Ill., during absence of Captain Bratton.

Woodbury, F. T., asst.-surgeon, granted thirty days' leave of absence.

Wilson, James S., asst.-surgeon, left Fort Oglethorpe, Ga., on twenty-one days' leave of absence.

Truby, A. E., asst.-surgeon, reports departure from detached duty at Fort Leavenworth, Kan., on thirty days' leave of absence.

Reynolds, Charles R., asst.-surgeon, ordered to report in person on October 5, to Major William H. Arthur, surgeon, president of the examining board at the Army Medical Museum building, Washington, D. C., for examination to determine his fitness for advancement.

The following asst.-surgeons will report in person on the dates specified, to Lieut. Col. George H. Torney, deputy surgeon general, president, examining board at Army General Hospital, Presidio, San Francisco, for examination to determine their fitness for promotion: Baker, Frank C., October 31; Vose, William E., October 31; Woodbury, Frank T., October 31; Dale, F. A., November 28; Edwards, James F., November 28; Chidester, Walter C., November 28; Williams, Allie W., December 29.

Shortlidge, E. D., asst.-surgeon, leave of absence extended thirty days.

Howard, D. C., asst.-surgeon, ordered to report in person Oct. 10, 1905, to Major William H. Arthur, surgeon, president, examining board, Washington, D. C., for examination to determine his fitness for promotion.

Reagles, James, contract surgeon, granted leave of absence for one month, with permission to apply for an extension of one month.

Whinnery, Jean C., dental surgeon, left Fort St. Michael, Alaska, and arrived at Fort Davis, Alaska, for temporary duty.

McAlister, John A., dental surgeon, arrived at Presidio of Monterey, Cal., for duty.

Newlove, George, contract surgeon, left San Francisco, with squadron of the Twelfth Cavalry, for Fort Oglethorpe, Ga.

de Quevedo, Luis G., contract surgeon, left San Juan, P. R., and arrived at Cayey, P. R., for temporary duty.

Thorp, Charles W., contract surgeon, ordered from Fort Ethan Allen, to Plattsburg, Barracks, N. Y., for temporary duty.

Greenwell, Samuel A., contract surgeon, left Fort Barrancas, Fla., on leave of absence.

### Navy Changes.

Thompson, J. C., P. A. surgeon, ordered to the naval recruiting station, Providence, R. I.

White, E. C., Reed, T. W., Reed, E. U., Old, E. H. H., McConnon, G. H., asst.-surgeons, appointed assist.-surgeons with rank of lieutenant (junior grade), from Sept. 21, 1905.

Wedekind von, L. L. surgeon, detached from the *Lancaster* and ordered to the navy recruiting rendezvous, Chicago.

Richards, T. W., surgeon, detached from the navy recruiting rendezvous, Baltimore, and granted leave for thirty days.

De Valin, C. M., surgeon, detached from the naval hospital, Philadelphia, and ordered to the *Lancaster*.

Peck, A. E., P. A. surgeon, detached from the *Bennington* and ordered to the *Concord*.

Angeny, G. L., P. A. surgeon, ordered to the naval hospital, Philadelphia.

Moore, J. M., P. A. surgeon, detached from the navy recruiting rendezvous, Chicago, and directed to wait orders.

Brown, E. M., asst.-surgeon, detached from the navy yard, Mare Island, Cal., and ordered to the Naval Medical School, Washington, D. C.

Gelger, A. J., asst.-surgeon, ordered to the navy yard, Mare Island.

Hull, H. F., asst.-surgeon, detached from the Naval Hospital, Philadelphia, and ordered to the Naval Academy.

Heiner, R. G., asst.-surgeon, detached from the navy yard, Washington, D. C., and ordered to the *Scorpion*.

Richardson, F. A., acting asst.-surgeon, detached from the *Scorpion* and ordered to the navy recruiting rendezvous, Baltimore, Md.

Field, J. G., surgeon, detached from the *Solace* and ordered to the *Celtic*.

Spear, R., surgeon, detached from special duty at St. Petersburg, Russia, and ordered to the Asiatic station.

McConnon, C. H., Reed, E. U., Reed, T. W., White, E. C., and Old, E. H. H., asst.-surgeons, ordered to Washington, D. C., for course of instruction at the Naval Medical School.

Oman, C. M., asst.-surgeon, ordered to the Naval Hospital, Norfolk, Va.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from September 16 to 29:

#### SMALLPOX—UNITED STATES

California: San Francisco, Sept. 2-16, 2 cases.

District of Columbia: Washington, Sept. 8-16, 1 death.

Florida: Jacksonville, Sept. 8-16, 1 case.

Illinois: Galesburg, Sept. 16-23, 1 case.

Minnesota: Four counties, July 31-Aug. 14, 28 cases; six counties, Aug. 14-21, 26 cases; three counties, Aug. 21-28, 6 cases; two counties, Aug. 28-Sept. 11, 8 cases.

Ohio: Cincinnati: Sept. 1-8, 4 cases, Sept. 15-22, 3 cases.

Pennsylvania: Allegheny, Sept. 2-9, 1 case; York, Sept. 8-16, 7 cases.

Wisconsin: Appleton, Sept. 16-23, 4 cases.

#### SMALLPOX—FOREIGN.

Africa: Cape Town, July 29-August 5, 5 cases.

Argentina: Buenos Ayres, June 1-30, 34 deaths.

Brazil: Pernambuco, July 1-31, 393 deaths; Rio de Janeiro, August 20-27, 14 cases, 3 deaths.

China: Nanchang, Aug. 5, 1 case.

Ecuador: Guayaquil, Aug. 22-Sept. 5, 7 deaths.

France: Paris, Aug. 27-Sept. 9, 35 cases, 5 deaths.

Great Britain: Liverpool, Sept. 9-16, 1 case, imported; Plymouth, Sept. 2-9, 9 cases.

India: Bombay, Aug. 9-15, 1 death; Calcutta, Aug. 5-26, 4 deaths; Karachi, Aug. 6-13, 1 case, 1 death; Madras, Aug. 5-18, 14 deaths.

Italy: General, Aug. 18-24, 14 cases; Aug. 31-Sept. 7, 7 cases; Catania, Aug. 31-Sept. 7, 2 cases; Messina, Aug. 12-19, 4 cases, 4 deaths.



Russla: Moscow, Aug. 12-Sept. 2, 15 cases, 6 deaths; Odessa, Aug. 19-Sept. 9, 15 cases, 3 deaths; St. Petersburg, Aug. 19-26, 3 cases, 1 death.

Turkey: Constantinople, Aug. 28-Sept. 10, 3 deaths.

#### YELLOW FEVER—UNITED STATES.

Florida: Pensacola, Aug. 29-Sept. 25, 101 cases, 12 deaths.

Kentucky: Lexington, Sept. 17, 2 refugees.

Louisiana: Ascension Parish, to Sept. 23, 70 cases, 3 deaths; Assumption Parish, to Sept. 25, 30 cases; Avoyelles Parish, to Sept. 25, 10 cases, 2 deaths; East Baton Rouge Parish, to Sept. 24, 5 cases; East Carroll Parish, to Sept. 25, 264 cases, 31 deaths; Iberville Parish, to Sept. 13, 16 cases, 3 deaths; Jefferson Parish, to Sept. 26, 342 cases, 43 deaths; Lafayette Parish, to Sept. 26, 8 cases; La Fourche Parish, to Sept. 24, 379 cases, 47 deaths; Madison Parish, to Sept. 26, 261 cases, 16 deaths; Morehouse Parish, to Sept. 18, 1 case, 1 death; Natchitoches Parish, to Sept. 20, 76 cases, 5 deaths; Orleans Parish, New Orleans, July 21-Sept. 27, 2,907 cases, 378 deaths; Plaquemines Parish, to Sept. 23, 57 cases, 8 deaths; Rapides Parish, to Sept. 25, 20 cases; St. Bernard Parish, to Sept. 25, 61 cases, 3 deaths; St. Charles Parish, to Sept. 20, 114 cases, 16 deaths; St. John the Baptist Parish, to Sept. 26, 150 cases, 14 deaths; St. Mary Parish, to Sept. 25, 672 cases, 26 deaths; Tangipahoa Parish, Sept. 17, 2 cases; Tensas Parish, to Sept. 23, 4 cases; Terrebonne Parish, to Sept. 23, 229 cases, 10 deaths.

Mississippi: Enoka: Sept. 15, 1 case; Gulfport, Aug. 15-Sept. 25, 75 cases, 1 death; Gulf Quarantine, July 22-Sept. 2, 61 cases, 1 death; Hamburg, Sept. 15-25, 23 cases, 4 deaths; Handsboro, Sept. 17-24, 3 cases; Harriston, to Sept. 25, 2 cases; Mississippi City, Aug. 22-Sept. 25, 50 cases; Natchez, to Sept. 25, 35 cases; Roxie (vicinity of), to Sept. 25, 5 cases; Soria, Sept. 15, 1 case; Vicksburg, Aug. 30-Sept. 25, 57 cases, 7 deaths.

#### YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Aug. 20-27, 5 cases.

Guatemala: Tocura, Aug. 23, present.

Honduras: Puerto Cortez, Aug. 29-Sept. 5, 2 cases; San Pero, Aug. 20-30, 4 cases.

Mexico: Coatzacoalcas, Sept. 10-15, 1 case; Merida, Sept. 17, 1 case; Tehuantepec, Sept. 3-9, 1 death; Tezonapa, Sept. 3-15, 2 cases, 2 deaths; Vera Cruz, Sept. 3-9, 4 cases, 1 death.

Nicaragua: San Francisco, Aug. 27, 2 deaths.

Panama: Bocas del Toro, Sept. 9, 5 removed from steamship *Preston*; Panama, Aug. 27-Sept. 9, 6 cases, 1 death.

#### CHOLERA.

Germany: Hamburg, Aug. 26-Sept. 6, 3 cases, 1 death; Posen-Stettin, Sept. 19, 1 death.

West Prussia: Vistula District, to Sept. 7, 105 cases, 32 deaths.

India: Bombay, Aug. 8-15, 1 death; Calcutta, Aug. 5-26, 36 deaths; Madras, Aug. 5-25, 1,313 deaths.

#### PLAGUE.

Africa: Cape Colony, Port Elizabeth, Aug. 12-19, 1 case, 1 death.

Brazil: Rio de Janeiro, Aug. 20-27, 9 cases, 2 deaths.

Chili: Talta, Aug. 30, 3 cases.

India: Bombay, Aug. 8-29, 139 deaths; Calcutta, Aug. 5-26, 34 deaths; General, July 29-Aug. 5, 1,445 cases, 1,054 deaths; Karachi, Aug. 6-27, 29 cases, 20 deaths.

## Society Proceedings

### COMING MEETINGS.

- Delaware State Medical Society Wilmington, October 10.
- Mississippi Valley Medical Association, Indianapolis, October 10-12.
- Vermont State Medical Society, Burlington, October 12-13.
- New York State Medical Association, New York City, October 16-19.
- Kentucky State Medical Association, Louisville, Oct. 18-20.
- Medical Society of Virginia, Norfolk, October 24-27.
- Hawaiian Territorial Medical Society, Honolulu, November 4.
- American Academy of Medicine, Chicago, November 9-10.

### AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

*Eighteenth Annual Meeting, held at New York, Sept. 19-21, 1905.*

(Continued from page 1022.)

#### The After Management of Abdominal Sections.

DR. WALTER B. CHASE, Brooklyn, N. Y., said that, in reviewing his personal experience, he is led to the conclusion that the principal and by far the most frequent condition after laparotomy requiring treatment is flatulence. The accumulation of gas in the intestinal tract is present, to a greater or less extent, in a majority of cases. The principal causes are reversed peristalsis, intestinal paresis, and the effect of the anesthetic itself. He seldom gives anodynes, except in conditions of pain, making a possible exception in cases when peritonitis was present prior to the operation, or other structures involved in the operation were so friable that peristalsis should be prevented for a time, or in cases following intestinal anastomosis. Its administration for the relief of pain is admissible and perhaps mandatory. It is a matter of much moment what anodyne is selected. Ordinarily he uses codein hypodermatically in doses of gr.  $\frac{1}{4}$  to  $\frac{1}{2}$ , or more, if required. While its power to relieve pain and check peristalsis is much inferior to that of morphin, its lesser disturbance of the nervous system,

checking of secretion, and tendency to undue constipation makes it an agent of great value. It is imperative that a reliable preparation be used. In troublesome cases of continued nausea the administration of small doses of cocain, gr.  $\frac{1}{10}$  to  $\frac{1}{12}$ , exercises a salutary sedative influence on the nerves supplying the stomach, and is attended with happy results. Either the nausea or flatulence, or both, may disappear in a few hours after operation.

Among the newer remedies for the relief of intestinal paresis is the alkaloid of the calabar bean. Salicylate of physostigmin, given in doses of gr.  $\frac{1}{100}$  to  $\frac{1}{50}$ , or even more, hypodermatically, repeated once in four hours, seems to induce a powerful contraction of the circular fiber of the intestinal tract. The diet of patients after abdominal section calls for the greatest circumspection, always following the rule that nourishment, taken per os, before the stomach retains or digests it, is positively harmful. When shock is profound, minute doses of morphin sulphate are among the most powerful stimulants, and superior to most for prompt and sustained effect. The author discussed at length the importance of bodily temperature and position of patient after laparotomy.

#### Trivial Uterine Causes of Severe Gastric Disturbances.

DR. FRANCIS REDER, St. Louis, said that, during the last two years, eight patients came under his observation, six of whom presented a train of symptoms that would ordinarily be grouped as those of hysteria or neurasthenia, moderately severe in character, the remaining two patients being free from any such pronounced neuropathic phenomena, and some in fairly good health, with the exception that their stomachs were weak. The pelvic organs, on examination, gave evidence of disease, and, although the examination did not reveal anything of a serious nature, yet local minor surgical procedures afforded relief.

In the cases cited by the author, it was a surgical procedure that anticipated the pathologic conditions. He said to wait for pathologic conditions to give evidence of their existence by more pronounced local symptoms in gynecologic disease, where there is a marked reflex neurosis, would be to invite secondary conditions that might prove of a very grave nature.

#### DISCUSSION.

DR. RUFUS B. HALL thought the cases reported by the essayist had pathologic conditions sufficiently marked to justify operation, regardless of their neurotic condition. To cure nervous patients, it is sometimes necessary to remove every obstacle in the way of perfect health physically. He is convinced that if many of these cases had not been operated on their condition would have become worse, a more grave pathology would have resulted later, and it would have been more trying for the patients, thus making the surgery more difficult and harder for the patients to recover from the operation.

DR. X. O. WERDER, Pittsburg, is not enthusiastic about operating on neurotic patients, as the results are not usually good, and he feared the essayist would have some of the patients on whom he had operated return in a few months with the same symptoms having recurred.

#### Prolapsus Uteri and Its Treatment.

DR. HERMAN E. HAYD, Buffalo, N. Y., briefly spoke of the various conditions which contribute to the production of prolapsus uteri, and then immediately discussed its treatment by surgical means only. His operative treatment is carried out according to the degree of the descensus and the necessity for the preservation of the uterus. He believed that in minor degrees of prolapsus uteri, with rectocele and cystocele, the Alexander operation, with well-directed plastic surgery of the vagina and perineum, will cure these simple forms. When the prolapsus extends to the introitus, or the cervix points through the vulva, a vaginal hysterectomy, with a well-performed anterior and posterior colporrhaphy and a perineorrhaphy, accomplishes the best results; and the effect is permanent if the vault of the narrowed vagina is sewed firmly to the cut edges of the broad ligament. When it is desirable to save the uterus for the purpose of child-bearing, or to continue the function of menstruation, the cervix must be amputated and an anterior and posterior colporrhaphy and perineorrhaphy must be per-



formed and the uterus firmly ventrofixated to the abdominal wall through a median abdominal incision. Usually all these operations can be performed at one sitting, but if it is desirable to make two operations the posterior colporrhaphy and perineorrhaphy must be done at the same time, say three weeks after the first operations. The author, however, prefers the removal of the uterus, as this operation has been infinitely more successful in his hands. He also deprecated the performance of all operations which close the vagina, as he believed this unnecessary and because he had seen much unhappiness result from this procedure.

For the extreme cases of pelvic hernia, he was particularly pleased with a reprint sent him by Dr. Crile, in which he advocated a very elaborate and extensive operation. For one such case, which occurred in his own practice, he sewed the united vagina and broad ligaments to the abdominal wall, and the result was very satisfactory. However, such extreme measures are seldom called for, as most cases can be cured by the other operations described.

Dr. Hayd then detailed his operation on the posterior vaginal wall and the perineum, in which he cuts out a large triangular piece of the posterior central part of the vagina, and then, with the finger in the rectum as a guide to make tense the obturator fascia and levator ani muscle, he sews these opposing structures in perfect apposition with fine chromic gut, which layer of sutures is buried by bringing together the vaginal mucous membrane by another layer of sutures, and finally the skin is brought together by silkworm gut. This operation lessens the size of the vagina and lengthens it by producing an oblique canal instead of a horizontal one, and by carefully approximating the fascia and levator ani, the *sine qua non* of all perineal operations, the result remains fixed and permanent.

#### Surgery of the Liver.

DR. WILLIAM J. GILLETTE, Toledo, Ohio, read a paper on this subject, in which, after discussing the control of hemorrhage, the power of the liver to regenerate itself, infection and cholemia, he described a means of controlling liver hemorrhage in certain cases of severe bleeding when the blood vessels can not be easily reached. It sometimes happens that to tie them requires a further enlargement of the lacerated liver substance. This of itself increases the gravity of the patient's condition. Three years ago he was called in haste to see a young girl of 14 years, who had been shot by a target gun, the bullet entering between the eighth and ninth ribs, near the costal cartilage, and passing through the right lobe of the liver, lodging behind the stomach. The low velocity of the bullet had caused it to make a tear rather than a perforation. When first seen the child was nearly pulseless, and had all the evidences of a severe internal hemorrhage. Her face and lips were white and bloodless. The abdomen was opened. An incision was made close and parallel to the costal cartilages on the right side. The abdomen was found full of blood, which could be seen freely oozing from the torn liver. He attempted to control this first with catgut ligatures, but the friability of the tissues prevented. Some time previously he had had an experience with a similar wound of the liver made by a bullet, and had attempted to control the hemorrhage by packing with gauze; but the patient, a strong, robust man, had promptly died from the continued loss of blood. Postmortem revealed that the gauze packing had been entirely inadequate to control it. Having this case in mind, he did not feel like trusting to gauze again, and, inasmuch as it was not controlled by direct ligation, it occurred to him that by passing sutures from within, entirely through the liver substance and through the abdominal wall, making exit between the ribs after the manner of a staple, and tied firmly on the cutaneous surface, that permanent and constant pressure could be made, sufficient to control the hemorrhage without the ligature cutting into the friable liver tissue. Five or six such sutures were now introduced on the proximal side of the wound, each one embracing about three-quarters of an inch of the liver substance. Care was taken to link them together so as to include all the bleeding tissues in their bite. The ligatures emerged between the ribs

the same distance apart as they were entered on the liver substance, and when firmly tied all the hemorrhage and oozing ceased at once. Other injuries to the viscera, which were slight, were repaired, a drainage tube inserted, and the abdomen closed. The patient made an uninterrupted recovery. He has since used this suture in two instances, in one of which in removing a very adherent gall bladder he met with a severe hemorrhage which was readily controlled with it. Recovery was prompt. The third case was one in which a hydatid cyst the size of a small coconut was removed, together with a large number of gallstones, from a suppurating gall bladder. This patient unfortunately died from peritonitis a few days later, but the hemostasis was perfect.

The author referred at length to the more recent contributions to liver surgery.

#### Papillary Cyst Adenoma of the Breast.

DR. EDWARD J. ILL, Newark, N. J., said that this disease is comparatively rare, but that he has seen eight cases in his practice. There is not very much literature about the disease. Its characteristic symptoms are a clear yellowish-pink to dark bloody discharge from the nipple. On palpating the breast a small tumor can be made out early in the disease which may become multinodular later on. He has observed cases for from a few weeks to eleven, twelve and twenty-one years. The pathologic condition found is a papillary adenomatous mass projecting into the milk duct. It is non-malignant in character. The patient may get well without any interference. When the disease persists, he advises removal of the breast.

#### DISCUSSION.

DR. MILES F. PORTER, Fort Wayne, Ind., said that cyst-adenoma of the ovaries and other organs is prone to become malignant, and no one can tell whether the tumor is malignant or not until he has removed it. Some of these tumors are pronounced to be non-malignant by microscopists, but there is recurrence after operation. Others are pronounced malignant, but the disease does not return after operation.

DR. JOSEPH PRICE, Philadelphia, has never regretted the early removal of tumors of the breast for fear they might become malignant. He cited cases in point.

#### The Byrne Operation in Cancer of the Cervix.

DR. X. O. WERDER, Pittsburg, Pa., described the operative technic employed by Byrne, and said that Byrne places special stress on the importance of thorough and repeated cauterization of the wound surfaces and edges from which cancerous material has been removed, regarding it as the best safeguard against a recurrence of the disease. The most remarkable feature of the Byrne operation, when compared with all other operations undertaken through the vagina for the cure of cancer of the cervix, and one which seems to justify Byrne's conclusions, is the almost uniform absence of local recurrence. While employing the method described by Byrne in his first cases, he invariably followed it by the ablation of the remaining portion of the uterine body and appendages. Subsequently, however, he simplified the procedure very materially by dispensing with the preliminary amputation of the cervix. The principal features of the Byrne operation have been retained, namely, thorough and repeated cauterization of all wound surfaces and edges. The operation differs from the usual vaginal hysterectomy by the use of the cautery knife for detaching the cervix from its vaginal connections, the application of the electrothermic clamps devised by Downes, and the final cauterization of the stump with the dome-shaped cautery. He described the technic as he employs it at the present time. Of the sixteen cases operated on by him, only one died, about four weeks after the operation, from uremia. She is supposed to have suffered from nephritis for ten years previously; the operation, he thinks, may have hastened, but not caused her death.

#### Indications for Hysterectomy in Puerperal Septicemia.

DR. CHARLES GREENE CUMSTON, Boston, stated that hysterectomy applied to the treatment of acute puerperal infection is as yet a mooted question as far as its indications are



concerned, and it would be quite as illogical to advise this interference in all serious cases as it would be systematically to condemn it. All surgeons seem to be in accord as to the great difficulty of formulating the indications for this operation, and especially the time when these become formal. To come to a conclusion, all clinical methods of examination and those of the laboratory must be employed. The latter, however, are far from being of equal value, as no positive result can be obtained from a bacteriologic examination of the lochia or blood. Cytologic examination of the blood will give excellent data as far as the prognosis of the type of infection is concerned. Clinically, there is no one valuable sign, but taken together the symptoms obtained by careful intrauterine examination may indicate the necessity of surgical intervention when all other therapeutic procedures have failed. Septicemia occurring at once after labor can not derive benefit from surgery, but, on the other hand, it would appear that hysterectomy is indicated in cases of secondary septicemia with a slow evolution, or those taking on a pyemic type proceeding by successive stages, on the condition that there are no visceral metastases, in which case surgical treatment would be a method of exception.

#### **Abdominal Hysterectomy for Multiple Fibroids Complicated by Pregnancy.**

DR. J. HENRY CARSTENS, Detroit, reported the case of a woman, 42 years old, who was never pregnant before. The tumor was noticed for five or six years, but not accompanied by hemorrhage. Menstruation was regular until May; there was a slight show in June and July. He operated in the middle of August. The growth became rapid during the last three months. Patient recovered from the operation for the removal of the tumors.

These cases are not uncommon; still they are sufficiently rare to warrant reporting them. In nearly all cases the women are sterile; a growth develops, and after some years they become pregnant, which makes one suspect that there was some abnormal condition of the uterus, perhaps some malposition which prevented impregnation, but as the result of the growth the uterus was pulled up or shoved over in one direction or another in such a way that the ova could pass into the uterus and pregnancy occur. This seems to him the correct explanation of the occurrence of pregnancy in sterile women after the development of fibroid tumors.

In reference to general rules for these cases, the cases vary so much that no definite rule can be laid down to govern all cases, but on general principles he thinks cases of fibroids complicated by pregnancy can be left alone if they are subperitoneal and located at the upper half of the uterus. Fibroids located in the lower half of the uterus or in the broad ligament should be removed. Fibroids adherent or complicated with other pelvic diseases should be removed by enucleation, or, in some cases, an abdominal hysterectomy should be performed.

*(To be continued.)*

#### **MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.**

*Annual Meeting, held in Scranton, Sept. 26-28, 1905.*

##### **Election of Officers.**

The following officers were elected: President, Dr. William H. Hartzell, Allentown; secretary, Dr. Cyrus Lee Stevens, Athens (re-elected), and treasurer, Dr. George W. Wagoner, Johnstown (re-elected). Bedford Springs was selected as the next meeting place.

##### **Adopted Uniform Plan.**

The committee appointed for the purpose a year ago reported in favor of such modifications of their present constitution and by-laws as to make them conform to the uniform plan recommended by the American Medical Association. Pennsylvania was one of the few states that had had the county plan before the matter was taken up by the American Medical Association, but certain details were not in conformity with the uniform plan recommended. The trustees now become the councilors.

#### **Medical Defense and Fraternal Relief.**

The society also introduced an amendment to the by-laws providing for medical defense similar to that which has been in force in the Philadelphia County Medical Society, the Chicago Medical Society and a few other local societies for some time.

Action was also taken looking to the provision for the relief of physicians in sickness, as well as for the widows and children of deceased physicians.

*(To be continued.)*

#### **AMERICAN PUBLIC HEALTH ASSOCIATION.**

*Proceedings of the Thirty-third Annual Meeting, held in Boston, Sept. 25-29, 1905.*

The President, DR. F. F. WESBROOK, Minneapolis, in the Chair.

Addresses of welcome were delivered by Attorney-General Herbert F. Parker, on behalf of the state, and by Dr. Samuel H. Durgin, on behalf of the city of Boston.

##### **President's Address.**

The president, Dr. F. F. Wesbrook, Minneapolis, said that in America two causes are operative in rendering it difficult to protect the health of the public, one of which is the lack of real knowledge on the part of the public in regard to the scientific truths which underlie the conservation of its chiefest asset, namely, its health, and the other is a tendency in the preservation of individual freedom to lose sight of our obligations to respect the rights and privileges of others who may be less assertive.

The older method of securing experience by experimentation on the public should be superseded by requiring preliminary special training at universities and by boards of health, so that while retaining for the good of the public the service of those already trained and competent, they may be re-enforced and, when necessary, succeeded by those who have received such special training.

Knowledge of the clinical manifestations of disease is important, but often much more than clinical experience and ability is essential. While in scarlet fever, smallpox and certain of the infectious diseases it is nearly always possible to diagnose the condition present, and by so doing protect others from infection, there are a number of diseases in which clinical observation alone proves utterly insufficient. As illustrating this he mentioned diphtheria.

The policy of the association should be to anticipate demands for special work and special information along the lines which are closely applicable to public health, and care must be taken that with so many societies the members do not lose interest because they have failed to provide a place and a stimulus for workers in all lines which directly affect the work of the association.

#### **Lessons to Be Learned from the Present Outbreak of Yellow Fever in Louisiana.**

DR. JAMES CARROLL, Washington, D. C., read a paper on this subject, which is published in this issue of THE JOURNAL, page 1079.

##### **Yellow Fever in Mexico.**

DR. EDUARDO LICÉAGA, Mexico City, said that since the institution of modern methods in the City of Mexico, yellow fever has been diminished to a marvelous extent. He predicts that at no distant date this disease will be completely exterminated, as has been done in Cuba.

##### **Etiology and Prevention of Yellow Fever.**

DR. JOHN GUITERAS, Havana, Cuba, confined his remarks to new points that have arisen in the struggle with yellow fever during the year which have been evolved by investigations. The French Commission from the Pasteur Institute, experimenting in Rio Janeiro, produced a case of yellow fever by applying to a non-immune mosquito the eggs laid by an infected mosquito. This raises a very interesting question as to the transmissibility of yellow fever by the progeny of infected mosquitoes. The speaker thinks that by experimentation they have settled this matter in Havana, that an infected mosquito can not transmit infection through its prog-



eny or eggs. He is inclined to believe from a perusal of the experiments of the French Commission that there is some mistake. Marchoux, the French experimenter, acknowledges that he has only one such case. He worked in an infected locality, and it is possible, Dr. Guiteras thinks, that the patient was accidentally bitten by another infected mosquito without Marchoux knowing it.

There is another argument against the transmission of yellow fever by the progeny of infected mosquitoes. It seems to him that it would have been impossible to have eradicated yellow fever in Havana as they have done if that theory is true. In getting rid of yellow fever in Havana, they began to attack the epidemic in the beginning, so that it was comparatively easy to wipe out the disease in that city. This would have been impossible if the progeny of infected mosquitoes had been also infected.

Another interesting point to which Marchoux called attention was that one source of infection is to be found in young children affected with a mild form of yellow fever. Dr. Guiteras said this is not new, as Blair, Chaille and himself pointed this out in their investigations at Key West and in Havana, and they had shown that there were many cases of mild yellow fever among children that were unrecognized who became sources of infection by the mosquito. It was a study of the problem of yellow fever in young children in the yellow fever zone that led him to call attention to and insist on the great danger of mild cases of yellow fever. He has been calling attention to this for many years, not only in cases of young children, but also in young adults, especially of the colored population who are apt to develop mild cases of the disease. These he has always considered the most dangerous transmitters of the infection.

Special attention was directed to the high percentage of hemoglobin found in yellow-fever cases, which he said is an important differential diagnostic point between this disease, typhoid fever, malaria and influenza, three affections that are frequently confounded with yellow fever. In influenza, typhoid fever and malaria the percentage of hemoglobin is low—70, 75, perhaps 80. In malaria and typhoid fever, on the second day of the disease, one notices a decline in the percentage of hemoglobin in the blood. On the other hand, in yellow fever the percentage of hemoglobin is high, very often 100, sometimes above 100, during the first three, four and five days of the disease, and rarely below 90. If the percentage of hemoglobin goes below 90, and the case proves to be one of yellow fever, he considers that there is a complication, or the patient previously suffered from malaria.

Another point that has been of considerable aid to him during the present epidemic of yellow fever, especially in Florida, where they were confronted with the existence of an epidemic of dengue, and where the question came up as to whether or not yellow fever was present, is the diazo-reaction of Ehrlich. The diazo-reaction of Ehrlich is an important diagnostic sign in typhoid fever, but it may be present in other infectious diseases. He could say positively, however, that this is never present in uncomplicated cases of yellow fever, and on two occasions his mind was completely relieved as to the existence of yellow fever during the past summer in the South by finding the Ehrlich diazo-reaction in the urine. He was, therefore, able from his experience in Havana to exclude at once yellow fever in these two cases.

Another diagnostic point is albumin in the urine. Albumin in the urine is a characteristic sign of yellow fever. He insists more than he has ever done before on the importance of this symptom, and on a certain interpretation that must be given to the presence of albumin in the urine. After a careful study of many kinds of fever in Havana, he has found that albumin in the urine is more common in other infectious diseases that he has heretofore thought. It is common in cases of influenza and of typhoid fever, but not so common in malaria. It is only occasionally found in cases of malaria. Albumin in the urine is found in cases of dengue. The special point he brought out was that the quantity of albumin found in the urine in cases of yellow fever is out of all proportion to the other symptoms present.

Dr. Guiteras concluded his remarks by referring to the methods of disinfection that are being employed in New Or-

leans, and complimented the physicians in charge of yellow-fever cases in Louisiana on the efficient work they are doing.

He spoke of the use of superheated steam for the destruction of mosquitoes, saying that this agent is being used to great advantage in the present epidemic in Louisiana, and it is a valuable and efficient adjunct.

#### Resolutions on the Yellow Fever Epidemic.

A committee consisting of Drs. John Guiteras, Frederick Montizambert, P. H. Bailhache, James Carroll, William Bailey and Eduardo Licéaga, presented the following resolutions, which were adopted:

WHEREAS, The results obtained during the present epidemic of yellow fever in New Orleans by the methods of mosquito extermination, and by the prevention of the access of the mosquito to the patients, have been far in advance of the results obtained by the older methods; and

WHEREAS, It has been possible by the new methods, to hold in check and gradually to reduce an epidemic that has taken a firm foothold in the midst of the largest non-immune population that was ever exposed to yellow fever: therefore be it

*Resolved*, (1) That the association sees in these results a further confirmation of the view that yellow fever is naturally transmitted only by the bite of an infected mosquito. (2) That the association is of opinion that an efficient plan of defense against the propagation of yellow fever at the beginning of an epidemic can be easily established on the basis of this doctrine. (3) That the successful carrying out of such plan depends on a thorough understanding of the mosquito doctrine by the people, and the support that they may give to the prompt and frank reporting and to the proper handling of the first cases and of all suspicious cases. (4) The association wishes further to congratulate the Public Health and Marine-Hospital Service for the brilliant work done by Dr. Joseph H. White and his colleagues in New Orleans, and to urge on all concerned that the said Service be called on to take charge permanently of maritime quarantine along the Gulf Coast.

#### Election of Officers.

The following officers were elected: President, Prof. F. C. Robinson, Brunswick, Maine; vice-presidents, Drs. J. J. Kin-youn, Glenolden, Pa.; Domingo Orvananos, Mexico City, and Richard H. Lewis, Raleigh, N. C.; secretary, Charles O. Probst, Columbus, Ohio; treasurer, Dr. Frank W. Wright, New Haven, Conn.

Mexico City was chosen as the place for the next annual meeting in 1906.

*(To be continued.)*

#### AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

*Tenth Annual Meeting, held at Buffalo, N. Y., Sept.  
14-16, 1905.*

*(Continued from page 1123.)*

#### Advantages and Disadvantages of Glasses in Railway Service.

DR. NELSON BLACK, Milwaukee, Wis., gave a report of the opinion of ophthalmologists throughout the United States as to the safeness of an employe requiring the use of glasses. The advantages of, and objections to, the protection of the eyes of engine men and firemen by glasses was discussed. The question of allowing engine men, who have been a long time in the service, to wear glasses for constant use, when their vision has fallen below the required standard, but can be brought up to standard by lenses, has been receiving very serious consideration by railway officials. Many railroad companies allow their old engine men to run with glasses, requiring them to carry an extra pair. An opinion was asked as to the safety of such an engine man, and the following was given: "It is my opinion that a railroad employe (engine man or fireman), who has been in the continued service for a period of not less than five years, and who on re-examination falls below the required standard of vision, and such vision can be brought up to said required standard with glasses, his color perception meeting the required standard, and there being no ocular disease, is a safe employe. Such employe should be required to carry at least one extra pair of glasses. He should also be re-examined semi-annually to ascertain if there has been a further decrease in vision, and if the glasses fully correct the visual defect."

#### Fixation of External Rectus Muscle in Nystagmus and Paralysis.

DR. J. ELLIOTT COLBURN, Chicago, reported a case of nystagmus, one of paralysis of the right internus, and another of motor paralysis of the third nerve.



### Ocular Origin of Migraine.

DR. GEORGE M. GOULD, Philadelphia, read an article on this subject which will be published in THE JOURNAL.

### Retinal Changes as an Aid to Diagnosis in Vascular Degenerations.

DR. THOMAS A. WOODRUFF, Chicago, called attention to the slight anomalies that are recognized from time to time which show themselves in alterations in the caliber and contour of the retinal vessels. In some cases these changes may be so slight as to be overlooked. A very careful and closer study of the fundus will enable one to detect slight structural changes in the retinal vessels, which will lead him to form the conclusion that there is commencing degeneration of the arterial walls, also in the smaller arteries elsewhere in the body, signifying an arterio-capillary fibrosis. Tortuosity of the vessels is not a positive sign, unless it is confirmed by other variations from the normal which are found in the early stages of arterial degeneration. These changes are readily recognized by an ophthalmoscopic examination in the early stages of arterial degeneration, and if appropriate treatment is promptly instituted the disease can be arrested and a favorable prognosis given.

### Formalin in the Treatment of Diseases of the Ear, Nose and Throat.

DR. OTTO J. STEIN, Chicago, narrated his personal experience with this drug in a variety of diseases of the ear, nose and throat.

### The Treatment of Recent Embolism of the Retinal Arteries By Digital Massage.

DR. H. V. WÜRDEMAN, Milwaukee, Wis., gave abstracts of all the cases he could find in the literature, including four of his own, describing the treatment in detail. Two of his cases were completely cured, and two were benefited by the massage, as well as a number of the cases reported in the literature. This treatment was strongly recommended by the author, as yielding better results than any other form of treatment. In fact, older methods, unassisted by massage, are deemed of little use.

### Dextrophia.

DR. FRANCES VALE, New York, said that this condition is found in the examination of the field of vision with the tropometer. It shows a tendency for the visual lines to turn to the right or left under the influence of the direct innervation of the muscles. It has probably an anatomic cause. It is found associated with esophoria and exophoria, and in the operative correction of all cases of lateral imbalance is a useful indication of a necessary procedure.

### Advancement Operation versus Tenotomy.

DR. EDW. J. BERNSTEIN, New York, assumed that the position of Landolt is correct, that tenotomy of the recti is unjustifiable except under rare conditions, as it substitutes two weak muscles for one normal muscle and one relatively weak one, thereby producing insufficiency in amplitude in both lateral directions. The technic of the operation is the Weeks advancement. With this operation the author corrects not only actual strabismus, but also muscular insufficiencies which are not amenable to non-surgical means.

### Clinical Measurement of Torsion.

DR. LUCIEN HOWE, Buffalo, pointed out the difference between torsion with convergence and torsion with parallel axes. He has devised three instruments for measuring torsion with convergence, which were exhibited and demonstrated.

### Intranasal Pressure a Cause of Diplopia and Headache.

DR. KATE WILEY BALDWIN, Philadelphia, stated that pressure from the left middle turbinal acts as an irritant and causes diplopia. There is no relief from treatment directed to the eyes but disappears entirely soon after a middle turbinectomy. In a case occurring after a very serious nervous strain recurrence took place several months later. The patient was relieved by division of a postoperative synechia. When headache is caused by intranasal pressure the nasal tissues usually are found hypersensitive, especially those on

which pressure causes pain in some particular part of the head or in the eyes. When pain is unilateral only one side of the nose is abnormally sensitive. This sensitiveness disappears after operation.

### Treatment of the Diseased Attic.

DR. F. C. HORTZ, Chicago, stated that success in the treatment of chronic aural discharges depends chiefly on the personal attention of the attending physician, particularly if the attic is involved, ere the routine treatment of syringing, use of the gouge, drains and instillations of various solutions is absolutely ineffective. The diseased conditions should be attacked directly by instruments with which the attic can be cleaned thoroughly and apply the proper solutions directly to the diseased wall. Instruments were shown and the treatment described.

### Some Displeasing Results of the Mastoid Operation.

DR. J. A. STUCKY, Lexington, Ky., said that it is very essential that general practitioners should know more of suppurative mastoiditis, how to recognize it, and what treatment to urge. Important lessons learned from failures and unpleasant after-effects of the operation were pointed out. Some of the most displeasing after-effects are protracted discharge, obstinate granulations, atresia of the external auditory canal, slow healing of the wound, unsightly scar, and post-auricular fistula. The most important of these are due to: 1. Neglect in urging the operation early, instead of waiting until the disease has completely invaded and infected the contiguous structures of the antrum, and the resistive and recuperative power of the patient is undermined by the absorption of the retained septic material. It is just as dangerous to wait for external evidence of pus formation in the mastoid process as it is in the abdomen in appendicitis. 2. Want of proper preparation of the patient before operating. The presence of indican in the urine is a most important factor in toxemia, high temperature, and slow and unsatisfactory recovery which follows a thorough operation. 3. Want of thoroughness in removing all diseased and infected tissue, and giving unobstructed drainage to every part of the wound. 4. Carelessness and indifference shown in after-dressings of the wound, and in diet and quietude of the patient for several days after the operation.

### The Submucous Resection of the Septum.

DR. WILLIAM LINCOLN BALLENGER, Chicago, described the various methods for the submucous resection, and presented a critique of the methods. He described his own method with the swivel knife for removing the cartilaginous septum through an anterior incision and exhibited his swivel knife, together with specimens removed with it.

### The Front Bent Gouge in Mastoid Operations.

DR. W. S. BRYANT, New York said that this gouge aids the operator in saving time, gives him security, and enables him to carve the bone with perfect precision. It does away with accidental injury to the sigmoid sinus, even when irregularly placed. It permits the surgeon to remove the posterior canal wall without injury to the facial nerve. With its aid the operator can remove the outer wall of the attic and hanging wall of the meatus without accidentally opening the middle fossa. He can smooth out the bony excavation without danger of going further than he intends. When the mastoid process is sclerosed this gouge enables the operator to proceed rapidly with the excavation of the bone, without increased risk. It is not necessary to use a mallet with this gouge, thus sparing the patient the infliction of disturbing blows on the head.

### The Oto-Projectoscope.

DR. M. A. GOLDSTEIN, St. Louis, Mo., gave a practical demonstration of this apparatus, which consists of a combination of the modified and simplified epidiascope and the Brunton otoscope. It may be used in the class-room without the otoscope attachment for projecting anatomy and pathologic specimens in their natural color, depth and details. Photographs, diagrams and all forms of illustrations may be projected directly on the screen without further preparation.



## Relations Between Medical Practitioners and Eye Specialists.

DR. JAMES A. SPALDING, Portland, Me., said that many medical men will sign petitions to legalize opticians as scientific fitters of lenses, send patients with diseased eyes and foreign bodies in them to opticians, consult opticians for diseases of their own eyes and the fitting of lenses, and send friends and patients to opticians even when in their own town there reside educated medical men who have specialized in diseases of the eyes. The reasons for this are thoughtlessness, jealousy, belittlement of the skill demanded in fitting glasses, desire to have the optician and family of the patients, irritation at the large fees demanded by oculists, and the belief that the specialty is overrated, and that many of the practitioners are undereducated.

Specialists must deserve recommendations from practitioners. They must be well educated and ethical men. No one can be a good specialist in six weeks. If well-educated specialists should fail in proper medical support, they can not gain a living in competition with hospitals, which take the operations, and opticians who advertise for and get the refractive cases in a vast majority of towns and cities in the land. Just as physicians organize, so specialists should organize, and as an organization publish under the auspices of their publication committee papers on diseases of the eye. They should teach that eyes with imperfect sight are diseased eyes, and need proper treatment at the hands of medical specialists in the way of proper lenses. They should issue their own set of test types and hang them in every school. They should send a representative into every normal school to test the eyesight of the pupil teachers and lecture before these future teachers about the eye. They should keep in touch with the colleges and their students, some member following each class through its four years of college life. They should furnish to medical practitioners a fee table, for people of moderate means who wish to know the cost beforehand. They should refuse to buy lenses of opticians who make it a rule to fit lenses. Or, better still, they should furnish their own lenses just as hosts of medical practitioners prescribe their own medicine, and so retain their patients and their means of living.

DR. L. A. W. ALLEMAN, Brooklyn, N. Y., said that ophthalmology should be taught as a necessary part of a medical education and not as a specialty. Personally, he does not attempt to cover the entire field of ophthalmology. He does not advise the student to learn to use the ophthalmoscope, and he feels reasonably successful, if, at graduation, his student has learned to recognize the cases which he may safely and properly treat, and those which are of so serious a nature as to at once require the assistance of the specialist. The points which the author strives to impress on the student are the assistance that he may expect from an examination of the eye in forming a general diagnosis; also the necessity of recognizing ocular disorders as a factor in the causation of general disease—the systemic causation of many diseases of the eye.

## The Mechanism of Accommodation and Astigmatic Accommodation.

DR. EDWARD JACKSON, Denver, Colo., said that recent physiological examinations have shown that the increased refraction of crystalline lens during the accommodation accompanies relaxation of its suspensory ligament, but that the lens does not at this time become more spherical. Skiascopy also shows that increased lenticonus attends accommodation, and that each lens presents its individual peculiarities of aberration and astigma. When freed from the tension of its capsule, it tends to assume a shape determined by the development of the lens fibers, and on these may depend astigmatic accommodation.

The following papers were read: "Electric Ophthalmia," Dr. Edward N. Meckel, Pittsburg; "Fallacies in Ophthalmology," Dr. Joseph E. Willetts, Pittsburg; "Radium," Dr. W. Freudenthal, New York; "Physical Examination of the Mastoid," Dr. A. H. Andrews, Chicago; "Hemorrhage in Nose and Throat Operations," Dr. Emil Mayer, New York; "Angio-Endothelioma of the Middle Ear," Dr. Joseph Beck, Chicago; "Acute Eustachian Salpingitis," Dr. Frank H. Koyie, New York; "Middle Turbinate Body in Diseases of the Accessory Sinuses," Dr. Charles M. Robertson, Chicago; "Interstitial Keratitis," Dr. Thomas Faith, Chicago; "The Diseased Fauces Tonsil," Dr. William R. Murray, Minneapolis; "Clinical Significance of Otagla," Dr. Percy Fridenberg, New York; "Dendritis Keratitis," Dr. George F. Kelper, Lafayette, Ind.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

## Herpes Zoster.

Leale, in the *New York Med. Jour.*, discusses this condition from a pathologic standpoint and states that he believes the disease to be a nervous affection due to an acute hemorrhagic inflammation of the posterior ganglia and trunks of the nerves supplying that portion of the skin on which the characteristic eruption is situated. In the treatment, therefore, we must bear in mind we have to do with an acute inflammatory condition involving certain structures of the nervous system and perhaps associated with a mild form of cerebrospinal toxemia.

As soon as the disease is recognized the patient is put to bed and given a laxative, a fever prescription may be given, and a light diet, preferably milk. The author then directs treatment to the causative seat of the disease. Counterirritation is applied over the roots and trunks of the nerves involved. By this means the congestion is lessened and the absorption of the inflammatory products is hastened by going directly to the seat of the trouble and thereby favorably affecting the symptoms. The author recommends the use of dry cups, which should be applied over the ganglia of the posterior roots and over the points of emergence of the nerves involved. In order to do this properly it is necessary to have at least a general idea of the location and relation of the spinal nerves. The ganglion is developed on the posterior root of each of the spinal nerves, and they are situated in the intervertebral foramina external to the point at which the nerves perforate the dura mater. Having located the posterior roots involved, the cups are applied just to the affected side of the spinous processes and allowed to remain long enough to insure their maximum suction power. After the first set is removed they may be reapplied if deemed necessary. A few cups are then applied to the location of the emergence and over the course of the nerves involved. In this the physician is guided by the seat of the pain, hyperesthesia, and by the location of the eruption. If the cups are carefully and accurately applied the author claims a shortening of the duration of the disease and a very great amelioration in the severity of all the symptoms, especially the pain. Cups should be applied in the disease and sometimes even before the eruption has appeared. The cupping is repeated every twenty-four hours, preferably at bed time. In this way a nocturnal paroxysm of pain can often be prevented.

It is essential to protect the vesicles and to prevent their rupturing. This is best accomplished by the application of collodion. If the vesicles rupture a dusting powder is most satisfactory:

R.	Zinci oxidi	
	Pulv. amyli, āā.....	3i
	Acidi borici .....	3iiss
		10

M. Sig.: Apply locally to the vesicles and cover with sterile cotton dressing.

After an attack is over general tonics, a liberal diet and careful hygienic measures are usually indicated.

## Cerebrospinal Meningitis.

Hogner, in *American Medicine*, reports cases of this disease successfully treated by the intramuscular injection of mercuric chlorid. In the author's opinion the intravenous route is the best for injections. If the fluid is injected extravascularly it causes considerable smarting, and hard, very annoying infiltrations, swellings, stiffness, etc.; sometimes even gangrene may result. The technic for the intravenous injection is simple: "Take a 2 c.c. morphin syringe and inject into a large vein, which is readily accessible (with or without previous constriction of the upper part of the limb). As a rule I use a vein of the forearm or lower part of the upper arm, but sometimes I use a vein of the legs or one of the scrotum. The injection should always be given very slowly and if, when it is started, swelling or pains occur (I do not mean the insertion pain),



then the point of the needle is placed extravenously, and must be corrected, or the needle should be withdrawn and inserted in another place. If the smallest quantity of the fluid has been injected extravenously the patient should be given at once a hard, thorough massage, however painful it may be, for thus only can the consequences be prevented.

"For intravenous injections I use the finest, shortest and best steel needles; for intramuscular injections I have very coarse needles one and one-half inches in length. In the cases reported I injected a plain distilled water solution, but it is better to add some sodium chlorid. For ten years in the treatment of syphilis I have used:

	Parts.
Mercuric chlorid .....	1 to 2
Sodium chlorid .....	1 to 9
Distilled water .....	1,000

"One can safely inject from 1 c.c. to 4 c.c. of this solution, i. e., from 2 mg. to 8 mg. of the mercuric chlorid. Intravenously 8 mg. is the maximum dose. Generally I inject from 2 mg. to 4 mg., and have in more than 5,000 injections never seen any bad symptoms result from the injection."

#### Alopecia.

Walsh, in the *Journal of Medicine and Science*, has used the following with gratifying success in preventing this condition:

R. Acidi salicylici .....	3iii	12
Acidi carbolici .....	3i	4
Olei ricini .....	3ii	8
Alcohol q. s. ad.....	3vi	90

M. Sig.: Apply freely to scalp once or twice daily.

#### Fissure of Anus.

In the treatment of this condition, Katzenstein, in *Bull. Gen. de Therap.*, recommends the following ointment:

R. Cocainæ hydrochlor.		
Ext. belladonnæ, āā.....	gr. i	06
Ichthyol .....	3iss	

M. Ft. ungt. Sig.: Apply twice daily.

#### Ergot in Labor.

Applegate, in *American Medicine*, discusses the therapeutic value of ergot during labor. He states that the drug has no place in the first stage of labor. In normal labor, as is well known, the rhythmic contractions of the uterus are accompanied by gradual thinning and relaxation of the cervix, while under the influence of ergot the predisposition is to constriction and rigidity, particularly of this portion of the uterus, and the fact that it is valuable, or even safe, in uterine inertia can not be substantiated. If rest for a time, friction over the fundus, and stimulation with strychnin or quinin, fail to establish the normal first stage, it is far better and safer to complete the dilation manually and to deliver instrumentally, than to prescribe ergot prematurely, with its attending dangers. The dangers from the administration of ergot are threefold: 1, Rupture of the uterus; 2, asphyxiation of the child or paralysis of the fetal heart from compression; 3, retention of the placenta and membranes. Complete rupture of the body of the uterus, in this author's judgment, rarely occurs from the premature administration of ergot, extensive lacerations are not so rare. Until it is definitely ascertained that descent or partial protrusion of the placenta through the cervical canal has taken place, the administration of the ergot should be regarded as premature, notwithstanding the opposite opinion held by some well-known authorities.

A dram of the fluid extract administered immediately after the termination of a long, tedious labor, or when uterine inertia has been a factor, is unquestionably of value as a preventive measure, since slow involution inevitably follows such a labor, but for the control of established hemorrhage the effects are indicated at once, and far better results can be obtained by the administration of aseptic ergot hypodermically.

A distinction, however, should be made between private and hospital practice; in the latter, with competent resident physicians to compress the uterus in the proper way and manner, to pack in an emergency, or to administer ergot hypodermically, together with trained nurses to administer a hot vaginal douche (temperature from 110 F. to 115 F.), ergot is rarely needed as a preventive measure. Ergot is also of undoubted value following placenta prævia, for the purpose of closing the sinuses of the abnormal placental site, both for preventing too free bleeding and septic infection.

To obtain, then, the greatest therapeutic value of ergot in labor, its administration should be limited to, or near, the end of the third stage, administered by the mouth when indicated for the prevention of hemorrhage, and hypodermically when indicated for the control of hemorrhage.

## Medicolegal

### Privilege in Federal Courts—Health Stipulations.

The United States Circuit Court of Appeals, Third Circuit, says that at the trial, in the United States Circuit Court for the District of New Jersey, in the case of *Doll vs. Equitable Life Assurance Society*, objection was made to allowing a practicing physician and surgeon of New York, who had attended the sister of the insured in her last illness, to testify as to the cause of her death. The ground of this objection was that a statute of the state of New York prohibited a physician or surgeon from disclosing "any information which he might have acquired in attending any patient in a professional character and which information was necessary to enable him to prescribe for such patient as a physician, or do any act for him as surgeon." Counsel contended that, inasmuch as the contract of insurance was made in the state of New York, the law and usages of the place of the contract should govern in matters of construction affecting the validity of the contract and the rights of the parties, and that, therefore, this statute was controlling in the trial of this case. But the Circuit Court of Appeals thinks that the judge of the Circuit Court committed no error in admitting the testimony objected to. It says that the contention stated confused those laws which enter into and form a part of the contract, or with reference to which the contract was made, with those, merely, which govern remedy and procedure. The prohibition of the New York statute is a rule as to evidence or procedure, and does not enter into the contract of insurance. The interpretation of the contract does not at all depend on it. The rule affects the remedy and not the contract. In such cases the law of the forum (of the place where legal redress is sought) and not of the place of the contract, must govern. The New York statute, therefore, was not applicable to the trial in the United States Circuit Court for the District of New Jersey. Section 721 of the United States Revised Statutes, providing for the application of state laws to trials in the United States courts, had no relevancy to the point here under consideration. The Supreme Court of the United States, in *Connecticut Mutual Life Ins. Co. vs. Union Trust Company*, 112 U. S. 250, merely decided that the provision of the New York statute here referred to was obligatory on the court of the United States sitting *within that state*. Another thing said by the United States Circuit Court of Appeals in this case is that courts have been reasonable, and sought to protect the beneficiaries of life insurance policies from careless or ill-considered statements as to prior health, by not holding non-serious ailments or those not material to the risk, within the warranty of a statement by the insured, but it will not do, by too great refinement of argumentation, to fritter away the protection which these stipulations as to previous illness are properly intended to give to the insurer. They must receive a sensible and reasonable construction.

### Physicians as Expert Witnesses and Their Opinions.

The Supreme Court of Alabama says, in *Braham vs. State*, a homicide case, that a physician, as an expert, having testified in answer to a hypothetical question that under the hypothesis stated he would say the person was of unsound mind, it was proper on cross-examination for the state to test the accuracy of his information as to the causes of insanity. The jury is not concluded by the opinions given by experts on the question of whether sanity exists or not, and, while the court pronounces on the competency of witnesses as experts, it is the province of the jury to measure the weight of their opinions. In order that the jury may have a proper appreciation of the value of such opinions, it is entirely competent to develop on cross-examination the extent and accuracy of the expert's knowledge of the particular subject on which he



has been called to testify as an expert. Another witness in this case testified on the direct examination that he was a practicing physician, and had been such since 1897; that he was assistant county physician and had seen the defendant a number of times in the county jail; that he treated the defendant for a severe cold, which turned out to be measles; and that he treated him again a few days before the trial. He further testified that he saw the defendant often in the jail, and talked with him, he supposed, a dozen times; that his conversations were chiefly about his physical condition; that from his acquaintance with, observation of, the defendant, and from his professional knowledge, he would say that the defendant was sane. On cross-examination the defendant asked the physician this question: "Are you an expert on insanity?" The court has been unable to find any case in which the precise question presented has been considered. It is undoubtedly the law that the court must determine the question of the competency of a witness to testify as an expert, and that all evidence which goes to the competency of such witness should be addressed to the court. It is also true that, after a witness has been held competent by the court, it is the province of the jury to determine the weight of the evidence of such witness, and, as ruled above, a jury is not concluded by the opinion of experts, but must weigh such opinions with the other evidence; and in order to afford the jury ample opportunity to test the value of such opinions it is competent on cross-examination to inquire of the expert as to the extent and accuracy of his knowledge with reference to the particular subject on which, as an expert, he has expressed an opinion. As was said in *De Phue's case*, 44 Ala. 39, "A physician is an expert, and as such he may be asked questions which develop his capacity to form a correct judgment on the experiences of his profession." In this respect it might be competent to ask the physician if he had a diploma, or from what college he graduated, or the extent of his experience in the treatment of persons afflicted with insanity. In this way some of the data would be furnished on which the court, in the first instance, would be able to draw its conclusion as to the competency of the witness, and the jury, in connection with the evidence on which the opinion is based, could measure the weight to be accorded the opinion expressed. But this court submits that the question under consideration did not call for any data of the kind above referred to, nor data of any kind, but simply called for the opinion or conclusion of the witness as to his capability; and to have allowed an answer to it would have been to substitute the witness for the court and jury, whose duty it was to pass on the competency of the witness and the weight of his evidence. It was insisted by counsel that the question should have been allowed because it called for a fact peculiarly within the knowledge of the witness. But not every fact that lies peculiarly within the knowledge of a witness is competent evidence. The court notes, too, the fact that the witness, by his evidence, made himself competent to express an opinion that the defendant was of sound mind, aside from the fact that he was an expert.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

September 23.

- 1 \*Digitalis in the Treatment of Valvular Disease of the Heart. R. M. Goepf, Philadelphia.
- 2 \*Diverticulums of the Esophagus. W. G. Morgan, Washington, D. C.
- 3 \*Observations on the Therapeutics of Acute Insanity. D. R. Brower, Chicago.
- 4 Fractures of the Lower End of the Radius, with Forward Displacement of the Distal Fragment. R. Russ, San Francisco, Cal.
- 5 \*Three Cases of Cancer of the Corpus Uteri. F. C. Hammond, Philadelphia.
- 6 Pathology of General Paralysis of the Insane. J. D. O'Brien, Massillon, Ohio.

1. Digitalis in Valvular Heart Disease.—Goepf says that digitalis increases the contractions of the heart and lengthens the intervals of rest (diastole), and that at the same time the nutrition of the muscle is increased because more blood is

forced into the coronary arteries. The indication for digitalis is found in the dynamic state of the circulation, the precise nature of the cardiac lesion being of minor importance. It may be indicated in any form of valvular disease and it is not contraindicated even in aortic insufficiency. Contraindications for the use of digitalis are: hypertrophy with established compensation, and degeneration of the myocardium, and high arterial tension. The cumulative action of digitalis may be disregarded and the administration kept up continuously for a considerable period. The best preparation, he states, is the infusion made from the powdered leaves of digitalis, and not, as is sometimes the case, by diluting the fluid extract. Digitalin is a useful preparation and can be given hypodermically. It should be given in considerably larger doses, he thinks, than is usually recommended. It is well to begin with 3 mgm. (1/20 grain), but no hesitation need be felt in increasing the dose up to 5 mgm. or 8 mgm. (1/12 or 1/8 gr.)

2. Diverticulums of the Esophagus.—Morgan describes and classifies esophageal diverticulums, details symptoms, etc. In diagnosis he advises the use of two tubes, which may be passed simultaneously; after one tube is passed into the diverticulum, a second tube is passed along side and so guided into the stomach or into a second diverticulum. By the introduction of two tubes into different cavities these may be explored separately. In accessible esophageal diverticulums in the cervical region, surgical procedures for radical cure are available, such as obliterating the cavity by invagination or the establishment of a fistula from the borders of the diverticulum to the skin, to afford drainage for the sac, etc. In non-surgical cases, the conditions may be palliated by keeping the diverticulum empty, and cleansed by irrigation. Astringent or antiseptic applications or irrigations may also be employed to relieve inflammation and ulcerative conditions in the sac. As the greatest trouble in these cases arises from starvation, so the greatest results of treatment, often amounting to symptomatic cure, may be obtained from proper nutrition. When dysphagia is only moderate a sufficient amount of food can sometimes be introduced into the stomach by natural deglutition, by careful selection of easily swallowed foods, careful eating, and by keeping the esophageal passage open and straight by the sound or bougie. When the power of swallowing is greatly impaired or entirely abolished, gastrostomy and feeding through the fistula affords one method of keeping up nutrition. When dysphagia is extreme and the esophagus passable by the stomach-tube, a far better method of feeding is by gavage, which the patient can learn to perform for himself. An entirely adequate amount of food can thus be introduced into the stomach without excessive discomfort, through the natural passages instead of a troublesome artificial fistula, and without the necessity of a formidable operation. The following are some of the foods which Morgan says may be included in the dietary: Beef juice, rich soups and broths, including those containing cream, eggs and wine; puree of all vegetables which do not have tough fiber, among them being puree of spinach, beans, peas, celery, asparagus and potatoes; milk and cream; cocoa, chocolate, coffee, tea and some wines; eggs, raw or soft; scraped meat and fish chowder; porridge made from thoroughly cooked breakfast cereals; a few sweets, such as bees' honey, calf's foot jelly, and simple custards. Once a week the patient is instructed to masticate thoroughly several mouthfuls of some hard substance like crackers with butter, or bread with butter, before one or other of the meals, and even to swallow some portion of it in order to keep up the secretion of saliva in the mouth. By immediately washing out the diverticulum and esophagus no harm is done.

3. Therapeutics of Acute Insanity.—Brower says that insanity is a profound error in general metabolism, which may sometimes be overcome by alteratives; mercury, potassium iodid, and the chlorid of gold and sodium. In considering the therapeutics of acute insanity, the physician must bear in mind the necessity of attention to the general constitutional state of the patient. Rheumatism, gout, tuberculosis and syphilis require special consideration. Special attention must also be given to elimination by the bowels and kidneys. In-



testinal fermentation, when present, must be diminished by intestinal antiseptics, of which Brower believes that salol and zine sulphocarbolate are among the best. Disorder of the gastrointestinal tract is one of the most common errors in these cases. Colonic impaction is common, and is frequently overlooked. He states that relief of this condition by aloetia and flushing, when this is resorted to early, will often change the whole aspect of the case. Brower insists on the importance of a generous diet for these patients, and states that if the mental condition of the patient interferes with this forced feeding should be resorted to. In case this is necessary, the nasal tube should be used, unless there is some condition in the nose which would interfere with its use; in that case, the esophageal tube will have to be used. He calls attention to the necessity of controlling the insomnia and advises caution in the use of chloral and of hyoscin hydrobromate.

**5. Cancer of the Corpus Uteri.**—Hammond reports three cases of cancer of the body of the uterus illustrative of interesting points in the diagnosis of this disease. He states that it is a fact of peculiar interest that malignant disease of the cervix occurs frequently in comparatively young women. During the past year, he says, two women, each aged 34, with inoperable carcinoma of the cervix, applied at the Samaritan Hospital for treatment. He lays especial emphasis on the importance of early diagnosis in these cases and states that every woman who is bleeding should be subjected to a careful pelvic examination. He cautions the physician against waiting for the "classical" symptoms of pain, hemorrhage, fetid discharge and cachexia. The appearance of hemorrhage one or two years after the menopause, he says, is strong presumptive evidence of cancer. In some cases, he states, instead of hemorrhage, a slight watery discharge, with a characteristic unpleasant odor, is an early symptom of the disease.

#### Medical Record, New York.

September 23.

- 7 \*Individual Treatment of Diabetes Mellitus. H. S. Stark, New York.
- 8 Congenital Umbilical Hernia. C. C. Cumston, Boston, Mass.
- 9 Sixty Cases of General Paresis—A Clinical Study. E. L. Hunt.
- 10 High Frequency Spark in a Xanthoma-like Degeneration of the Lips. C. W. Allen, New York.
- 11 \*Case of Acute Internal Hydrocephalus. T. Diller, Pittsburg, Pa.
- 12 \*Case of Abdominal Pregnancy Undiagnosed Until After Operation. A. J. Ronginsky, New York.

**7. The Individual Treatment of Diabetes Mellitus.**—Stark advises the treatment of the individual patient in diabetes mellitus, rather than the arbitrary treatment of the disease by stereotyped methods. The severity of the pathologic process can not be measured by the amount of sugar in the urine. The physician should study the power of the patient to assimilate carbohydrates; his general state, whether anemic, plethoric, obese, or emaciated; his mental attitude, his digestion, his ability to maintain nitrogenous equilibrium, the complications, and the preferences of the patient as to diet. Patients can not be put on a diet that starves them of carbohydrates, but the amount taken can be lessened. Under prophylactic treatment the author advocates a modified diet for the children of diabetics, with a systematic examination of the urine. The occurrence of an excess of uric acid may be a forerunner of diabetes. The patient should be restrained from gratifying his appetites for food and drink. If emaciated and weak, a diet of increased fats is valuable. For glycosuria and polyuria, the author states that codeia should be given only in very moderate doses. For the skin lesions about the genitals he uses a soothing lotion and protective application. In bad cases catheterization for a time works well. When diabetic coma is established very little can be done. To prevent coma, he uses alkali-therapy, purgation by croton oil, and blood letting if necessary.

**11. Acute Internal Hydrocephalus.**—Theodore Diller reports this case, which was that of a girl who died at the age of 4½ years of what, at the autopsy, was found to be internal hydrocephalus. The cortex was nearly smooth, the convolutions and fissures being almost entirely obliterated. The brain resembled a bladder, and from the distended ventricles about a pint

of clear fluid escaped. The condition apparently began with an obscure febrile attack at the age of 2½ years. Six months later, a double convergent squint developed, and after that the manifestations of the internal pressure steadily progressed until the patient became totally helpless and died of exhaustion.

**12. Abdominal Pregnancy Undiagnosed Until After Operation.**—Ronginsky's patient was seen at various times by fourteen physicians, yet it was not until an exploratory laparotomy was performed that it was discovered that the underlying condition was an ectopic pregnancy. The age of the fetus was about 3½ months, and the placenta was attached to the small intestine, and to the ovarian end of the tube. The symptoms had at first simulated indigestion and spasm of the intestine, and later a condition of chronic intestinal obstruction developed. The patient grew progressively more anemic and emaciated, and went into shock after the operation, dying three and a half hours later.

#### Boston Medical and Surgical Journal.

September 21.

- 13 \*Methods in Medicine. L. F. Barker, Chicago.
- 14 \*Medical Treatment of Gastric Ulcer and Hyperchlorhydria. F. C. Shattuck, Boston.

**13. Methods in Medicine.**—Barker calls attention to the various advances in recent years in the science of medicine. He states that the aspects of scientific medicine, the theoretical and the practical, ought to work together and that medical science and medical art should live in a state of wedlock. Scientific medicine does not undervalue observation or good clinical work; it does not maintain that the laboratories are the only places whence illumination comes. On the contrary, scientific medicine realizes to-day more than ever before that the ideas which stimulate experimental work which will be fruitful for diagnosis and treatment must be gained, in part at least, from the sick people themselves. A scientific physician, Barker states, should have a large bedside experience and should be familiar, from personal observation on human beings, with the forms of disease on which he is working. He should be able to make accurate diagnoses and thorough prognoses, and should have a knowledge of the various remedies which empiricism has recommended. He says that it has taken thousands of years to elaborate the present methods of clinical examination, and the results which have been achieved give us increased confidence in man's power in medicine. If the past is an index of the future, Barker thinks that we need not hesitate to assert with regard to medicine that, in time, through the further applications of scientific methods, "we shall know; we shall be able to predict; we shall gain the power to control."

14. See abstract in JOURNAL, July 1, 1905, page 65.

#### New York Medical Journal.

September 23.

- 15 Rheumatic Poison and Its Treatment. (Continued.) F. Le Roy Satterlee, New York.
- 16 Original Ideas in Interdental Splints and the Result from Their Use. H. J. Kauffer, New York.
- 17 Surgery at the Dawn of the Nineteenth Century. (Concluded.) N. Jacobson, Syracuse, N. Y.
- 18 Six Lectures on Diseases of Blood. (Continued.) J. M. Swan, Philadelphia.
- 19 Study of Masked Rheumatism. (Continued.) G. F. Souwers, Germantown, Pa.
- 20 Food Factor in Asthma: Hyperemia. F. Hare, London, England.
- 21 \*The Menopause. J. N. Upshur, Richmond, Va.
- 22 List Practice. D. W. Bedinger, Bellbrook, Ohio.

**21. The Menopause.**—Upshur reviews the symptoms most commonly occurring in women at this period of life and says that the treatment should aim at sustaining the system in such a way as to alleviate nervous irritability and to supply stimulus and nourishment which will keep the patient as nearly as possible at the normal standard of health. He states that drugs are not to be administered in any case in which simpler and less active agents will accomplish the same end, and emphatically protests against the injudicious prescription of narcotics or alcoholic stimulants because of the great danger of making the patient dependent on them. Hygienic regulation of all the functions and habits should be attended to, and especially the patient should keep early hours.



## Lancet-Clinic, Cincinnati, Ohio.

September 23.

- 23 \*Carcinoma of the Rectum and Treatment. G. B. Evans, Dayton, Ohio.
- 24 Local Lesions and Treatment of Amebic Dysentery. J. P. Tuttle, New York.
- 25 \*Use and Abuse of Fresh Air and Over-Feeding in Tuberculosis. W. H. Prioleau, Asheville, N. C.
- 26 Infant Feedings. W. H. DeWitt, Cincinnati.

23. See abstract in JOURNAL, July 8, 1905, page 128.

24. Id.—Oct. 24, 1903, page 1041.

25. Use and Abuse of Fresh Air and Overfeeding in Tuberculosis.—Prioleau calls attention to the fact that while fresh air in abundance is to be desired above all else in the treatment of tuberculosis, it is better for the patient to be comfortable indoors than to be uncomfortable in the open air. Nothing, he states, is more unpleasant to an invalid than being cold, and there are a few things more harmful. Besides the discomfort of it, cold stops digestion, chills the periphery of the body and congests the internal organs. He states that the proper feeding of the patient is as important as fresh air. A tuberculous patient is often required to dispose of a full tuberculosis diet, without regard to his digestive or assimilative powers. Ordinarily the digestive powers of a consumptive are poor, and forced feeding overburdens the stomach and destroys any natural appetite a patient may have. A consumptive should never know hunger, but he should be allowed the privilege of an appetite. As the appetite is generally poor in these cases, a tuberculous patient should be required to eat more at the three principal meals than he feels like doing, as it is a well-known fact that a tuberculous patient can digest and assimilate more than he feels like eating. Prioleau concludes his article by stating that each patient should be supplied with fresh air and nutritious food, according to the comfort of his body and the power of his digestion, remembering always that the personal equation enters into each case.

## St. Louis Medical Review.

September 16.

- 27 Etiology of Cancer. M. Schueller, Berlin, Germany.
- 28 Climate and Relapses in Pulmonary Tuberculosis. A. Dixon, Jr., El Paso, Texas.

## Journal of Experimental Medicine, New York.

August.

- 29 \*Study of Pneumococci; Comparison Between the Pneumococci Found in the Throat Secretions of Healthy Persons Living in Both City and Country and Those Obtained from Pneumonic Exudates and Diseased Mucous Membranes. W. H. Park and A. W. Williams, New York.
- 30 \*Application of the Reaction of Agglutination to the Pneumococcus. K. R. Collins, New York.
- 31 Comparative Study of Pneumococci and Streptococci from the Mouths of Healthy Individuals and from Pathologic Conditions. W. T. Longcope and W. W. Fox, Philadelphia.
- 32 \*Study of Pneumococci and Allied Organisms in Human Mouths and Lungs After Death. C. Norris and A. M. Pappenheimer, New York.
- 33 Studies on the Pneumococcus. C. W. Duval and P. A. Lewis, Boston.
- 34 Studies of the Pneumococcus and Allied Organisms with Reference to their Occurrence in the Human Mouth. L. Buerger, New York.
- 35 \*Comparative Study of Pneumococci and Allied Organisms. P. H. Hiss, Jr., New York.
- 36 \*Viability of the Pneumococcus After Drying: Study of One of the Factors in Pneumonic Infection. F. C. Wood, New York.
- 37 The Growth of Pneumococci and Streptococci in Blood Serum. W. T. Longcope, Philadelphia.

29. Study of Pneumococci.—The investigations carried on by Park, Williams and others were planned after consultation with the members of the commission for the investigation of acute respiratory diseases of the health department of the city of New York, but were otherwise entirely independent of that body. Two hundred patients were examined for the presence of pneumococcus, with the following results: Typical pneumococci were present during the winter months in the throat secretions of a large percentage of healthy individuals in the city and in the country. A higher percentage of atypical strains of pneumococci has been obtained from healthy persons than from those suffering with pneumonia. In the latter cases the atypical strains may have been overlooked, because of the larger number of typical pneumococci present. Many of the atypical strains seemed to be closely related to the streptococci. The so-called *Streptococcus mucosus* of Schottmueller, which has hitherto been classed with the distinct streptococci, is placed as a definite variety among the

pneumococci, and it is recommended that the name be changed to *Streptococcus lanceolatus*, var. *mucosus*. A lower percentage of strains of pneumococci virulent for rabbits in the doses used was obtained from normal individuals by rabbit inoculations of mass cultures than from cases of pneumonia by the same method. Since the virulence of pneumococci may be rapidly increased for a susceptible species of experimental animal by successive passage, and since pneumococci obtained from most pneumonias are more virulent for experimental animals than are those obtained from healthy individuals, therefore, the virulence of pneumococci from cases of human infection is probably increased for human beings. Hence, cases of pneumonia, to a certain degree, should be considered as contagious, and, since the virulence of the pneumococcus may be quickly increased and since the organism is very prevalent in normal sputum, all possible measures should be taken to restrict public expectoration. By repeated inoculations into sheep of a pneumococcus strain, a specific protective power of this serum for mice is developed against the homologous strain and against certain other strains, one morphologic variety (*Streptococcus lanceolatus*, var. *mucosus*) being thus clearly differentiated from other strains. Coincident with this production of protective power, a slight specific increase of the sheep serum in phagocytic power *in vitro* was observed with some strains of pneumococci, all strains of *Streptococcus lanceolatus*, var. *mucosus* acting similarly with the serum produced by the inoculation of one strain; the strains of some varieties, however, have shown no definite relationship between the phagocytic power and the protective power of the serum.

30. Agglutination Pneumococcus.—The report made by Collins is a part of the work on pneumonia planned by the pneumonia commission. Owing to unavoidable circumstances, the work done was curtailed considerably; hence, Collins is able to make only the following preliminary report: 1. Pneumococci, by reason of their agglutinating properties exhibit a tendency to separate into numerous groups similar to streptococci. 2. *Pneumococcus mucosus* forms a distinct and consistent variety. The production by it of common agglutinins for some pneumococci and the resistance of the agglutinins produced by it to absorption by the streptococcus indicate a nearer relation to the former than to the latter organism. 3. The agglutinating substances in the serum of immunized animals were demonstrated by absorption tests to consist of specific and group agglutinins in cases in which the agglutinins were sufficiently developed to make use of this method. 4. The pneumococci seem to show marked differences in their ability to undergo agglutination. 5. There was considerable uniformity of reaction of the various strains in low dilutions, but this uniformity is not continued as the animal becomes more highly immunized. 6. At present it is not possible to establish a definite relation between the agglutination reaction and the other characteristics of the pneumococcus, except in the case of the *Pneumococcus mucosus*.

32. Bacteria Found in Mouth and Lungs After Death.—The studies made by Norris and Pappenheimer were confined to a determination of the prevalence of the pneumococcus in normal lungs and in lungs which presented various lesions. The report embodies the results of the bacterial examination of 42 human lungs. The cases were taken at random and included patients dying outside of the hospital, patients dying in the hospital within 24 hours after admission and patients dying 24 hours or longer after admission. The lungs were selected from subjects examined within 24 hours after death. The authors found that organisms of the pneumococcus or streptococcus group were present in the lungs of practically all cases, whether normal or showing a variety of lesions; strictly speaking, they were found in forty out of forty-two cases, or in 95 per cent. of the series. The pneumococci and the streptococci were obtained in practically similar percentages—that is, 50 per cent. of the cases. Pneumococci were obtained more frequently in the small series of patients exposed for some time to hospital atmosphere. The number of cases examined, however, was insufficient, and the findings may thus be accidental, and hence of no value. Test micro-organisms, namely, small portions—half a dram or less—of *Bacillus prodigious*



introduced into the human mouth after death were conveyed to and recovered from the lungs by culture in a little over half of the cases in which this experiment was tried. The test micro-organisms are probably conveyed to the lungs with the fluid which collects just before death. The numerous manipulations entailed in the removal of the body from the wards to the morgue greatly facilitate the entrance of any fluid from the pharynx and buccal cavity into the lungs. It follows, logically, from the results obtained in this experiment, that the cultural findings after death are not a guide to the bacterial contents of the lungs during life, and that any deductions made from such findings are unreliable and deceptive. There is every reason to believe that any of the micro-organisms present in the mouths and pharynx, and, in many cases, in the stomach contents, may enter the lungs, and, if conditions be suitable, increase in numbers, during the time between death and the examination of the lungs. There exists, perhaps, more frequently than has hitherto been suspected, a series of diplococci, intermediate between the typical pneumococci and streptococci. The diplococci of this type were found in 40 per cent. of the cases examined. The differential diagnosis of these atypical diplococci from the pneumococci and streptococci is a difficult one, depending, as it does, on general cultural characteristics. No single character, such as the presence of capsules or the fermentation of inulin, virulence, etc., has been found to be a certain criterion. The agglutinative reactions made seem to show that these intermediate diplococci have none or only slight agglutinative affinities to the typical pneumococcus. Further tests must be made, however, with the various methods at hand before this statement can be accepted as final. These diplococci are of interest from the fact that they have been found in the blood during life, and in the pial exudate in cases of meningitis, endocarditis, etc. These studies throw no light whatever on the conditions which determine the onset of lobar pneumonia in apparently healthy persons. Moreover, the authors were unable to draw conclusions as to the presence of pneumococci in the lungs during life, or as to the channels by which they gain access thereto.

**35. Comparative Study of Pneumococci and Allied Germs.**—The investigations in this field of work made by Hiss lead to the following conclusions: (a) Organisms, not to be distinguished by morphologic characters or by any physiologic peculiarities from true pneumococci derived from pathologic sources, occur with frequency in the mouths of healthy persons and those suffering from slight inflammations of the nasopharynx, and the only permissible and legitimate conclusion is that these organisms are true pneumococci. (b) There are other organisms in normal mouths and from pathologic sources that morphologically or by staining reactions are not definitely to be distinguished from pneumococci, and can only be recognized by a careful study of their fermentative activities and agglutination reactions. These organisms are non-inulin fermenters. (c) The organism known as *Streptococcus mucosus* is at times found in cultivations from the mouths of apparently healthy individuals, and that, although it shows certain peculiarities distinguishing it from the typical pneumococcus, it is probably very closely related to, and a variety of, this species. (d) Other organisms occur which in their fermentation are indistinguishable from pneumococci, but which enter morphologically or in agglutination reactions show a variation from this type. Some of these are probably temporarily or permanently modified pneumococci or *Streptococcus mucosus*; others, it may be, are streptococci of types which it has not heretofore been possible to recognize and describe. Some of these organisms were isolated from pneumonic lungs at autopsy, or from some internal source, such as the circulating blood, and presumably have long resided under conditions which may be considered adverse, thus bringing about a modification of their morphology or physiology. This theory is supported by the observation that pneumococci from such sources—perfectly typical morphologically and in fermentative articles—are apt to show a lessening of their ability to agglutinate.

**36. Viability of Pneumococcus.**—According to Wood, the life of the pneumococcus in moist sputum is of considerable duration, the average period being less than two weeks unless the material is exposed to direct sunlight. As such sputum, however, does not give off bacteria even when exposed to strong currents of air, it may be considered as innocuous except to persons handling clothes, bedding, etc., which have recently been contaminated. Under ordinary conditions this sputum dries in the course of a few hours or days. The dried masses retain their virulence for a long time, and if deposited on the floor or on the bedding of the patient may be powdered mechanically, and sweeping, dusting, or brushing the contaminated articles will distribute pneumococci in the air. Fortunately the organisms in the sputum do not remain long in suspension and die off rapidly under the action of light and desiccation. In sunlight or in diffuse daylight the bacteria in such powder die within an hour, and in about four hours if kept in the dark. The danger of infection from powdered sputum, therefore, may be avoided by ample illumination and ventilation of the sickroom in order to destroy or to dilute the bacteria, and by the avoidance of dry sweeping or dusting. Articles which may be contaminated and which can not be cleaned by cloths dampened in a suitable disinfectant should be removed from the patient's vicinity. When a person suffering from a pneumococcus infection coughs, sneezes, expectorates, or talks, particles of sputum or saliva, which may contain virulent pneumococci, are expelled from the mouth. Such particles remain suspended in the air for a number of hours if the ventilation of the room is good. They may be inhaled by persons in the vicinity of the patient, or they may be deposited on various articles in the room. Wood's studies show that, whether suspended in the air or dried on surrounding objects, these micro-organisms become harmless in a very short time, about an hour and a half being the extreme limit, while many of the pneumococci in the spray perish in a few minutes, especially if exposed to strong light. In the light of these experiments, the risk of infection from the pneumococcus is largely confined to those in direct contact with the person whose excreta contain the organism.

#### Cleveland Medical Journal.

September.

- 38 \*Immediate Mortality in Abdominal Section, Based on a Personal Experience in 2,008 Cases. G. W. Crile, Cleveland.
- 39 Case of Traumatic Asphyxia. R. H. Birge, Cleveland.
- 40 Significance of Pathologic Elements in the Urine, with a Description of the Best Methods of Ascertaining Their Source. W. E. Lower, Cleveland.
- 41 X-Ray Treatment of Skin Diseases a "Passing Fad." W. I. LeFevre, Cleveland.

**38. Mortality in Abdominal Section.**—Crile details his experience in 2,008 cases of abdominal section. The gastrointestinal tract was operated on 894 times, 748 times for appendicitis, with 72 deaths, a mortality of 8.05 per cent. The genitourinary tract was the site of operation 121 times, 41 times for floating liver, with 11 deaths, a mortality of 8.3 per cent. The pelvic organs were operated on 751 times (including five Cesarean sections), with 13 deaths, a mortality of 1.7 per cent. The liver and gall bladder were operated on 130 times, with 11 deaths, a mortality of 8.3 per cent. There were 45 cases of ventral hernia, with 1 death, a mortality of 2.22 per cent., and 65 miscellaneous operations, with 5 deaths, a mortality of 7.6 per cent. The total mortality for the 2,008 cases was 5.2 per cent. In 74 cases, death was due to infection. This does not mean infection following operation in a clean field, but it means that patients with acute peritonitis, general peritonitis, ruptured gall bladder, perforation of the stomach and of the intestines, acute infection following miscarriages and abortions, had gone past medical treatment and operation was done with the hope of controlling or arresting the process. In 12 cases, death was due to exhaustion. These were principally cases of inoperable malignant tumors; in some only cocain incision was made and the inoperability of the tumor established. In several cases of long-continued exhausting infection with multiple abscesses, the patients died of exhaustion. The larger number of the 12 cases in this list occurred in the early years before the great importance of not permitting the patient in an operable case to remain in the



recumbent posture during the repair of the wound was realized. There were no cases of death from shock *per se*, but there were 10 cases in which the infection existing at the time of operation, and its continuation, together with the shock of the operation, caused death. Emboli and thrombosis were fatal in four cases, three of pulmonary embolism, and one involving the mesenteric artery. The latter patient was supposed to have died of obstruction of the bowels. At autopsy it was found that embolism was the cause of death, the obstruction being secondary. In four instances, pneumonia caused death, in two of which, although it was not proved, Crile felt quite certain that septic emboli were the exciting cause. The other two were cases of bronchopneumonia, vaguely termed ether pneumonia. In one case death was due to complete suppression of urine. Obstruction of the bowels *per se* is not mentioned as having in a single instance caused death. Of this total number of cases, 736 were operated on for relief from infection; that is to say, were infective cases. Of these, the mortality rate was 11 per cent. The greatest risk lies in visceral perforation, typhoid perforation, gastric duodenal ulcer, and gunshot wounds. In 160 malignant tumors treated surgically the risk was 11 per cent. There were 1,108 non-infective cases, with five deaths, a mortality of 4 per cent.

#### Illinois Medical Journal, Springfield.

September.

- 42 \*Pelvic Infections in Women. T. J. Watkins, Chicago.
- 43 Diagnosis and Treatment of Laceration of the Vaginal Portion of the Uterus and Fornix Vaginae. L. H. A. Nickerson, Quincy.
- 44 Subparietal Injuries of the Kidneys, with Exhibition of a Case. W. Fuller, Chicago.
- 45 \*Use of the Tent in the Treatment of Tuberculosis. J. W. Pettit, Ottawa.
- 46 \*New Procedure for Opening the Pericardium. J. H. Bacon, Cleveland, Ohio.
- 47 Chronic Prostatitis and Its Treatment. H. Schiller, Chicago.
- 48 Cerebral Hereditary Syphilis. W. J. Butler, Chicago.
- 49 Air Examinations—Importance and Results. A. Gehrman, Chicago.
- 50 Fever of Tertiary Liver Syphilis. J. L. Miller, Chicago.
- 51 Value and Place of Duodeno-Choledochotomy in Gallstone Surgery. J. C. Hancock, Dubuque, Iowa.

42. See abstract in JOURNAL, June 3, 1905, page 1802.

45. Tent in Tuberculosis.—Pettit discusses the value of the tent in the treatment of tuberculosis, and points out the advantages of the tent as compared with confining patients in rooms. He says that from an economic standpoint the tent commends itself. The housing of tuberculous patients in buildings is not only unnecessary, but it is in violation of an essential principle which has for its object providing the patient with fresh air. The only argument that can reasonably be deduced for placing patients in buildings is that it is necessary to keep them warm. A tent with necessary furnishings is far cheaper, more rational and more conducive to securing the favorable outcome. Tuberculous patients need not be housed in substantial buildings in order to make them comfortable.

46. See abstract in JOURNAL, May 27, 1905, page 1704.

#### Washington Medical Annals.

September.

- 52 \*Case of Unusually Large Ureteral Calculus; Transperitoneal Uretero-Lithotomy. J. W. Bovée, Washington, D. C.
- 53 \*Two Cases of Transposition of Viscera; Hereditary. B. M. Randolph and J. D. Thomas, Washington, D. C.
- 54 Case of Double Pyosalpinx. J. W. Bovée, Washington, D. C.
- 55 Excision of the Hip-Joint for Hip Disease. J. F. Thompson, Washington, D. C.
- 56 Hysterectomy for Sloughing Degenerated Fibroma of the Uterus. H. D. Fry, Washington, D. C.
- 57 Modern Ideas on the Treatment of Tuberculosis. R. Reyburn, Washington, D. C.

52. Unusually Large Ureteral Calculus.—Bovée removed an unusually large ureteral calculus transperitoneally. The calculus measured  $2\frac{3}{4}$  by  $1\frac{3}{4}$  by  $1\frac{1}{2}$  inches and weighed 1,310 grains. It was kidney-shaped, one end larger than the other, was grayish in color and had rough surfaces. On section it was found to consist of several concentric layers of phosphatic formation covering over a decidedly dark mass one inch in diameter, which contained many layers composed of a deposit of calcium oxalate.

53. Transposition of Viscera.—In the first case reported by Randolph and Thomas the heart, liver and stomach were trans-

posed, but were normal in size. An interesting feature of this case is the fact that the maternal grandfather (the second case) of this patient presents the same phenomena, the heart, liver and spleen being transposed.

#### Oklahoma Medical News-Journal, Oklahoma City.

September.

- 58 Principles of Diagnosis of Lesions of the Spinal Cord Due to Trauma. J. Punton, Kansas City, Mo.
- 59 \*Suggestion in the Surgery of Abortions. B. F. Fortner, Vinita, I. T.
- 60 Care of Infants, from Birth to Completion of Dentition. J. H. Loving, Blair, Okla.
- 61 Doctor's Duty Concerning Dying Declarations. W. L. McCann, Oklahoma City, Okla.
- 62 Simple Method for the Reduction of Luxations of the Humerus. E. Boulton, Philadelphia.
- 63 Landlord and Tenant. W. C. Sprague, Detroit, Mich.

59. Surgery of Abortions.—The operation suggested by Fortner consists essentially of obliterating the lumen of the Fallopian tubes in cases in which it is impossible or undesirable that the patient shall again conceive. It is performed as follows: The abdomen is entered by the median suprapubic method; the fundus uteri and tube are brought to the surface; the peritoneum overlying the contracted portion of the tube half an inch, or slightly more, from the uterus, is caught up and snipped longitudinally with scissors between tissue forceps; a silk-threaded artery needle is passed through this slit, around and under the tube which is looped up as is the cord in a Bassini hernia operation; the ligature is tied only sufficiently snug to hold without damage; the tube is cut off and its distal end pulled into a second loop of the same ligature, which is tied and dropped back into the peritoneal slit, which, in turn, is closed by two or three running catgut sutures, and the operation is completed, except closing the abdomen in the usual way. The hemorrhage amounts to little more than a stain. Fortner says that this operation goes beautifully with that of fixation in cases in which the woman has acquired a displaced uterus and the incurable habit of aborting, as is found in the best of women. Some of the results of the procedure are: No more conceptions; the distorted, sorely afflicted, suffering bladder and other pelvic organs, with rest, resume their normal condition and function; no more distal tubal or ovarian infections; no more depressing, neurosis-producing apprehensions; no adhesions.

#### Montreal Medical Journal.

August.

- 64 Medical Memoirs of Bytown. H. B. Small, Ottawa.
- 65 Puerperal Infection. E. McDonald, New York.
- 66 Third Case of Transposition of Viscera and Other Autopsy Findings. J. McCrae, Montreal.
- 67 Importance of Chemistry in Medicine. J. C. L. Wolf, New York.
- 68 Interesting Family History of Epilepsy. C. A. Peters, Montreal.

#### Southern California Practitioner, Los Angeles, Cal.

August.

- 69 Cases Illustrating Some of the Difficulties in Abdominal Diagnosis. E. E. Montgomery, Philadelphia.
- 70 Evils of Institutional Childhood—Sociologic Study. W. Lindley, Los Angeles.
- 71 Los Angeles Health Department—History. L. H. Schwalbe, Los Angeles.
- 72 Diseases of Women and Children. W. A. Edwards, Los Angeles.

#### Columbus Medical Journal.

August.

- 73 Diethylbarbituric Acid. J. C. Larkin, Hillsboro, Ohio.
- 74 Inflammation. J. C. Barnhill, Columbus.
- 75 Carcinoma in Third Generation. W. E. Allaman, Dayton.

#### Archives of Pediatrics, New York.

August.

- 76 Acid Autointoxication in Infancy and Childhood. J. L. Morse, Boston.
- 77 Eye Symptoms of Infantile Scurvy, Case of Infantile Scurvy with Extreme Protrusion of the Right Eyeball, Shown by Autopsy to be Due to a Large Retrobulbar Hematoma. I. Snow, Buffalo (N. Y.).
- 78 Rheumatism in Children. H. B. Deale, Washington, D. C.
- 79 Erythema Nodosum, Definition and an Illustration. F. S. Meara, New York.
- 80 Leucocytes in Whooping Cough. C. G. Grulee and D. B. Phenister, Chicago.

#### Northwestern Lancet, Minneapolis.

August.

- 81 Problems in Appendicitis Cases. A. E. Benjamin, Minneapolis.
- 82 Need of a More Rational Therapy. J. W. Bell, Minneapolis.
- 83 Adenoid Operation on a Child, and Some Practical Observations in Regard to It. R. A. Campbell, Minneapolis.



## Northwest Medicine, Seattle, Wash.

August.

- 84 Pain and Vomiting in Diseases of the Stomach. H. M. Read, Seattle.
- 85 Early Diagnosis of Tabes Dorsalis. J. E. Harris, Seattle.
- 86 Auto-intoxication as a Factor in Mental Diseases. D. A. Nicholson, Seattle.

## Southern Medicine and Surgery, Chattanooga, Tenn.

August.

- 87 Treatment of Typhoid Fever in Small Towns and Rural Communities. A. H. Freeman, Starke, Fla.
- 88 Dysentery. J. W. Pierce, Tate Springs, Tenn.
- 89 Tuberculosis in Children. St. G. T. Grinnan, Richmond, Va.
- 90 Abscess of the Liver. M. E. Nuekols, Richmond.

## Indiana Medical Journal, Indianapolis.

August.

- 91 Essentials of Treatment of Acute Inflammation of the Middle Ear. A. E. Bulson, Jr., Ft. Wayne.
- 92 Surgery of the Stomach. H. O. Pantzer, Indianapolis.
- 93 Remarks on Presenting the Historical Data Relating to Dr. Bobb's Performance of the First Cholecystotomy. L. H. Dunning, Indianapolis.
- 94 Pathology of General Paresis. W. C. White, Indianapolis.

## Cleveland Medical Journal.

August.

- 95 Gallstones. F. E. Bunts, Cleveland.
- 96 Epithelioma of the Vulva. H. Dittrick, Cleveland.
- 97 "School" Lateral Curvature. H. O. Feiss, Cleveland.
- 98 Castor Oil Treatment of Trifacial Neuralgia. G. Gill, North Ridgeville, Ohio.

## Pacific Medical Journal, San Francisco.

August.

- 99 Finsen Light. F. C. Keck, San Francisco.
- 100 Poppy Culture and Opium Production in the United States. E. Weschcke, San Francisco.
- 101 Advantages of Life, Accident and Disease Insurance to the Medical Practitioner. W. Anderson, San Francisco.

## Medical Fortnightly, St. Louis.

August 10.

- 102 Exophthalmic Goiter and Its Treatment. H. Stolte, Milwaukee, Wis.

August 25.

- 103 Treatment of Dysentery. J. E. Beatty, Philadelphia.
- 104 Electricity as a Therapeutic Agent. G. R. Neff, Farmington, Iowa.
- 105 Anatomic Eponyms. (Continued.) R. S. Gregg, Chicago.

## Medical Standard, Chicago.

August.

- 106 Differential Diagnosis Between Appendicitis and Right Pyosalpinx or Salpingitis. L. Waite, Chicago.
- 107 Diagnostic and Prognostic Value of the Diazo Reaction in Typhoid. G. T. McCoy, Columbus, Ind.
- 108 Treatment of Chronic Interstitial Nephritis. G. F. Butler, Chicago.
- 109 Individualizing in the Treatment of Urethral Gonorrhea—What Does it Mean? G. Kolischer and L. E. Schmidt, Chicago.

## Milwaukee Medical Journal.

July.

- 110 Pneumonia. O. S. Canright, East Troy, Wis.
- 111 Indications for Gallstone Operations. L. G. Nolte, Milwaukee.
- 112 Appendicitis During Pregnancy. K. W. Doege, Marshfield, Wis.
- 113 Pathologic Review. D. R. Hopkinson, Milwaukee.

## California State Journal of Medicine, San Francisco.

August.

- 114 Diagnosis of Typhoid Fever. C. M. Cooper, San Francisco.
- 115 Routine Treatment and Complications of Typhoid Fever. R. L. Wilbur.
- 116 Surgery (Immediate) of Perforated Typhoid Ulcer. F. E. C. Mattison, Pasadena.
- 117 Accessory Treatment of Typhoid Fever. G. B. Rowell, San Bernardino.
- 118 Prevention of Disease—Its Present Need. F. M. Bruner, Santa Ana.
- 119 Tubular Diarrhea or Membranous Colic. W. H. Flint, Santa Barbara.
- 120 Practical Application of Functional Diagnosis in Unilateral Kidney Lesions. M. Krotoszyner and W. P. Williard, San Francisco.

## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

September 9.

- 1 Poisoning by Fungi. C. B. Plowright.
- 2 \*Clinical Effects of Ether Anesthesia on Renal Activity. H. Pringle, R. C. S. Maunsell and S. Pringle.
- 3 \*Hemolytic and Hemosozic Serums. M. A. Buffer and M. Crendiropoulo.
- 4 \*Case of Empyema of the Gall Bladder, with Unusual Symptoms. R. A. Stoney.
- 5 Discussion on Toothache, Neuralgia and Remote Affections of Dental Origin. J. S. R. Russell, J. H. Mummery, U.

Pritchard, V. Horsley, H. Baldwin, E. A. Bogue, F. E. Huxley, J. L. Payne, W. A. Maggs, H. A. T. Fairbank and others.

- 6 Relationship of the Teeth to Disease in Early Life. E. Cautley.
- 7 Remote Affections Due to Teething in Childhood. R. Hutchinson.
- 8 Eye Affections of Dental Origin. F. J. Bennett.
- 9 Preliminary Note on the Treatment of Alveolar Osteitis (Rigg's Disease) by Means of Vaccine. K. W. Goadby.
- 10 Teeth as a Test of Age; Note on Eruption. S. Spokes.
- 11 Influence of Arranging Irregularly Placed Teeth into their Normal Positions. E. A. Bague.
- 12 Vegetarianism and Its Effects on the Teeth. J. F. Rymer.
- 13 Obscure Case of Alveolar Abscess. F. L. Dodd.
- 14 Unusual Case of Necrosis of Jaw in a Child. A. Clarke.

2. Effects of Ether on Renal Activity.—The investigations made by the two Pringles and by Maunsell were undertaken with the object of determining clinically the influence of ether anesthesia on the secretion of urine. The method adopted was to take periods before, during and after the anesthesia, as follows: Period 1. Twenty-four hours, ending at 9 a. m. on morning of operation. Period 2. From 9 a. m. on the morning of operation till immediately preceding the administration of the anesthetic. Period 3. During the induction of anesthesia, ending with the abolition of corneal reflex. Period 4. First half-hour of complete anesthesia. Period 5. Second half-hour of complete anesthesia. Period 6. Third half-hour of complete anesthesia. Period 7. Six hours following anesthesia. Period 8. Twenty-four hours following Period 7. The bladder was emptied by catheter at the end of each period. Examinations were made in 10 cases. The ages of the patients ranged from 18 to 50. The operations done on them included myomectomy, ovariectomy, curettement, appendectomy, excision of varicose veins, and removal of cervical glands. Period 1 was taken as the normal rate of secretion. Period 2 showed an increase in every case except one, the increase being accounted for by the nervous condition of the patient preceding operation. In Period 3 the secretion was increased in some cases and decreased in others. In Period 4 the effect of full anesthesia became evident, every case showing a great decrease, the average rate of secretion being only 23 per cent. above the normal. In Period 5 there was a further decrease, the average being only 55 per cent. of Period 6 and 13 per cent. of Period 1. In each of the two cases in which the anesthetic was continued for Period 6, the rate showed a further decrease. In Period 7 the rate of secretion rose, but never reached the normal, as indicated in Period 1. In Period 8 a slight decrease in the rate of secretion was seen in every case. In the majority of cases this decrease seemed to have no definite relation to either the amount of fluid taken or to the amount vomited during the thirty hours following operation. During the time of full anesthesia the excretion of the nitrogenous constituents of the urine was diminished to such an extent as to amount to practical suppression. This condition appears to increase the longer the anesthetic is continued. Furthermore, the kidney substance apparently recovers its power of secretion of water after the removal of the anesthetic more rapidly than it regains its power of nitrogenous excretion.

3. Hemolytic and Hemosozic Serums.—Ruffer and Crendiropoula summarize the results of their experiments as follows: 1. Bile contains at least two hemolysins or groups of hemolysins: (1) biliary hemolysin No. 1 (insoluble in alcohol), which produces a hemosozic serum when injected into rabbits; and (2) biliary hemolysin No. 2, which produces no hemosozic serum when injected. 2. Bile contains a hemosozic precipitate which, when injected into rabbits, produces a hemolytic serum. 3. The hemosozic precipitate added to bile never prevents completely the hemolysis produced by the bile. 4. The hemosozic precipitate neutralizes the hemolysin insoluble in alcohol (hemolysin No. 1), but not the hemolysins soluble in alcohol (hemolysin No. 2). 5. The hemosozic precipitate prevents the hemolytic action of a serum produced by the injection of bile.

4. Empyema of the Gall Bladder.—In the case reported by Stoney there was an empyema of the gall bladder, the result of the obstruction of the commencement of the cystic duct by calculus. Owing to the fact that the liver was enlarged so that the anterior edge, which was very thin, reached almost to the level of the umbilicus, though a dull note on percussion was only obtained for one and one-half inch below the costal



margin, the tumor was situated below the level of the umbilicus. In addition to this, the transverse colon was adherent to the under surface of the liver between its anterior sharp margin and the fundus of the gall bladder, causing a resonant note to be obtained on percussion between the hepatic dullness above and the gall bladder dullness below. As the result of these two factors a wrong diagnosis of appendicitis was made.

**The Lancet, London.**

*September 9.*

- 15 Evolution. G. H. Darwin.
- 16 Removal of a Large Pin from the Lower Lobe of the Lung by Transpleural Pneumotomy. R. H. Russell.
- 17 \*Pathology and Treatment of Eclampsia. J. W. Byers.
- 18 Case of Tumor of the Cauda Equina Removed by Operation, with Remarks on the Diagnosis and Nature of Lesions in that Situation. W. B. Warrington.
- 19 \*Appendicitis, the Quiescent Period. J. L. Thomas.
- 20 Family Tabes Dorsalis: Tabes in Husband, Wife and Daughter. E. F. Trevelyan.
- 21 Simple Technique for the Bacterioscopic Examination of Sewage. W. H. C. Forster.
- 22 Five Cases of Tuberculosis Treated with Marmorek's Serum. H. F. Bassano.
- 23 Case of Pneumonic Plague. H. B. Osburn.

17. **Treatment of Eclampsia.**—If the attack can not be warded off, Byers recommends the following method of treatment: "1. Treat the convulsions with morphin used subcutaneously. Keep the patient on her side, purge freely, use saline infusion, allow no liquids; in a word, as Gooch advised long ago, 'take care of the convulsions, and let the uterus take care of itself.' 2. Make an effort to eliminate the poison by purgation, hot packs and by saline infusion. 3. If labor has not set in, treat the convulsions, but do not induce premature action of the uterus. If labor has begun and the patient is in the second stage and the os dilated, give chloroform and deliver by forceps, if possible, or by turning. If, however, morphin and purgation with saline injections have been tried and the patient is not improving, dilate the cervix and deliver. 4. For the convulsions after delivery use morphin, purgatives and saline infusion. 5. In the prophylaxis of eclampsia rest, milk diet, warm baths and purgatives are the best methods of treatment."

19. **Appendicitis.**—Thomas has done 129 consecutive and successful Treves operations for appendicitis during the quiescent period. He advises removal of the appendix in cases of operation for ventral hernia following the opening of a perityphlitic abscess, and in cases of persistent thickening or induration after a first attack of appendicitis, and after two definite inflammatory attacks. The questions of diagnosis and operations are also discussed.

**Journal of Tropical Medicine, London.**

*September 1.*

- 24 Uncinaria and Other Intestinal Parasites in the West Indies. C. W. Branch, St. Vincent, W. I.
- 25 Pathology of the Yaws Nodule. J. N. Rat, Leeward Islands, W. I.
- 26 Similarity in Nature of Some of the Morphologic Characters and Habits of Insects. G. H. Fink.

**Annales de l'Institut Pasteur, Paris.**

*Last indexed page 292.*

- 27 (XIX, No. 6.) Effets expérimentaux de la toxine dysentérique sur le système nerveux. C. Dopter.
- 28 Bactériologie de l'appendicite. Perrone.
- 29 Les microbes dans l'industrie fromagère (cheese making). P. Mazé.
- 30 Microbes dans l'intestin du nourrisson (infants). A. Rodella.
- 31 (No. 7.) Sur quelques points relatifs à l'action pathogène de l'amibe dysentérique. C. Dopter.
- 32 \*Bactériologie des gastro-entérites infectieuses. H. Pottevin.
- 33 D'une variété de tuberculose zoogléique et de ses rapports avec la pseudo-morve (glanders). J. Cagnetto.
- 34 \*Etudes sur le bacille typhique et le bacille de la peste (plague). Besredka.

32. **Infectious Gastroenteritis.**—Pottevin reports several new points of resemblance between the *B. enteriditis*, the paratyphoid and the hog cholera bacillus, and the *H. bacillus*. He accepts them as belonging to a group which he calls the *Salmonella*. In case of epidemics or epizootics, of a gastrointestinal character, more attention should be paid to the domestic animals as sheltering the germs. Many clinical cases of paratyphoid infection from cattle have probably been diagnosed as typhoid fever. Sheltered by the animal, the germs have been scattered in its dung, entailing infection of man in the rural districts; it may be transmitted to the city in milk, meat, vegetables or otherwise.

34. **Typhoid and Plague Vaccination.**—Besredka reports research on rabbits in the line of vaccination by means of an endotoxin and its antiendotoxin, both for typhoid fever and plague.

**Revue de Chirurgie, Paris.**

*Last indexed page 814.*

- 35 (XXV, No. 7.) \*Considérations sur les plates du canal thoracique dans la région cervicale. Vautrin.
- 36 Forward Displacement of Urethra.—La technique de la dislocation de l'urètre dans les hypospadias et autres vices de conformation et lésions de l'urètre. C. Beck (New York).
- 37 La luxation congénitale de la hanche. Anatomie pathologique. Lésions prémonitoires. P. Le Damany.
- 38 \*Du danger des vapeurs chloroxycarboniques dans la chloroformisation. C. Armand and J. Bertier.
- 39 \*Des anévrysmes artério-veineux de la sous-clavière. E. Pluyette and A. Bruneau.
- 40 Contribution à l'étude du tissu élastique dans les tumeurs. F. Bindi.
- 41 \*De la tuberculose et des sténoses tuberculeuses du pylore. Ricard and Chevrier.
- 42 \*De l'amputation abdomino-périnéale du rectum cancéreux. P. Goullioud and G. Faysse.

35. **Operative Injury of Thoracic Duct.**—Vautrin has observed 4 cases of operative injury of the thoracic duct during an operation. The results were insignificant in three of the cases, but in the other they were so serious that he writes this article to protest against the optimism which prevails in regard to injuries of this nature. He reviews the various methods of caring for such an injury in vogue, preferring, himself, to ligate the vessel after exposing it and testing the condition of its walls. This ligature may prove very difficult when the duct has to be sought behind the blood vessels, in the retrosternal region. This should be done at once, instead of waiting until the patient has become so much debilitated from the loss of lymph from the duct that he is scarcely able to bear any surgical intervention. In his fatal case the patient had had congestion of the lungs, dyspnea and tachycardia on previous occasions, which made him hesitate to resort to general anesthesia and to ligate the thoracic duct when it could have been done on the exposed, easily accessible portion. When he was finally compelled to this course, ligation was no longer possible except at a more inaccessible part of the duct, rendering the operation so grave that the patient finally succumbed. He advises ligation from the first, without wasting time on compression, if the walls of the duct are not too friable. It is a dangerous procedure in case of the absence of collaterals. When both these conditions are encountered the prognosis is necessarily bad.

38. **Danger from Illuminating Gas During Chloroform Anesthesia.**—Armand and Bertier state that the combustion of illuminating gas in a close room in which chloroform is being administered produces toxic gases rapidly fatal in sufficient quantity to birds and mammals. These gases reveal their presence by a whitish vapor, irritating to the mucosa and causing coughing, even in small amounts, and actually dangerous when the room is small and imperfectly ventilated. Certain individuals are more susceptible than others to the action of these irritating gases, and it is possible for the patient on the operating table to feel their effect more intensely than the surgeon or his aids, while, owing to the anesthesia, intoxication may occur without its onset being suggested by any symptoms until cyanosis and the respiratory syncope are noticed. The toxic gas generated is ehloro-oxy-carbonic acid. It has a specific poisonous action on the blood. Armand is convinced that a number of "chloroform deaths" have been due to this cause.

39. **Treatment of Arteriovenous Aneurism of the Subclavian.**—Pluyette and Bruneau review the cases on record of operative treatment of subclavian aneurism. They are few in number and the results were far from encouraging. Three died out of the 7 patients operated on, while only 1 died among 12 patients not operated on. Of the 4 who survived the operation, 2 were left with functional impotence and the others were lost to sight immediately after. Expectant treatment seems preferable, they think, although menacing hemorrhage or other indication may force the surgeon's hand.

41. **Tuberculous Stenosis of the Pylorus.**—Ricard and Chevrier conclude this extensive study of tuberculosis of the pylorus with an account of two patients treated by gastroenterostomy. This brings the total number of authentic cases on record to



16. Gastroenterostomy has been done six times. It has the advantage, they think, over all other measures for the relief of this condition. It does not touch the focus, but leaves it in repose, and offers the most favorable conditions for its healing. Gastroduodenostomy would be the ideal physiologic technic, but it is more difficult, and practice is worth more than theory in such cases. They advocate posterior, transmesocolic gastroenterostomy.

42. **Abdominoperineal Amputation of Rectum.**—Goullioud and Faysse comment on the greater danger of this operation in men than in women. Out of 31 cases in which this operation was performed, there were 11 deaths and 20 recoveries, but only 5 of the 15 men recovered, while all but 1 of the 16 women made an uneventful recovery. The mortality for the men was, therefore, 66.6 per cent., while it was only 6.2 per cent. for the women. One reason for this difference may be the closer connection between the urinary passages and the rectum in man. Once accepting the sacrifice of the sphincters, the abdominoperineal operation along the lines laid down by Quénu is a notable progress in the treatment of cancer of the rectum. It permits the removal of otherwise inoperable neoplasms.

#### Archiv f. Verdauungs-Krankheiten, Berlin.

Last indexed page 664.

- 43 (XL. No. 3.) \*Zur Diagnostik und Behandlung des Magengeschwürs (gastric ulcer). E. Wirsing.
- 44 \*Zur Klinik der Ischochymie und deren Behandlung. M. Einhorn (New York).
- 45 \*Zur Methodik des quantitativen Nachweises von Fäulnis und Gährungsprodukten in den Fäces (putrefaction and fermentation products in stools). H. Ury.
- 46 Single and Specific Nature of Pancreas Trypsin.—Beitrag zur Frage der einheitlichen und spezifischen Natur des Pankreas-Trypsins. M. Ehrenreich.

43. **Gastric Ulcer.**—Wirsing relates comparative trials of the Lenhartz and von Leube-Ziemssen dietetic treatments of gastric ulcer. The Lenhartz technic has been described by Wagner, and was summarized in THE JOURNAL, Feb. 13, 1904, page 495. Wirsing found it distinctly superior to the other technics in cases of gastric ulcer with hemorrhage. It supplies more nourishment, and although it irritates the ulcer more than other technics, the advantages of more nourishment for the subjects debilitated by the hemorrhages, outbalance the local action on the ulcer. On the other hand, the von Leube-Ziemssen technic gave much better results in the cases without hemorrhage and consequent anemia. Wirsing's article is based on 320 cases of gastric ulcer. Only one-sixth of the patients were men. The Lenhartz method was followed in 42 cases, in half of which hemorrhage had been observed. The patients were given two raw whipped eggs and 20 c.c. of milk the first day, ice cold, increasing daily by one egg and 100 c.c. milk until they were taking eight eggs and one liter of milk during the twenty-four hours. After the sixth day chopped meat, butter, etc., are allowed in progressive amounts. Ice was applied to the stomach during the first seven to ten days in case of recent hemorrhages, and from 1 to 2 gm. of bismuth were given three times a day, sometimes with extract of bell. When there were no further pains, liq. ferr. alb. was administered, with Fowler's solution in case of severe anemia. The patients were kept in bed for from two to four weeks. Only a few patients found this diet disagreeable and the albumin had to be given in another form. The acidity approximated normal in the course of this treatment and all the patients gained in weight, but not to the extent of Wagner's patients, who averaged nearly 20 pounds. A circular of inquiry was sent to all the 320 patients who had been treated in the hospital, asking for details in regard to their present state of health, and answers were received from 108. They showed that 68 per cent. of the hemorrhagic patients had been permanently cured, and 53 per cent. of the non-hemorrhagic. It is possible that the hemorrhage provides more favorable conditions for the healing of the ulcer. Hematemesis had not occurred in any case in which there had been no hemorrhage before treatment. Sixty-seven of the patients stated that the ulcer had not been cured or had recurred, but as only 21 of these had sought medical aid later, it is evident that the troubles could not have been very serious. A number of other points are brought out in Wirsing's communication. Among them is the difficulty of diagnosing gastric ulcer, even when it is approaching perfora-

tion. Fifty-two of the patients had no pains. In others the pains did not correspond to the location of the ulcer, but were in the solar plexus or the pylorus. The painful point in the back to the left, near from the seventh to the tenth dorsal vertebrae, which Boas has found in one-third of all his cases, was noted in about half of Wirsing's patients. Pains in change of position were observed in one-third of all cases. Vomiting during the three hours after eating had occurred in 59 per cent. of all the cases. Hemorrhage was much more frequent among the male patients. In 3 cases the hemorrhage was the first symptom noted. Perforation occurred in four instances and immediate intervention saved two of the patients. In a fifth case the diagnosis had been merely acute gastritis. In the others the perforation was the first sign of serious trouble, occurring in one patient after a dance. In a fifth case the patient was not seen until nearly twelve hours after the perforation in a fasting stomach. As she seemed to be doing well no operation was attempted and she recovered.

44. **Treatment of Ischochymia (Ectasia of Stomach).**—See THE JOURNAL, June 17, 1905, page 1962.

45. **Quantitative Tests of Products of Putrefaction and Fermentation in the Feces.**—Ury has been studying this subject for four years and published his results last spring in the *Deutsche med. Wochsft.*, No. 19. He here further elaborates them and describes his technic in detail. His aim is to establish the normal standards for the feces in every respect, which he thinks he has accomplished in some directions. When normal standards are once known then the pathologic variations can be easily studied.

#### Berliner klinische Wochenschrift.

- 47 (XLII, No. 33, Aug. 14.) \*Zur Operation der Tumoren des Kleinhirn-Brückenwinkels (cerebellum-pons angle). M. Borchardt.
- 48 \*Interruption of Pregnancy on Account of Tuberculosis or Vomiting.—Ueber die künstliche Unterbrechung des Schwangerschaft wegen starken Erbrechens und Schwindelsucht. P. Ruge.
- 49 Experimentelle Untersuchungen über die Wirkung einiger Stomachica auf die Magensaftsekretion (action on gastric secretions). T. Hoppe.
- 50 \*Eine lebensbedrohende Intoxikation bei Anwendung 50 proc. Resorcin Paste. S. Kaiser.
- 51 \*Investigation of Stomach Functions in Gynecologic Affections.—Ueber die Ergebnisse von Magenuntersuchungen bei Frauenleiden. H. Winkler.
- 52 Zwei Fälle von congenitaler Parese des Musculus rectus inferior, der eine durch Operation geheilt. G. Gutmann.
- 53 \*Zur Diagnostik des Magenchemismus. V. Bartenstein.
- 54 Prophylaxe und Abortiv-Behandlung der Gonorrhoe. J. Vogel.

47. **Tumors in Cerebellar-Pons Angle.**—Borchardt describes a case of fibrosarcoma in the angle between cerebellum and pons, which was removed without much trouble. The patient died the following day, probably from the effects of compression by coagula left from two preceding ineffectual attempts to reach the tumor, interrupted on account of severe hemorrhage and the extreme weakness of the patient. The conditions of successful removal of a tumor at this point are a good constitution on the part of the patient, distinct encapsulation of the tumor, which must not be too deeply situated, and absence of much hemorrhage. If the tumor had been a cyst or cholesteatoma the extirpation would probably have been successful. Intervention should be prompt, before loss of vision. The symptoms in the case described had been headache, vomiting, vertigo, uncertain gait, choked disc, attacks of apathy and trismus, deviation of head, slight acceleration of pulse, subjective sounds in the ears, etc.

48. **Artificial Interruption of Pregnancy in Tuberculosis and Uncontrollable Vomiting.**—Ruge summarizes his views in the statement that in advanced cases of tuberculosis, the interests of the child should be regarded as paramount, while in incipient tuberculosis the interests of the mother should take precedence. In case of uncontrollable vomiting the general condition is the criterion as to whether to interfere or not. If in spite of emaciation the patient still feels well and strong, the pregnancy should not be disturbed, but when loss of strength becomes apparent, consideration for the child, he thinks, should yield to the mother's interests.

50. **Intoxication from External Use of Resorcin.**—A man of 29 was treated with applications of a 50 per cent. resorcin paste on account of lupus, about 100 gm. of the paste being rub-



bed into the two patches. In a few minutes he began to exhibit symptoms like those noted when resorcin has been taken internally, convulsions, lethargy, etc. Consciousness was not regained for an hour or more, but recovery was complete by the fourth day.

**51. Stomach Secretions in Gynecologic Affections.**—Winkler found evidences of hypochlorhydria in all his severer gynecologic cases. The measures directed against the gynecologic affection had to be supplemented by treatment of the subacidity. He thinks that subacidity should be assumed and treated in all gynecologic cases, in the absence of evidence to the contrary. Displacement of the genital organs and of the stomach is probably the result of a single cause, and motor insufficiency generally accompanies the gastropnoxis which he noted in 18 out of 31 gynecologic patients examined. He tabulates 41 gynecologic cases, free from any stomach affection, in which he noted secretory anomalies in the majority, and almost invariably in the line of subacidity.

**53. Chemistry of Stomach.**—Bartenstein points out a source of error in chemical examinations of the stomach. He has found that the stomach contents do not form a homogeneous mass, but that the acidity of different portions varies within wide limits. The total acidity of the stomach contents—as mixed in a jar after withdrawal—may be only 60, when in reality it may be 90 in some parts of the stomach and 30 in others. The hyperacid regions may react with the symptoms of hyperchlorhydria, when chemical tests in the jar would seem to exclude such a condition of hyperacidity. Tests based on examination of only a small portion of the stomach contents are liable to give erroneous conclusions.

#### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 55 (XXXI, No. 33, Aug. 17.) \*Diagnose und Therapie der nervösen Magendarmerkrankungen (gastrointestinal affections). I. Boas.
- 56 Sind Toxine Fermente? L. v. Liebermann.
- 57 \*Early Audibility of Fetal Heart Sounds.—Weitere Erfahrungen über die frühzeitige Hörbarkeit der fötalen Herztöne. O. Sarwey.
- 58 Ueber einen gelegentlichen Erreger von Sepsis puerperalis (occasional agent). E. Martini.
- 59 Ueber experimentell bei Hunden erzeugte Tumoren nach einer Krebsübertragung vom menschen (cancers on dogs). C. Lewin.
- 60 Ueber den Metatarsus varus. C. Helbing.
- 61 Case for Examination of Urine.—Ein neues Besteck für Harnuntersuchungen. Rubens.
- 62 Ueber Cylindrurie und Nephritis. M. Gentzen.
- 63 Ueber "nikotin-freien" Tabak. Ratner.
- 64 (No. 34.) Military Surgery in Russo-Japanese War.—Kriegschirurgische Erfahrungen, etc. Schäfer.
- 65 Ueber abnorme Epithelisierung und traumatische Epithelcysten. Pels-Leusden.
- 66 Serum Cure of Case of Tuberculous Conjunctivitis.—Heilung eines Falles von Augen-Tuberkulose durch Marmorek's Serum. Schwartz.
- 67 Location and Opening of Deep-lying Abscesses at Base of Tongue by Operation from Without.—Ueber den Sitz und die Eröffnung tiefliegender Abscesse der Gegend der Zungenbasis und des angrenzenden Pharynxabschnittes durch Operation von aussen. J. A. Killian.
- 68 Ein weiterer Spirochäten-Befund bei hereditärer Lues. Reischauer.
- 69 Instruments and Technic for Curetting Male Bladder, in Case of Chronic Cystitis, without Opening It.—Ausschabung der männlichen Harnblase bei chron. Cystitis ohne deren Eröffnung. A. Strauss.
- 70 \*Immunization Cure of Pulmonary Tuberculosis with Bovine Tuberculin.—Ein neues immunisierendes Heilverfahren der Lungenschwindsucht mit Perlsucht-Tuberculin. C. Spengler (Davos, Switzerland).

**55. Nervous Gastrointestinal Affections.**—Boas groups nervous gastrointestinal affections as those with a single or with several symptoms. The single symptoms may vary from time to time, but this group is much more easily diagnosed than the cases with several symptoms. Besides the anamnesis, the course of the affection is important for diagnosing, the striking, motiveless intermissions and leaps and the absolute independence between the disturbances and the diet, while the disturbances are dependent to the last degree on emotions, overexertion, changes of air, etc. The physician, not the medicine, is what cures in these cases. A change of environment is one of the most important measures, but scarcely less important is the principle gradually to spur the sound but irritable digestive tract to maximal work. Most of these nervous gastrointestinal affections lead to under-nourishment of the individual. Institution treatment is almost indispensable, and after dismissal the patients must be warned to keep away from business for several months and to continue the diet

found most suitable. They should keep watch of their weight every week, and whenever it begins to go down, another brief course of dietetic treatment should be commenced to regain what is lost. Electrotherapy, massage, hydrotherapy and movements are frequently applied without individualizing, so that the full benefit is not derived from them. Local procedures have never done much good in his experience, with the exception of faradization of the rectum, which he has found invaluable in habitual obstipation from atony. Fashionable watering places are contraindicated for nervous gastrointestinal troubles; such patients require quiet and freedom from strain. Drugs should not be given much, as these patients should be taught that hygiene and a regular and rational mode of life are the main factors in getting and keeping well.

**57. Fetal Heart Sounds Audible at Thirteenth Week.**—Sarwey reiterates his former assertions in regard to the possibility of auscultating the fetal heart sounds from the thirteenth week of the pregnancy. They become perceptible almost always at the same spot in the horizontal plane of the internal os. The conditions for successful auscultation are a trained ear, a perfectly quiet room, great patience on the part of the examiner, preliminary complete emptying of the bladder with the catheter, and approximation of the anterior wall of the uterus to the anterior abdominal wall, which must be pushed in deep with the stethoscope, just back of the symphysis.

**70. Immunization Treatment of Pulmonary Tuberculosis with Bovine Tuberculin.**—Spengler's previous communications on the immunization treatment of tuberculous subjects with tuberculin made from bovine material have been summarized in these columns as published. He here reports the particulars of the agglutinating property acquired in 80 cases of tuberculosis in which the patients had been immunized with his perlsucht tuberculin. Koch found agglutination at 1-25 and 1-75 in 51 out of 74 cases treated with his tuberculin, the majority of the rest agglutinating at 1-75 to 1-300. Spengler with his perlsucht tuberculin found agglutination from 1-300 to 1-3,000 in 60 out of the 80 subjects, and from 1-100 to 1-300 in the rest. The most rapid increase in the agglutinating property and the most intense bactericidal action were noted in patients under treatment with the tuberculin when the edematous-inflammatory reaction at the point of injection was allowed to subside completely before another injection was attempted. This is especially important for avoidance of organ reactions in case of tuberculous nephritis, pseudoasthma and in tuberculosis of intestines, larynx or ears. He found the systematic administration of iodine useful in promoting the formation of agglutinins. All the patients with tuberculosis in whom the disease dated from youth made much better progress in agglutination and curative properties when supplemented by the use of iodine. Lues in all its manifestations has an inhibiting influence on the increase of the agglutinating properties, as also severe physical or intellectual work. General hygienic measures and mode of life favor the acquirement of agglutinating properties, while depressing circumstances, weak heart, underfeeding and overworking act against it. A small number of tuberculous and phthisic patients were unable to tolerate the perlsucht tuberculin, the infection in their case being probably of bovine tuberculosis origin. Spengler adds, in conclusion, that he supplies his perlsucht tuberculin only to those physicians who have had special training in the specific treatment of tuberculosis. He agrees with Petruschky that the introduction of tuberculin treatment requires special training beforehand.

#### Münchener med. Wochenschrift, Munich.

- 71 (LII, No. 33, Aug. 15.) \*Ueber ein Embryom der Wade (of the calf). B. Fischer.
- 72 Transmision of Foot and Mouth Disease to Rabbits.—Bericht über gelungene Uebertragung der Maul- und Klauenseuche auf Kaninchen. J. Siegel.
- 73 Ueber eine rätselhafte Drüsenerkrankung (puzzling gland affection). P. J. Möblus.
- 74 Shape of Bladder in Roentgen Picture.—Die Gestalt der menschlichen Harnblase im Röntgenbilde. F. Voelcker and A. Lichtenberg.
- 75 \*Determination of Indican in Urine.—Zur Methodik des Indikannachweises im Harn. A. Gürber.
- 76 \*Determination of Hematin in Feces.—Ueber den Nachweis von Blutfarbstoff in den Fäzes. M. Siegel.
- 77 Die Plaut-Vincent'sche Angina. F. Reiche.
- 78 Stomatitis ulcerosa und Angina Vincenti. K. Morlan.



- 79 Zur Aetiologie und Therapie des Heufiebers (hay fever). R. Mohr.  
 80 Gewichtsexension der Haut (weight extenson of skin). Frey.  
 81 Needle for Suturing Bone.—Eine neue Nadeizur Ausführung der Knochennaht. O. Klauber.

71. **Embryoma on Calf of Leg.**—Fischer's patient was a man of 57 who had noticed the growth of a tumor in the calf for about six years. He succumbed to the progress of miliary tuberculosis, and examination of the tumor showed it to be of congenital origin. None of the theories in vogue for the origin of congenital tumors harmonize with the findings in this case, except the Marchand-Bonnet blastomere theory, but this would explain all the findings in this typical embryoma. It contained a great variety of derivates from all the three blastodermic layers, including intestine and gland formations of all kinds. The germ remained latent for half a century before it commenced to proliferate, and it finally assumed the characteristics of a myxosarcoma. Fischer asks whether the sarcomatous degeneration could have been from an exogenous cause, or whether it was a mere coincidence that the sarcoma should happen to settle on the embryoma.

75. **Determination of Indican in Urine.**—Gürber uses osmic acid instead of calcium or ferric chlorid in the Jaffé test for indican in the urine. A reagent glass is filled one-third full of urine and the glass is then filled with a concentrated solution of hydrochloric acid, and two or three drops of a 1 per cent. solution of osmic acid are added. In a few seconds the fluid turns violet or almost pure blue, according to the proportion of indican. Osmic acid is much more reliable than the other substances previously used for the test.

76. **Determination of Hematin in Feces.**—Siegel relates that numerous trials were made in Müller's clinic at Munich of the guaiac and benzidin tests for "occult" blood in the feces. The general conclusions are to the effect that negative findings are almost positive evidence of the absence of blood. Positive findings testify to the presence of blood if the ingestion of meat or of drugs can be excluded. The spectroscopie affords the best control test.

#### Zeitschrift f. Geb. und Gynäkologie, Stuttgart.

*Last indexed XLIV, page 1889.*

- 82 (LV, Olshausen Festschrift). \*Resultate meiner Ovariectomien in 22 Jahren. H. Fritsch.  
 83 \*Indikationen und Kontraindikationen der Bauchhöhlen-drainage nach der Laparotomie. O. Küstner.  
 84 \*Wissenschaftliche Begründung der Indikationen zur Myomoperation. G. Winter.  
 85 \*Die Ventrifixura uteri bei Verlagerungen des Uterus. M. Hofmeier.  
 86 Zur Technik der abdominalen Exstirpation des karzinomatösen Uterus. E. Bumm.  
 87 Die Beteiligung der Harnwege beim Uterus-Karzinom und ihre operative Behandlung (involvement of urinary passages). Koblanck.  
 88 Borderland Questions.—Auf Grenzgebieten. C. Ruge.  
 89 \*Die Pyelonephritis gravidarum et puerperarum. E. Opitz.  
 90 \*Female Bladder and Genital Affections.—Weibliche Blase und Genitallerkrankungen. W. Zangemeister.  
 91 \*Beitrag zur Klinik und zur chirurgischen Behandlung chronisch-entzündlicher Adnex-Erkrankungen (chronic inflammation of the adnexa). M. Henkel.  
 92 Eine seltene Missbildung des Urogenitalsystems eines totgeborenen Mädchens (rare deformity in girl). O. Ihl.  
 93 \*Welche Ventrifixations-Methoden führten zu Geburtsstörungen und zu Heus? (which methods are followed by disturbances)? P. Seegerts.  
 94 \*Ueber Geburt und Trennung von Xiphopagen. R. Jolly.  
 95 \*Die Spontanruptur in der alten Kaiserschnittnarbe (in old Cesarean scar). F. Prüssmann.  
 96 \*Zur Pathologie der Thrombose der Vena mesenterica superior. J. Amos.  
 97 \*Ueber intestinale Autointoxikation nach Laparatomie. C. Keller.  
 98 \*Pathologic Desires to Urinate.—Die Ursachen des pathologischen Harndranges beim Weibe, insbesondere Cystitis colli und Perizystitis, sowie deren Behandlung. R. Knorr.  
 99 Myome und Ovarialtumoren als Indikation zum Kaiserschnitt (Cesarean section). W. Kallmorgen.  
 100 Die abdominale Total-exstirpation des kreissenden Uterus (sub partu). O. Gutbrod.  
 101 Tubal Twin Gestation.—Tubare Zwillingschwangerschaft mit zwei Eiern verschiedener Grösse. R. Saniter.  
 102 Forceps in Breech Presentation.—Zange am Steiss. C. J. Gauss.

82. **Twenty-two Years' Experience with Ovariectomy.**—Fritsch opens the stately list of articles all dedicated to Olshausen on the occasion of his seventieth birthday. The volume is a bulky one of 528 pages, with colored plates, and contains twenty-one articles. Fritsch states that he has performed ovariectomy on 1,000 patients and that 70 succumbed. The cause of death was after-hemorrhage from loosening of a ligature in 2 cases, ileus in 8, cancer in 7, contracted kidney

in 2, pyelonephritis in 2, shock in the first twenty-four hours in 12, and peritonitis with purulent ovarian cysts in 6. The proportion of deaths from sepsis alone amounted to 2.33 per cent. In 48 cases the tumor was malignant.

83. **Indications and Contraindications for Drainage After Laparotomy.**—Küstner emphasizes that the indications for tamponing after a laparotomy are becoming more and more restricted, but that in certain cases it is still indispensable. This is especially the case when a pus pocket has to be opened secondarily, or when the intestine and bladder have been injured; also when parenchymatous hemorrhage can not be arrested by any other means, especially after detachment of adherent tumors or other lesions on the posterior sheets of the broad ligaments and peritoneum in the Douglas cul-de-sac.

84. **Indications for Myoma Operations.**—Winter's experience includes 1,000 cases of myoma in seven years. Hemorrhage occurred in about two-thirds of all his cases; it generally proceeded from submucous myomata. Pure menorrhagia was more frequent than pure metrorrhagia; the latter suggests the possibility of malignant disease or secondary degeneration of the myoma or a submucous growth. Hemorrhage in the menopause is generally due to complication with malignant disease or secondary degeneration or submucous development of the myoma. Conservative treatment is indicated in such cases only when these three conditions can be positively excluded. In case of pure menorrhagia, the guide to operation should be the severity of the anemia. Anemia with even 30 per cent. hemoglobin does not contraindicate an operation. Ergot was successful only in case of pure interstitial myomata, not larger than a child's head. Curettement of the uterus is scarcely liable to be successful except in case of subserous and small interstitial myomata. As the outcome is dubious, curettement should never be attempted in case of severe anemia. Submucous myomata with hemorrhage should be extirpated. Subserous myomata cause pain more often than other kinds except those hindered from developing freely into the abdominal cavity. Pure dysmenorrhea can be induced by a myoma alone, especially in case of submucous development. He warns that psychoses and general neuroses can not be ascribed to an accompanying myoma, and are not improved by its removal. Excessively large myomata ought to be removed, he thinks, if they interfere with the general health, even if they cause no symptoms, as also subserous tumors with a small pedicle; but otherwise not if they cause no symptoms.

85. **Ventrofixation.**—Hofmeier has examined 100 women long after he had performed ventrofixation, and is much pleased with the results of his intervention.

89. **Pyelonephritis in Pregnancy.**—Opitz has observed 84 cases of inflammation of the renal pelvis during pregnancy or the puerperium, and reviews the lessons learned from this experience and from the extensive literature on the subject.

90. **Affections of Female Bladder and Genitals.**—Zangemeister has tried Voelcker and Joseph's method of chromocystoscopy (described in THE JOURNAL, XLII, page 1326), and found it extremely reliable. He is surprised that gynecologists do not pay more attention to cystoscope findings. They are important in diagnosis and also as indications for operation and prognosis. He describes the behavior of the bladder in case of cervix carcinoma, of myomata and other tumors, and discusses further the cystocele accompanying prolapse and the conditions in case of vesicovaginal fistula.

91. **Treatment of Chronic Inflammation of the Adnexa.**—This communication from Olshausen's clinic does not draw a very favorable picture of the remote results of surgical intervention in the cases of chronic inflammation of the adnexa operated on there. Many of the women presented exudates, inflammatory changes in the organs left or displacement of the uterus. The immediate results are no criterion as to the results later. Exploratory puncture was found useful and harmless. Surgical measures should not be used until after failure of medical. Henkel considers it advisable to remove both tubes, as the chronic inflammation renders pregnancy improbable, but the physiologic function of uterus and ovaries should be respected.



93. **Ventrofixation and Disturbances Later.**—Seegerts discusses which methods of ventrofixation are liable to entail disturbances in childbirth or ileus, citing 40 cases from the literature. He thinks that Olshausen's technic offers the best prospects of successful outcome. He is careful to suture the uterus only at the points of insertion of the tubes. The uterus thus fastened can develop afterward normally during a pregnancy, undisturbed by the fixation at the point of attachment of the tubes. Ileus after ventrofixation is recorded in four instances. The fixation was median in each.

94. **Delivery and Separation of Xiphopagus.**—Jolly describes the birth of a xiphopagus and subsequent efforts to separate the living from still-born twin. The sternum and liver of each were continuous. Neither of the twins survived.

95. **Spontaneous Rupture in Old Cesarean Cicatrix.**—Prüßman adds another to the seven cases on record. In his case the woman had been delivered twice by Cesarean section. During the third pregnancy the integrity of the cicatrix had been determined in the course of an operation for hernia, but still it ruptured spontaneously two weeks before term. The patient was saved by prompt operation, excising the ruptured parts. The mucosa had evidently grown into the Cesarean cicatrix and undergone decidual changes, thus weakening the wall.

96. **Thrombosis of Superior Mesenteric Vein.**—Symptoms of ileus should suggest the possibility of thrombosis of the superior mesenteric vein when the blood has previously displayed increased coagulability by thrombosis elsewhere, or it is induced by the puerperium; also in case of congestion in the portal vein or artificial thrombus formation by operations in this region or suppurative processes. The discovery of a resistant tumor with intestinal resonance will sometimes aid in differentiation from other forms of ileus. The early appearance of ascites suggests occlusion of the vein. Amos' article is based on two cases.

97. **Autointoxication After Laparotomies.**—Keller relates the history of two patients who developed a febrile symptom-complex after a laparotomy in which no injury had been done to the intestines. It presented the classical picture of intoxication from intestinal putrefactions. Both patients had been constipated before the operation, and all symptoms subsided after a purgative. The case illustrates the danger from opium after a laparotomy.

98. **Pathologic Desires to Urinate and Cystitis in Women.**—Knorr states that one in every five of his gynecologic patients have complained of disturbances in urination, and one in every eight have exhibited chronic cystitis of the neck of the bladder. In two-thirds of all the cases with urinary disturbances, cystitis of the neck was evident. The cystitis may be attributed to infection, to venous congestion or to hyperplasia. The cystoscope is an invaluable diagnostic aid in gynecology. He describes the local findings in cystitis and also his method of local treatment, cauterizing the parts with 1 per cent. solution of silver nitrate every two or three days. An abnormally small bladder can be stretched to regain its normal capacity.

#### Gazzetta degli Ospedali, Milan.

*Last indexed page 746.*

- 103 (XXVI, No. 82.) \*Catarrh of Bladder in Pulmonary Tuberculosis.—Sul catarro vescicale nella tubercolosi del polmone. A. Campani and G. Formaggini.
- 104 Ataxia-vertigo in Brain Lesions.—Fenomeno atassico-vertiginoso in lesioni cerebrali-extracerebellari. S. Mircoli.
- 105 \*Slow Pulse.—Polso lento permanente. A. Perugia.
- 106 (No. 83.) \*Artrite multipla pneumococcica. Cura comune e sieroterapia della polmonite. E. De Renzi.
- 107 (No. 85.) \*Sulla presenza dello spirochaete pallido nel sangue e nelle manifestazioni secondarie del sifilite. I. Bandi and F. Simonelli.
- 108 Anemia perniciosa progressiva da micrococco tetragono. F. Arullani.
- 109 L'indice colorimetrico di eliminazione del iodio nei diversi impieghi dei ioduri (colorimetric tests of therapeutic iodine). G. Campanella.
- 110 (No. 88.) \*Diagnosi differenziale tra essudati e trasudati (exudates and transudates). E. Tedeschi.
- 111 \*Relations Between Flora and Uric Acid in Human Intestine.—Intorno ai rapporti tra flora e acido urico nell'intestino dell'uomo. M. Carletti and L. Peserico.
- 112 (No. 91.) \*Pancreatite primitiva benigna. A. Testi.
- 113 Alterazioni anatomiche nella infezione da Tripanasoma. G. Fasoli.
- 114 Action of Tuberculous Toxins on Development of Fungi.—Azione che esercitano i veleni tubercolari sullo sviluppo di certe muffe. M. Sciallero.

- 115 (No. 94.) 15 Cases of Tuberculosis Treated with Serotherapy and Hemoantitoxin.—A. Gasparini.
- 116 La gelatina nella cura delle emorragie e degli aneurismi. M. Landolfi.
- 117 Il chloroformio en la diplococcemia e nella tubercolosi sperimentale. A. Campani.
- 118 (No. 97.) Heart Sounds in Acute Rheumatism.—Sul significato dei rumori cardiaci di soffio che si manifestano nel corso della poliartrite reumatica acuta. A. Rossi.
- 119 \*Le levoluturia alimentare nelle malattie infettive. S. Rebaudi.
- 120 Contributo clinico ed istogenetico al cancro primitivo del fegato (cancer of liver). F. Bindi.
- 121 La diagnosi del carcinoma gastrico per mezzo delle "Precipitine." D. Maragliano.
- 122 La etiologia del colera infantile e la necessita di provvedimenti sociali per attenuarne i danni. V. Tedeschi.
- 123 \*Di un elemento morfologico del sedimento urinario non ancora differenziato. E. U. Fittipaldi.
- 124 (No. 100.) \*I nucleoproteidi nella etiologia della cirrosi. T. Silvestri.
- 125 Curability or Latency of Tubercular Meningitis.—Sopra un caso di meningite tubercolare. E. Tedeschi.
- 126 Asciti opalescenti pseudochilose. A. Barlocco.
- 127 (No. 103.) La malattia del sonno (sleeping sickness). C. Tarchetti.
- 128 (No. 105.) \*Metodo rapido di colorazione della Spirochaete pallida. F. Simonelli.
- 129 (No. 106.) \*Le difese naturali ed artificiali dell'uomo contro la infezione tubercolare (defenses of man). F. Figari.
- 130 Pleuriti nel corso dell'infezione tifoide. A. Barlocco. Two cases.
- 131 La cura radicale ambulatoria dell'idrocele. A. Magrassi.
- 132 Osservazioni sperimentali sulla guarigione delle pleuriti infiammatorie (curability). G. Guyot.

103. **Catarrh of Bladder in Pulmonary Tuberculosis.**—Campani has noticed symptoms of catarrh of the bladder in a number of cases of early tuberculosis. He presents arguments to prove that this catarrhal condition of the bladder is the result of the lesser acidity of the urine in the pretuberculous stage and in incipient tuberculosis. This harmonizes with the views recently advanced by some writers that hypoacidity is an accompaniment of and favors the development of tuberculosis, and accompanies it in its early stages. The hypoacidity further favors the development of pseudo-phosphaturia and cystitis, and is a depressing element for the organism in general. Alkalines should not be administered to such patients, and their diet should be regulated to prevent the possibility of "alkaline cachexia," excluding more or less the starches and vegetables.

105. **Permanent Slow Pulse.**—The cause of the chronic slow pulse, 30 beats to the minute, in the case described, was evidently a lesion in the central nervous system, affecting the functions of the centers that preside over the action of the heart. The patient was a man of 73, a paranoiac and paralytic for several years.

106. **Serum Treatment of Pneumococcus Arthritis.**—De Renzi's patient had apparently recovered from his pneumonia, but within a week of defervescence symptoms of acute articular rheumatism developed. It is the first experience of the kind in 279 cases of pneumonia in his service. He advocates in treatment of pneumonia abundance of fresh air, remarking that the mortality from pneumonia in badly ventilated rooms is enormous. He insists further on the necessity of nourishing food, giving his patients three pints of milk a day and two eggs. They escape the depression of the heart noted elsewhere, or it is very brief. He is further convinced of the necessity for alcohol in pneumonia. One of his first cases was a patient with a serious cardiac defect who had been doomed to death by other physicians, but he recovered with the use of alcohol. De Renzi gives pure alcohol, not wine, as he is thus able to measure the amount and can rely on its purity. He gives it in the formula:

R. Alcohol purissimo .....	3ii	60
Water .....	Oi	500
Syrup of bitter orange peel.....	3i	30

From 30 to 25 gm. are given during the day, with larger doses to persons accustomed to the use of alcohol. He is convinced that serum treatment is a valuable adjuvant and hopes that physicians generally will pay more attention to the serotherapy of pneumonia in future. From his experience with 28 cases treated with serum he asserts that the general health showed marked improvement; the temperature declined and resolution occurred by lysis instead of the usual crisis. The local changes did not appear to be modified by the serum, but as the general health showed such marked improvement the local manifestations seemed much less important in comparison. Besides the tonic action of the serum, it aids in raising



the blood pressure. In his clinic, the blood pressure has never been low for longer than two or three days. He ascribes this to his abundant feeding and the use of alcohol, supplemented by the serum treatment.

107. *Spirochetes in Syphilis*.—Bandi found the *Spirochæta pallida* in 3 out of 5 cases of secondary syphilis in conditions that excluded the possibility of external contamination.

110. *Differentiation of Exudates and Effusions*.—Tedeschi applies the "biologic precipitation test" for the differentiation of transudates. He obtains a prepared serum from rabbits injected with egg albumin, and then has the patient eat several eggs fasting. The fluid to be examined, mixed with the prepared serum, gives the specific precipitation if it is a transudate, while there is no precipitation in case of an exudate, as a rule.

111. *Relations Between Flora and Uric Acid in Intestines*.—Carletti found that the uric acid and the bacteria in the intestines became both reduced on a milk diet and after ingestion of lemon juice, but with nothing to suggest cause and effect between the flora and the uric acid. On the other hand, when 500 gm. of calf's thymus was ingested for three days in succession, in place of other meat, no uric acid could be detected in the feces of one of the patients, while the number of bacteria increased to uncountable proportions. In the second patient the uric acid subsided to traces and the bacteria became very much more numerous, but the change was not so extreme as in the other. The conclusion seems evident that the proliferation of the bacteria on the thymus diet had some connection with the vanishing of the uric acid from the stools.

119. *Alimentary Levulosuria in Infectious Diseases*.—Rebandi concludes from his experiences with the alimentary levulosuria test that it is the most delicate and the most reliable one at our disposal for revealing even the slightest functional disturbance in the liver cells. The degree and intensity of the disturbance can be estimated from the amount of levulose found in the urine. Intercurrent bacterial intoxication may first render manifest a latent disturbance in the liver.

123. *New Morphologic Element in Urine*.—Fittipaldi gives illustrations of what he believes to be a hitherto undifferentiated morphologic element in the urine. He calls it the "miliary tube cast," and states that it takes the eosin and other stains while the pseudo-casts of sodium oxalate, with which it might be confounded, are dissolved by acetic acid and do not take these stains. He found these new casts in certain cases of nephritis.

124. *Autogenerated Nucleoproteids in Etiology of Cirrhosis*.—Certain Italian experimenters proclaim that some of the albumin ingested, such as that in meat, is liable to escape the assimilating action of the gastrointestinal mucosa and to make its way into the circulation and to induce the formation of antibodies. Silvestri argues that if this heterogeneous albumin enters the circulation in unusual amounts, the organism is a prey to auto-intoxication of a much more complex nature than generally supposed. The heterogeneous albumin reaches the liver practically unmodified, with the other waste products in the blood, and in time exerts a seriously injurious action on it. The damaged liver cells in turn launch new nucleoproteids into the circulation whose effects are superadded to those of the primal cause. The future will reveal the importance of the part played by these factors in inflammation of the liver, but experimental research to date indicates that it is a very important one. The injurious action of the nucleoproteids in the circulation is similar to that of intoxication from phosphorus, alcohol and other substances which we know are capable of inducing cirrhosis. This conception explains certain cases of cirrhosis in which no etiologic factor can be discovered. If we accept the assumption of the existence of these auto-hepatolysins, we can understand that some ordinary occurrence in a predisposed individual may influence the liver to an extent that will entail true hepatitis in time. A diseased organ may be injurious to the organism not only from the lack of its normal functioning, but also because it launches into the circulation certain poisons which, besides injuring the entire economy, have a special destructive action

on the organ in which they were elaborated. This conception is sustained by the beneficial results of splenectomy in certain affections, not only in Banti's disease, but in others. The improvement obtained in cirrhosis by organ treatment with liver tissue and in Banti's disease with spleen tissue, finds a plausible explanation in the hypothesis that the organ therapy, instead of merely substituting the diseased organ, is able to induce in it the production of antistances capable of neutralizing or precipitating the noxious substances turned out by the diseased organ or organs.

128. *Stain for Spirochetes*.—Simonelli and Bandi recommend the May Grünwald stain as far superior to others for detection of the *Spirochæta pallida*; 1 gm. of cosin and 1 gm. of methylene blue are dissolved separately in 1,000 c.c. of water each. The two solutions are then mixed and set aside for from two to seven days. The fluid is then filtered and the sediment left in the filter is rinsed again and again until the fluid comes away clear. It is then dried and dissolved in a saturated solution of pure methyl alcohol. A few drops of the stain thus made are added to the dried specimen and left in contact for from four to ten seconds. The specimen is then rinsed, dried and mounted in balsam. This stains the spirochetes while leaving the other elements in the specimen almost colorless.

129. *Protection Against Tuberculosis*.—Figari asserts his conviction that the only effectual means of protecting man against tuberculosis is by immunization carried on systematically and on a large scale.

Nordiskt Medicinskt Arkiv, Stockholm.

Last indexed XLIV, page 2012.

- 133 (XXXVIII, Internal Medicine, No. 1.) Tape Worm in Denmark.—Vorkommen von Bandwürmern beim Menschen in Dänemark. H. Krabbe.  
134 Fall von Tumor mediastini, verbunden mit häufigen Kollaps-Erscheinungen. K. Thils.

## Books Received

THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA. Eighth Decennial Revision. By authority of the United States Pharmacopoeial Convention held at Washington, 1900. Revised by the Committee of Revision and Published by the Board of Trustees. Cloth. Pp. 692. Price, \$2.50. Philadelphia: P. Blakiston's Son & Co.

LECTURES ON THE PRINCIPLES OF SURGERY. Delivered at the University of Michigan, by C. B. Nancrede, A.M., M.D., LL.D., with an Appendix containing a résumé of the Principal Views Held Concerning Inflammation, by W. A. Spitzley, A.B., M.D., Second Edition. Cloth. Pp. 407. Price, \$2.50 net. Philadelphia: W. B. Saunders & Co., 1905.

A TEXT BOOK OF CLINICAL DIAGNOSIS by Laboratory Methods. For the Use of Students, Practitioners and Laboratory Workers. By L. N. Boston, A.M., M.D. Second Edition. 330 illustrations. Cloth. Pp. 563. Price, \$4 net. Philadelphia: W. B. Saunders & Co., 1905.

ATLAS AND EPITOME OF DISEASES OF THE SKIN, by F. Mracek, Authorized Translation from the German. Second Edition, with 77 colored illustrations. Edited by H. W. Stelwagon, M.D., Ph.D., Cloth. Pp. 273. Price \$4 net. Philadelphia: W. B. Saunders & Co., 1905.

REPORT OF WORKING PARTY No. 2, Yellow Fever Institute. Experimental Studies in Yellow Fever and Malaria at Vera Cruz, Mexico, by M. J. Rosenau, H. B. Parker and others. May, 1904. Paper. Pp. 101. Washington: Government Printing Office, 1905.

TEXT-BOOK OF CHEMISTRY. For the Use of Students and Practitioners of Medicine, Dentistry and Pharmacy. By W. R. Jones, M.D., Ph.G. Cloth. Pp. 462. Price, \$2.50 net. Philadelphia: P. Blakiston's Son & Co., 1905.

MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students by A. A. Stevens, A.M., M.D. Seventh Edition. Cloth. Pp. 556. Price, \$2.50 net. Philadelphia: W. B. Saunders & Co., 1905.

MICROTOMIST'S VADE-MECUM. A hand-book of the Methods of Microscopic Anatomy. By A. B. Lee, Sixth Edition. Cloth. Pp. 358. Price, \$4.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE, by J. M. Anders, M.D., Ph.D., LL.D. Illustrated. Seventh Edition. Cloth. Pp. 1297. Price, \$5.50 net. Philadelphia: W. B. Saunders & Co., 1905.

HYPEREMIA AS A THERAPEUTIC AGENT. By Prof. A. Bier, authorized Translation edited by G. M. Blech. 11 illustrations. Cloth. Pp. 239. Price, \$1.50. Chicago: A. Robertson & Co., 1905.

A TEXT-BOOK OF DISEASES OF WOMEN, by B. C. Hirst, M.D. Second Edition, with 701 illustrations. Cloth. Pp. 471. Price, \$6 net. Philadelphia: W. B. Saunders & Co., 1905.

A COMPEND OF HISTOLOGY. By H. E. Radasch, M.S., M.D. 98 illustrations. Cloth. Pp. 304. Price, \$1 net. Philadelphia: P. Blakiston's Son & Co., 1905.

HELPS AND HINTS IN NURSING. By J. Q. Griffith, M.D., Ph.D. Family Edition. Cloth. Pp. 480. Price, \$1.50 net. Philadelphia: John C. Winston Co.



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## Addresses

### ARABIAN OPHTHALMOLOGY.\*

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I came from far abroad, following your very kind invitation, which I consider a mark of international courtesy and true fellowship. It is not my first visit to this flourishing city near the Pacific coast. The wonderful view of the rapid progress of a new culture reminds me of past cultures in the old world, and I propose to you to go back with me a thousand years and to consider the fascinating history of the old Arabian ophthalmology, which I have studied in the last five years, tracing it to its sources. I invite you to a short Arabian hour, which is as attractive as one of the "Arabian Nights;" or, if not, it does depend less on the matter than on the speaker and his want of mastering the English language.

Two questions at first must be entered on: Firstly, which were the sources at the disposal of the Arabs for the formation of their own ophthalmology? Secondly, what is the content of the Arabian work of ophthalmology? We shall learn the first in their initial, and the second in their last, text-books on ophthalmology.

The classical "Memorial of Ophthalmology," composed by Ali ben Isa shortly after the year 1000 of our era, mentions as sources for his work the Greeks and his predecessor, Hunain. As we see, Arabs agree with Goethe: There are the Greeks. The Arabs erected their palace of ophthalmology principally from Greek material, but with their own additions and according to their own plan—like this wonderful mosque in Cordoba. The riches of Arabian literature are overwhelming. The text-book of Halifa, about 1260, gives in the preface a list of eighteen works on ophthalmology.

While the Greeks in the thousand years from Hippocrates to Paulus produced only five text-books of our specialty, of which not a single one was written by a specialist, not a single one has come down to us; the Arabs in the shorter flourishing time of five hundred years have created over thirty text-books on ophthalmology; the majority and the most important of them are written by specialists, and fourteen exist to-day and are collected by myself and studied by myself with the help of my learned friends.

The name of oculist among the Arabs has lost the sneer which we find so often in Galenos, but represents a title of honor. Several of these specialists control an experience, of which we can not detect any traces in the remainder of Greek literature.

The oculist bears in the Arabian the name of al-kahhal, from the word kuhl, collyre; but it signifies also the eye operator.

The first learned Arabian work on ophthalmology is composed in ten books by Hunain, an excellent Christian doctor, who lived from 808 to 873 principally in Bagdad and was acquainted with the Greek language, a great translator of Greek works on medical science. I have demonstrated that his work of the ten books on the eye is preserved for us in two medieval Latin translations, that of Demetrius, which had been taken for a work of Galenos, and that of Constantinus Africanus, who declared it his own work.

The fault of this text-book is the want of symmetry. It is welded together from ten different books on various ophthalmologic subjects, which were edited, one after the other, in the lapse of more than thirty years. The theoretical part is too long, the practical too short and torn apart. But, after all, Hunain has planned this pathway for the Arabs; the first step was the most difficult one.

Hunain's influence has lasted till the end of the Arabian era, five hundred years—a time I wish my friends who have published text-books of our science.

The more theoretical and compilatory text-books of the learned doctors, the Greek Arabs, as we may call Hunain, his nephew Hubois and the famous mathematician Tabet ben Qurra of the ninth century, were replaced, a hundred years later, by practical text-books of the oculists. The latter, meanwhile, had stored and put in order their experiences, both in hospital and in private practice.

The classical text-book of ophthalmology was for the Arabs the memorial of oculists of Ali ben Isa, the oculist, written in Bagdad, about nine hundred years ago. Last year, with my friend, Professor Lippert, I published the German edition, with commentaries. This is the oldest text-book of our specialty which we possess to-day, both complete and in the original language. As the author states that he made researches in the works of the old Greeks and made his treatise exhaustive, we may judge that we possess in this work a summary of all which had been known to the Greeks in the department of ophthalmology. But we can expect also something which surpasses the knowledge of the Greeks, because the author says that he had added something from the masters of his time and from his own experience. Beside, he has a systematic arrangement and description which is far superior to that of the Greek compilers, Aetios and Paulos.

Our Ali b. Isa gives to every important and frequent disease—as ophthalmia, trachoma, cataract—the right place and a full chapter, while he shortens less important matter. The succession of the chapters follows the anatomic order. In every chapter comes, firstly, the definition of the disease, then the objective symptoms, then the causes, finally the treatment, the general and the local. In formal respect the book is a model even for us to-day.

The famous Arabian historians, Qifti and Usaibia, tell us that the doctors and oculists work prin-

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cipally and exclusively according to this book. We may call it the Arabian canon of ophthalmology. His reputation persists in the Mahometan world up to our days. We must not forget that the Islamic peoples have continued to live in middle age—they have no modern time. A Drusian oculist in Syria named Hamza, who was hanged in 1860 in Damascus, convicted of willful murder of Christians, was owner of an abstract and of a paraphrase of Ali b. Isa's memorial, the latter written in the year 1845. Owing to the great reputation of the work, we possess eight codes of it. Five of them were at my disposal. From every other Arabian text-book of ophthalmology there are only one or two codes in existence.

The work is divided into three books. The first contains the anatomy, with some remarks on physiology; the second those eye diseases which are perceptible with the senses; the third, the hidden eye diseases. About one hundred and thirty different eye diseases are described, while the Greek, Aetios and Paulos, contain only sixty, and the German Plenck, who wrote the first school book in modern times, one hundred and forty years ago, contains one hundred and twenty eye diseases.

In the work of Ali b. Isa the personality of the author does not appear in the foreground. Notwithstanding, we get the impression of a careful doctor, full of humanity and especially cautious in surgical interferences. He says: "To the cataract operation proceed with caution and circumspection." In none of the Greeks do we find any such remark. He says, also: "When the cataract needle has entered the interior of the eyeball, then address the patient with kind words to quiet his fears." No one of the Greeks has this human and useful rule, but almost all Arabs, who wrote in full on cataract operation.

How great the originality of our author has been is difficult to judge, owing to the missing links between Hunain and Ali b. Isa. But the progress from Hunain to Ali b. Isa is enormous. The book of the latter is not surpassed by anyone in the following 800 years.

Certainly in the Occident during this long time the standard of ophthalmology would have been much higher, and its use for mankind much greater if the early medieval Latin translation of the memorial were better, clearer and so more spread and propagated. But of course a text-book of ophthalmology has no use without a school, oral tradition and practical teaching. Certainly we must pass on to the beginning of the eighteenth century, when the doctrine of dioptries accomplished by Johannes Kepler began to become more popular among the doctors, and also the strong struggle for the seat of cataract was decided against Galenos and in favor of the truth, before we find better books on our specialty than the memorial of Ali b. Isa. That is the cultural position of his work.

After the classical treatise. I come to the most original book on Arabian ophthalmology, written in Egypt by a native of Mosul about the year 1000 of our era. His name is Ammar; the title of the work "Choice of Eye Diseases." I dare say that before our translation the contents of this work were entirely unknown in the history of medicine.

Ammar was an older coeval of Ali b. Isa. He was a Mahometan, and the most clever eye surgeon of the whole Arabian literature. But he is outshined by Ali b. Isa, because his book seemed too short to the Arabs, who always insist on copiousness and completeness. He

has only forty-eight eye diseases; his book contains only 1,800 lines or about 15,000 words. The only code of him is in the Escorial library in Spain. We secured its photographic reproduction and also the code of Parma itself, which contains the Hebrew translation. The so-called Latin translation of Canamusali, always spoken of in the history of our branch, was recognized by comparison to be an awkward forgery of middle age and has nothing to do with the refined work of Ammar. The most peculiar thing in Ammar's book is his six histories of cataract operation. They are clear and impressive, even to-day very attractive, without equal in the Greek literature.

Allow me, gentlemen, to give the true translation of one of these stories:

A marvellous experience. I have operated on the eyes of a lady in a palace, in the green harem of the manor-house of Ibn al Bakri. The cataract was equally in both eyes. Three pupils who studied were present with me. I began with the right eye and operated on it and proceeded in orderly fashion and extracted the needle and bandaged the eye. Then I began the operation on the other eye. As I introduced the needle into the eyeball and was ready to couch the cataract, the lady lost consciousness and was like dead. Immediately I splashed water on her bosom, till she moved, and the spirit re-entered into her, and she became quiet. Now I had the intention to couch the cataract for the second time. But immediately she clutched her hands and got fits, the needle being in the interior of her eye. The students became frightened and ran away. But I took pæonia from my pocket and gave her it to smell. Her spirit returned and she became quiet. Now I had the intention for the third time to couch the cataract and pursued the performance in a hurry and with force. Immediately her pupil dilated, the hole of the iris became as wide as if she suffered from mydriasis; notwithstanding I always held the needle in her eye with one of my hands, the other fastening the eyeball. As her condition became quiet, I finished the operation, withdrew the needle and performed the bandage. On the third day after I visited her to look the eye. Then she told me that from the hour I had left her she suffered hemiplegia. Now, of course, I was convinced that her eye was destroyed after all these accidents and loosened the knot of the bandage—full of desperation; but I found her eyes in the best condition, nearly recovered. Then I praised God the Almighty, because He is capable of all, from Him derives the love and the mercy. In all my surgery I never had a similar case.

Perhaps all the gentlemen present can say the same.

The most important thing in Ammar's work is the radical operation of the soft cataract by suction through the hollow needle constructed by himself.

The origin of this method is really dramatic—just as 730 years later the origin of Daviel's extraction. For catching the real point you <sup>never</sup> understand, that in the common couching of cataract, <sup>never</sup> performed by the Arabs after Greek model, the principal danger consisted in re-ascending of the cataract. To avoid this failure, it was considered necessary, without any exception, to lay the patient on his back for seven days after the operation. Once, at Diarbekr in the Iraq, Ammar operated on a man of 30 years for congenital cataract, which could not be couched at all, but ought to be cut into small pieces entirely and to be removed from the pupil. The man recovered fair vision, contrary to expectation. Ammar adds:

He swore that he never rested on his back, not a single day, and he took no precautions at all. Then I constructed the hollow needle, but I did not operate with it on anybody at all, before I came to Tiberias. There came a man for operation who told me: Do as you like with me, only I can not lie on my back. Then I operated on him with the hollow needle and extracted the cataract; and he saw immediately, and did not



need to lie, but slept as he liked. Only I bandaged his eye for seven days. With this needle nobody preceded me. I have done many operations with it in Egypt.

So it is perfectly clear what Ammar intended and what he performed. He desired to get a radical operation, after which reascension was impossible—principally for such cases, in which the rest in the recumbent position, so indispensable after the common couching, by no means could be carried out. That, without the slightest doubt, is a real progress, and the first step to Daviel's extraction, the greatest progress in our branch made after the Greeks.

From the book of Ammar we learn the author's character better than from any other Arabian or even European text-book, till far into the modern times. There emerges a strong and self-confident personality. He is conscious of his own merits in the department of eye operations. With confidence he sets out to perform division of symblepharon. He has no fear of bleeding in extirpation of sarcomatous ectropion—as a result of his experience. All remedies he recommends against ophthalmia are approved in his own very long practice. Instead of many doubtful remedies he recommends a single one, which dispenses with all others. To be sure, he makes the greatest demands on the eye surgeon, that is to say, on himself; he ought to be provided with sharp senses, with sure hand, with greatest experience. He needs an experienced assistant and a full collection of well-made instruments.

Ammar is very tender for the happiness of his patients and enthusiastic for success. Shudders and desperation attack him, if the operation does not progress as he liked. If the final result is good, God was the helper and the surgeon. Warm delight fills his soul, as he could restore vision by cataract operation after three years of blindness. Full of bitter resignation he deals with the incurable cancer.

He does not quote a single author, neither Greek nor Arab. Superstitious remedies are not to be found within his book. He also is far from the use of the mud remedies, so widely used both by Greeks and by other Arabs.

Ammar made long travels and practiced and operated in various countries, in Persia, Mesopotamia, Syria, Egypt. A result of his travels is his attempt to create a cataract geography.

So through the study of Ammar's book we get a clear picture of his personality and of his work, while the former accounts gave only a few and poor remarks, not free from important errors.

From the center of the Arabian culture, the Iraq and Egypt, we go to the far east, to Persia. We found a Persian text-book of ophthalmology, never hitherto mentioned in the history of our science. The only copy is in Oxford, from where we got the photographic reproductions. The author is named Abu Ruh, known as Goldhand; the time of composition is the year 1088 of our era; the title of the book is "The Light of the Eyes."

We mention as the first important fact: no traces of old Iranian wisdom are to be found in it; the content seems to be about the same as in the Arabian text-books of that period. The second fact is the separate description of eye operations in the seventh (of the ten books) of this work. The number of eye operations is thirty, the facts and the arrangement are about the same as in the memorial of Ali b. Isa. Concerning cataract, three methods are mentioned: Couching with the needle, couching after previous opening the coats with a lancet, suction. The author declares: the hard

cataract is easier for couching; the soft cataract is difficult for couching, but appropriate for suction. Excellent rules are given for after-treatment; principally the diet is very carefully controlled.

Abu Ruh, born in Gurgan, on the borders of the river Oxus, educated in the Persian language, trained by good masters both in general medicine and in the specialty, able to speak Arabian, but fond of his mother tongue, enthusiastic for his profession, but also full of ambition, a skillful surgeon, as his surname "Gold-hand" proves, has composed his extensive text-book in the Persian language, overestimating his own work, underestimating that of his predecessors, more by speech, than in fact, because he likes to borrow largely from them and to apologize for it with the common literary customs. The book is full of content, put in order, clear and comprehensible, not without his own additions. The description is wordy, but plastic, because based on experience.

From the far east I beg you to accompany me to the far west of Islam, to Andalus, that means Spain. Andalus was exceedingly admired by the Europeans of the middle age because it was the only part of the world of Islam they gained acquaintance with and found it far superior to their own culture: as well as people who have seen only the Alhambra believe it to be the highest type of Islamic art. But a critical consideration of the remainders of Andalusian ophthalmology shows clearly its inferiority in comparison with the wisdom of the East.

The spirited, but rather more theoretical work of the noble *Abul Mutarrif*, twice minister or wezir at Sevilla, eleventh century, is entirely lost. Of Andalusian works we possess only two anonymous treatises on eye diseases, of mean value, the Latin<sup>1</sup> translation of Alcoati and the very long work of Gafiqi, twelfth century, entitled "The Right Guide in Ophthalmology," remarkable for its wide scope; it furnishes the science and practice of our branch within a wide compass of general knowledge of the diseases of the brain and the whole head—a specialty revived in our days and too in this country.

Each of these Andalusian works is only conserved in a single code of the Escorial, of which I got the photographic reproductions. The codes of this famous library are bound by law to their own residence.

A splendid evening glow finishes the Arabian day of creation. A short time before Arabian science and culture were kicked down by Mongolian horses, two text-books of ophthalmology appeared of such extent and such learning, that we must pass to the beginning of the nineteenth century to find their equals in Europe.

The first is "The Sufficiency in Ophthalmology," composed by Halifa of Aleppo in Syria, about 1260. Its code, which was forwarded me by the Sultan, contains five hundred sixty four pages in folio. The content of the work is very solid and valuable. It is praised by the last Arabian oculist as matchless in literature. Of course, many important passages are borrowed from the memorial of Ali b. Isa, and the character of the composition is rather scholastic. Important are the figures of eye and brain, of instruments, the table of twelve sorts of cataract, the cataract operation. Halifa was eye surgeon. He tells it himself. He had a noble practice, and sketches us a story of a lancet broken in venesection of an emir, where he advised the loadstone for extraction of the broken splinter.

The other work is "The Light of the Eyes," by

1. I have discovered the fifth book of the Arabian original.



Salah ad-din, the oculist, from Hamat in Syria, about 1290. The code of Paris, of which I secured copies, contains 178 leaves in folio. The arrangement is similar to that of Ali b. Isa, but all things are more detailed and scholastically formulated, with an immense amount of quotations. Salah ad-din is a great scientist, the only Arabian oculist who dared in a treatise of ophthalmologic *practice* to explain extensively the subject of optical *theory*. That and his full chapter on cataract is reproduced in the second volume of our Arabian oculists.

It is very characteristic that the two last text-books from the fourteenth century are from Egypt, where the Mongolian hordes never had entered, and the Turks only later. These books are "The Revelation" of Sams ad-din, and "the Support" of Sadii. The last shows one mark of decadence, inasmuch as it is told therein that the practice of suction was entirely lost in that time and in that country, except its mention in older books and the preservation of some samples of the hollow needle. But, notwithstanding, the book is far superior to all European works on ophthalmology in the middle ages and too in the first period of modern time.

The great works of general medicine, by which the Arabs excelled, of Razi, Ibn Serafiun, Tabari, Ali b. al Abba, Ibn Sina, Abulqasim and even of Ibn Zuhri and Ibn Rusd, all of them contain a more or less full treatise of ophthalmology, which too is organically inserted, —quite different from the hand books of general medicine in our days. As a sample of this kind of literature I have edited the ophthalmology of the famous *Ibn Sina* in German translation and explanation.

I will not dwell on the monographs of various subjects of ophthalmology but will finish the explanation of Arabian literature of our specialty with the following point: In the five hundred years from 800 to 1300 of our era there were not less than sixty renowned men of the Arabian world, known to us as oculists or practitioners especially interested in our branch, authors of text-books or monographs on ophthalmology, meanwhile in medieval Europe before the twelfth century none is known as an oculist and in this century only two, one of them coming from Jerusalem, that is to say from the Arabian country, the other trained in Constantinople, this isolated remainder of Hellenistic antiquity. We are told that in Bagdad, in Cairo, in Damascus and in other cities within the reach of Arabs, there were created ocular divisions in general hospitals and even special eye clinics—institutions not to be found in Europe before the end of the eighteenth century.

After this summary sketch of Arabian literature on ophthalmology, I pass over to the single important chapters, in which the Arabs have produced original and special work. Of course, the Arabian anatomy of the eye is entirely derived from the Galenic, but their description is more practical. Dissection of animal eyes is referred to, but only in one author, Alcoati of Toledo.

Interesting for us are the following four points:

Firstly, the codes of Arabian text-books of our branch contain the oldest pictures of the anatomy of the eye.

Secondly, for our anatomic names of parts of the eyeball, as conjunctiva, cornea, uvea, retina, which are of daily use both in speech and writing, the lovers of these names are indebted to the translator of the Arabian works, the Mansuric book of Razi and the canon of Ibn Sina, that is to the famous *Gerard* of Cremona, who did this dull work of translating from the perfect Arabian language into the miserable Latin of middle

age, not less than forty years of his life, from 1147 to 1187, in Toledo, the former capital of Arabian Andalus.

Thirdly, the first attempt at a comparative anatomy and physiology of the organ of vision (or a germ of it) is to be found in the last Arabian text-book of our branch, of Sadili. Do not forget that the extensive and classical text-books of Joseph Beer, Mackenzie and Arlt from the first two-thirds of the last century did not touch this brittle matter, which only in our days by the largest handbooks, as *Graefe-Saemisch*, first edition, and the French cyclopedia, is fully dealt with.

Fourthly, to the most important facts, which are transmitted in the anatomic part of the Mansuric book of Razi, belongs the contraction of the pupil following illumination. This fact, that the pupil of the healthy human eye contracts in the bright and dilates in the dark,—a fact, which ought to be detected by the first thinker and observer at the eye of his companion in the first evening twilight, let us say by Adam on the eyes of Eve,—strange to tell, is not to be found in any of the Greek authors, neither of a philosopher nor of a physician. But Razi has the following words: The membrane of iritis contains in its center a hole, which now dilates, now contracts, according to the quantity of light required by the crystalline: it contracts, if the illumination is bright, it dilates in the dark.

This doctrine bore good fruits for the Arabs, principally for the diagnosis of operability of cataract. Ammar has the following general rule: "Look, in the good cataract, there is contraction of pupil in the light, and dilatation of the same in the dark. This doctrine is not lost in the later text-book. In the Greek literature nothing about this valuable symptom is to be detected.

From the anatomy I pass over to the physiology and optics. Here we find a new discovery of the highest importance. *Ibn al-Haitam*, about the year 1000 of our era, tells us in his handbook of optics: "*All vision is performed by refraction*. Nobody of the ancients (that is of the Greeks) has told that." Of course, the full truth was not yet discovered by the Arab, he was not a Kepler; but the Greek error, that vision is performed by rays emanating from the eyeball, this strange theory of subjective emanation, is by the Arabs eclipsed for ever out of science.

We may dwell for a minute on the marvelous history of this author. Born in Basra from noble parents, he ascended to the dignity of *wesir* in his city. He was fond of science, a good mathematician and well versed in theoretical medicine. Once he declared that if he were in Egypt, he would so control the Nile, that the beneficial water supply were equal every year. Invited by the Sultan Hakim of Egypt, he came and saw at the cataracts of the Nile that he could not stand by his promise. He fled from the scorn of the tyrant and lived in obscurity, only devoted to science. Every year he wrote a copy of three works, of Euclid's elements, of the middle mathematicians and of the *Almagest* of Ptolemy and brought these codes to the market of Cairo, where immediately they were sold for 180 dinars (that is about \$300), a sum sufficient for his life. Strange to say, to-day in the whole Mahometan world, from Morocco to Asia Minor and North India, not a single copy of this work could be sold, except to a European or American purchaser. So high was the Arabian standard of culture formerly; so low it is now, tramped down by the hoofs of Mongolian and Turkish horses. The great mass of the Caucasian race, even those who believe themselves to be educated, have an entirely wrong



judgment, because they mingle the old Arabian with the actual Turks in Asia Minor or with the Berbers in Morocco, both of course having adopted from the Arabs the Islam.

The pathology and therapeutics of ophthalmology is elaborated by the Arabs evidently after the Greek model. But the pupils have surpassed their masters in the systematic arrangement of the matter and in accuracy.

Compare the succession of eye diseases in the compilation of Paulos or Aetios with the text-book of Ali b. Isa and others: the Arabian composition does not differ very much from that of a text-book of our days. But they described several eye diseases, unknown to the Greeks. For instance the sabal, which to-day is called pannus. They described under this name, first, the deep vascularisation of the cornea, which we observe in constitutional keratitis; secondly the superficial vascularisation, which is peculiar to the pannus trachomatousus. They sketched the thick fleshy pannus, the shortening of the conjunctival sac, the origin of pannus from trachoma. They invented the circumcision of conjunctiva for this pannus, which Furnari of Paris, in the year 1862, has introduced as his own invention under the name of tonsura conjunctivalis; but I am sure he has borrowed this method in North Africa, during his long stay, from the native practitioners. Variations on this performance have been observed in Egypt lately and imitated enthusiastically by Professor Schmidt-Rimpler.

The treatment of trachoma, so common and wearying a disease in the Orient, is based by the Arabs on excellent principles. "If the trachoma is chronic and inveterate, there is no help except friction with sugar or with the iron; but as long as it is thin and in the beginning, the cure is by application of sharp collyres." Who listens to that proposition may think that it is taken from one of our text-books; but it is nine hundred years old.

This cataract (*ὑπόχυμα* of the Greeks) is called by the Arabs *ma'*, that means water, or *al-ma'an-nazil fi'l ain*, the water descending to the eye. Hence the medieval name cataract, which originally means the descending water and which is of daily use among us.

Concerning the seat of cataract, there were discussions. But we learn that the best and oldest clinicians and the oldest oculists put the cataract behind the iris; but that beginning with the year 1000, through Ibn Sina and Ali b. Isa the anterior surface of the pupil was preferred.

Have the Arabs occasionally confounded cataract with other eye diseases? Certainly. But that happened also to some of the modern oculists, even in the nineteenth century. Carron du Villards in Paris confesses that he took a fungus medullaris of the retina in its first period for cataract and that he undertook re-clination.<sup>2</sup> I have myself observed as a traveler, twenty years after discovery of the ophthalmoscope, that a famous cataract operator selected for extraction a case of hemorrhage into the vitreous. But the saying, that the Arabs (and likewise before them the Greeks) confounded entirely cataract with hypopyon and operated on hypopyon, speaking of cataract, that is mere tale and fable, refuted and annihilated by all classical texts.

The general surgery of the Arabs is not highly esteemed. But in the special surgery of the eye they achieved great things and were far superior to the

Europeans, not only of their time, but also of the following centuries.

The treasure of eye operations, inherited from the Greeks was received, cultivated and increased, principally enriched by a radical operation of cataract. In the Arabian literature for the first time we meet with oculists well educated and experienced, who without the slightest doubt had themselves performed hundreds or thousands of eye operations. We meet with eye surgeons full of boldness, self-confidence and ability, like the great Ammar; we learn the splendid results of the cataract operations, as of Ibn Raqiqa.

The excellent two tables of Halifa contain the figures of not less than thirty-six instruments for eye surgery; that is enough, compared with the last and very complete work on eye surgery, composed in our days by Prof. Czermak and containing seventy-six such figures.

Concerning cataract operation I would like to particularize, if I had the hope of keeping your attention or the courage of taking more of your time, on which I have trespassed so long; so I refer to the remarks I mentioned about this operation and conclude with the statement, that the Arabian literature has also created a kind of oculistic ethics. The system of medical ethics of the Arabs goes back to that of the Greeks and has its roots in the oath of Hippocrates. This old and venerable scripture was translated very early into Arabic by Hunain, the author of the first Arabian ophthalmology. In his life he himself found occasion to refer to that oath. The Caliph Mutawakkil desired to try Hunain and asked from him a mortal poison. Between treasures amassed and torments piled the doctor denied the poison to the tyrant, because it was forbidden, he said, firstly by his religion and secondly by his doctor's oath.

It is very interesting that the Arabian oculists arranged this oath of Hippocrates for their text-books and that they added to the old and general command, not to administer a mortal poison, the new and specialistic match, nor a salve or ointment which destroys vision.

We come to the end. The judgment of August Hirsch, that the Arabs have not contributed to the real progress of ophthalmology, is entirely wrong. He had not studied a single one of all these Arabian text-books. And also, the history of a speciality must be written by a specialist, versed in the matter of the speciality and of the historical sources. I acknowledge that the proficiencies of Arabian ophthalmology in comparison with their large literature are not so very great, but they are remarkable and should not be denied. Besides, during this total darkness in the medieval Europe they lighted and fed the lamps of our science—from the Guadalquivir to the Nile and to the river Oxus. Thirdly they were the only masters of medieval Europe in our branch. So we must state that the name of the Arabs, which is written with indelible characters on the firmament, never will be effaced from the memorial stones of ophthalmologic art and science.

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**Medical Societies.**—With proper effort and affiliation of the profession throughout the country there would be practically established in every town a postgraduate medical school. The standing of the profession as such would be raised and a better feeling of fellowship would prevail. With such a united effort those disposed to be treacherous and unprofessional would find it unprofitable and soon fall in line. Young men, old men, all should join hands; there is no excuse for not doing so.—*Kansas City Medical Index-Lancet*.

2. "Glioma of the Retina Simulating Hypopyon" is the title of a paper which appeared in the *Ophthalmic Review*, January, 1903.



# IMPORTANT SUBJECTS WHICH HAVE OCCUPIED THE ATTENTION OF GYNECOLOGISTS AND OBSTETRICIANS DURING THE PAST YEAR.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, ORE., JULY 11-14, 1905.

C. L. BONIFIELD, M.D.  
CINCINNATI, OHIO.

The rules of the Association demand that the chairman address the Section for a few minutes on the welfare of the Section and on the recent progress in gynecology and obstetrics. I am very willing to perform the first part of this task; for my experience as secretary has given me some decided opinions on how its usefulness can be maintained and increased.

In the first place, the office of secretary should be a comparatively permanent one. The same man should be re-elected not less than four times.

In order that a suitable man be induced to hold this office for five years, his duties should be made as light as possible. Members should assist him by furnishing titles and abstracts promptly when asked for. Papers should be ready for publication when read. Failure to observe this rule causes a vast amount of unnecessary labor and annoyance.

The secretary should be relieved of the necessity of disposing of the bound volume of the transactions, and the trustees should allow him a sufficient salary to pay his traveling expenses and a stenographer.

In the second place, the number of papers to be read should be limited to thirty, and the time limit of fifteen minutes should be strictly enforced in the reading of them. Longer papers may be prepared for publication and read in abstract. For the most part, papers should be read by men of more than local reputation. A moment's thought will convince any one that this is for the greatest good of the greatest number. The attendance almost invariably swells as the time approaches for some celebrity to read and rapidly shrinks when an unknown reader takes the floor. Our system of organization may be likened to the public school system. The county society is the ward school, the state society the high school, and the American Medical Association the university. One can not expect honors in the university until he has worked in the lower grades.

Papers should be read in the order in which they appear on the program. The secretary groups them as best he can; the chairman approves of the arrangement; members of the Association come from other sections at a given hour to hear a paper on some special subject in which they are interested, and are greatly disappointed to find some one else reading on an entirely different subject. Members should not ask for the privilege of reading their papers out of order for trivial reasons.

There has been some discussion as to the scope to which papers in this Section should be limited, some claiming that it should follow the lines adopted by the American Gynecological Society and the American Association of Obstetricians and Gynecologists and deal with all surgical conditions arising between the perineum and the diaphragm, inclusive, while others claim that its work should be limited to obstetrics and pure gynecology, leaving the surgical affections of the appendix, stomach, liver and kidneys to the Section on Sur-

gery and Anatomy. To my mind, there are two serious objections to this last arrangement: First, it is in the problems of surgery in the upper abdominal region that many of the men who belong to this Section are at the present time most interested, and on which they prepare their best papers, and if they can not read them here they will go elsewhere. Second, the surgical section can not give all the good men who wish to read papers on these subjects an opportunity to do so.

It seems to me the best arrangements that could be made would be to change the name of this Section to "Section on Obstetrics, Diseases of Women, and Abdominal Surgery." Ten papers could be allotted to each branch. Papers on kindred subjects would be so grouped on the program as to attract to a session those most competent to discuss the subjects under consideration.

## GYNECOLOGY.

Let us now glance at some of the subjects that have most attracted the attention of gynecologists and obstetricians since last we met. Neither science is now making the rapid strides forward that gynecology was making a decade ago. Recent progress has mainly consisted in appraising at their true value procedures previously introduced to the profession.

One of the subjects most discussed during the year is the treatment of retrodisplacements of the uterus. The fact that so many methods are advised is proof positive that no ideal method, which is applicable to all cases, has yet been found. Probably this is expecting too much. Retrodisplacements may be divided broadly into two classes: those requiring treatment and those not requiring it. The majority of the latter class the gynecologist does not see; the condition producing no symptoms, he is not consulted. When symptoms are produced some kind of treatment is required. The only question is whether it shall be by surgical operation or by other methods. In my opinion, many patients are subjected to operation in whom just as good and possibly better results could be obtained by careful, painstaking non-operative treatment. The fact that the uterus is displaced if the malposition be not congenital, or the result of inflammation of the appendages, shows that there is a disproportion between the weight of the uterus and the strength of its supports. To effect a cure this proportion must be restored. The weight of the uterus must be reduced or the supports must be strengthened. As a matter of fact, both are usually attempted. When the condition is treated non-surgically, the weight of the uterus is reduced by hot douches, tampons, rest in bed, free purgation, and by temporarily holding it in approximately its normal position. The supports are strengthened by rest, tonics and suitable exercise.

In surgical treatment the weight of the uterus is reduced by curettage, trachelorrhaphy or amputation of the cervix. The supports are strengthened by adding to their number (ventrosuspension), changing their direction so that they act at greater mechanical advantage (Gilliam's operation), or by restoring the function of some of the supports by taking up the slack in them (shortening the round or sacrouterine ligaments). In what cases can we hope for success without surgery?

The uterus must be free from adhesions and capable of being readily replaced. The appendages must be healthy and also free from adhesions, the posterior cul-de-sac must be fairly deep and the perineum intact so that tampons and pessaries can be used successfully for temporary support. The patient must be willing to submit to treatment for an indefinite length of time and



to remain where the gynecologist can see her as often as necessary. Prolapse of an ovary is not a contraindication for this treatment if the ovary goes up into position with the uterus when the latter is replaced. In some more complicated cases, non-operative treatment may be successful, in the cases described it will be, if skillfully and persistently used.

When it comes to surgical treatment, the wealth of operations advised may be confusing, but one of three will usually answer very well (not including curettage, trachelorrhaphy and perineorrhaphy, which, of course are done along with the one selected if indicated). Alexander's operation does as well as any in the cases which I have described, as those in which a cure can be accomplished without surgery, and if the gynecologist decides to operate in such cases it is the operation to use, on account of its simplicity and freedom from danger.

When there are complications, it is necessary to open the peritoneal cavity to deal with them. A free incision in the median line of the abdomen gives the best opportunity for doing everything that may be necessary; this often includes removal of the appendix. The uterus is freed from adhesions and the tubes and ovaries dealt with as they may require. If their complete removal is necessary or if the woman is past the menopause, ventrosuspension is indicated. This operation should not be done, when any other will answer in child-bearing women, and some method of shortening the round ligaments usually will answer.

I formerly folded the ligaments, covered as they are with peritoneum, on themselves once or twice, employing catgut for sutures. Some of my patients relapsed after six months or a year. I reopened the abdomen and found nothing but peritoneal adhesions to show for my former operation. Now, therefore, I strip the ligaments of peritoneum, fold them once, stitch the folds together with chromicized catgut, push the folded portion through the slit in the peritoneum and stitch it to the ligaments again toward its distal end, then close the peritoneum.

I have been loth to trust shortening of the sacrouterine ligaments alone, because these are little more than folds of peritoneum, and I should expect them to give away again in time.

Cancer of the uterus is another subject that forces itself on the attention of the gynecologist. I hope before this Section meets many more times we will know something of the cause and prevention of this horrible disease and that its treatment will have lapsed into comparative unimportance; at the present time, however, nothing can overshadow this phase of the subject. There are some who think with Baldy that all efforts at radical cure are worse than futile, and others who believe that every case seen early should be subjected to the Rumpf-Reis-Clark operation.

Every few months I meet on the streets a healthy woman whose uterus I removed nearly ten years ago for cancer of the inside of the cervix. This one case, if there were no others, would encourage me to continue to operate for cancer of the uterus.

Just how radical the operation is to be in a given case must depend on the general as well as the local condition of the patient, and the surgeon's skill and speed as an operator.

His best judgment must be used to make the operation not too severe for the patient before him. No matter how thoroughly we may be convinced by deductive reasoning that the most radical procedures are the proper ones, we must not forget that Byrne, Baker and Reamy

years ago obtained results by the high amputation of the cervix that have not been improved on by the ever-advancing radicalism of the present time.

It has seemed to me that the cautery may have played an important rôle in the results of these early operators, and for several years, therefore, I have begun the operation in every case of cancer of cervix in which I had hopes of giving permanent relief by destroying the growth with the cautery, and proceeding with an abdominal hysterectomy at once. I have not usually removed retroperitoneal glands, because prolonging the operation in this way seems to add too much to the primary mortality. Great care is always taken to trim away a considerable collar from the upper end of the vagina after the uterus is removed, because cancer of the cervix is prone to recur in the vaginal scar. To do anything less radical than this I regard as doing a palliative operation for relief of symptoms only.

In his presidential address before the American Gynecological Society, Dr. E. C. Dudley proposed an operation for the relief of incontinence of urine, which I believe will prove to be one of the real advances made by gynecology this year.

#### OBSTETRICS.

The toxemia of pregnancy has attracted the attention of a good many writers on obstetrics during the year. The prevalent belief is that this toxemia may be caused by the derangement of function of the kidneys, liver or thyroid gland. In fatal cases, the pathologic changes have been most frequently found in the liver. This being true, and veratrum viride being one of the most active stimulants of the liver known, besides being a spinal depressant, and so many severe cases having been reported in which this drug has been used successfully, it is difficult to understand why any case should be allowed to terminate fatally without giving this powerful but most tractable drug a trial.

Vaginal Cesarean section has become a well-recognized surgical procedure in cases suitable for its employment. It is always to be remembered that the child must be delivered through the bony pelvis after the cervix has been incised, so the wise operator will assure himself that this is possible before selecting this operation as the proper one.

Cesarean section or the Porro operation is no doubt indicated in certain cases of placenta prævia, but the indications should be those existing in the patient, not in the operator. The fact that the operator is more familiar with surgical than with obstetric procedures, is not a valid indication when skilled obstetricians are within call.

At the St. Paul meeting, our late lamented colleague, Dr. George J. Englemann, read a paper on "The Increasing Sterility of American Women," and during the past year the subject has attracted a good deal of attention from the lay press. It is one of the very greatest importances to the nation, and I know of no work this Section could do that would redound more to its credit than to make some collective investigations that would determine whether the decrease is real or apparent and if real the causes therefor. It would probably be found that it is real; that intentional limitation of the size of the family after marriage is the greatest cause; that late marriages is next in importance; that the higher education of women is a cause only in so much as it delays marriage and renders a woman averse to the cares of maternity.



Back of all these causes would be found the fact that Americans have drifted away from the "simple life." The luxuries of a few decades ago are the necessities of to-day. The struggle for respectable existence becomes more and more intense, and intelligent and educated people hesitate to start in the race of life, children who will be handicapped by poverty.

## Original Articles

### TUBERCULOSIS OF THE KIDNEY.\*

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This is a subject worthy of more consideration than has generally been accorded to it, and the condition is one which is likely to be overlooked for long periods when great benefit could result from proper treatment. As several patients have come under my care during the past eighteen months, my attention has been called more directly to the subject.

It has been claimed that renal tuberculosis occurs in 2 per cent. of all patients suffering from this disease, and, while many of these cases are inoperable, there still remains a considerable number in which no other lesion can be located save that in one kidney. Kroenlein<sup>1</sup> uses the terms "solitary" and "combined" tuberculosis of the kidney instead of "primary" and "secondary," and it would seem well to follow his classification, for such distinction will prove of value in the management of a given case. In his 34 cases of nephrectomy only 12 were of the solitary form, and it is reasonable to suppose, he says, that other latent foci have been present, though not detected.

The essential cause, the *Bacillus tuberculosis*, gaining entrance into the circulation through the respiratory or alimentary tracts, with or without the involvement of a lymph gland, is transported to the kidney by the blood, and, becoming localized there, may cause a renal tuberculosis. That the kidney escapes the disease in many cases is well established by Kahlden and others, while the lower urinary tract becomes involved from the presence of bacteria in the urine. In addition to infection from this source, there is undoubted evidence of the disease ascending from the bladder prostate or testis. Again, the possibility of infection of the kidney in the course of a Pott's disease by contiguity must not be overlooked. Morris<sup>2</sup> mentions a case of secondary renal infection from a tuberculous empyema which had perforated the diaphragm. An intestinal or peritoneal tuberculosis might excite disease of the kidney by contact. Such external infection must be rare, as pointed out by Tilden Brown.<sup>3</sup> Hunner<sup>4</sup> gives the proportion of circulatory infection as much larger than the ascending contamination from the bladder. He says: "With the widest margin in favor of primary bladder infection I have classed but 5 of the 35 cases under this heading." Israel gives the proportion as 8 in 30 cases. Hunner<sup>4</sup> points out the probability that ascending in-

fection is more frequent in males. Steinthal (quoted by Bab<sup>5</sup>) has carefully examined 24 cases with reference to this point and states that the bacilli reach the pyramids through the blood stream and there begin their activity. Thence they proceed toward the papilla and finally break into the calices and the pelvis of the kidney, and are carried down by the trickling urine, thus causing disease of the urinary passages. Steinthal states that the fact is often overlooked that renal and testicular tuberculosis may co-exist independently of each other, and that the process in the former is descending while the latter is ascending, and mentions three cases observed by Israel in which the kidney and testicle were simultaneously involved, while the bladder remained perfectly healthy. He also says that it is difficult to explain how the disease situated in the bladder, testicle and prostate proceeds upward, except it be that the disease is so extensive that it extends from cell to cell, and tissue to tissue, or that the ureter possesses a certain amount of "anti-peristaltic" property, a view held by Posner.

If the extension is upward we would expect a continuity of diseased tissue in the first instance, and in the case of reversed peristalsis we would look for some obstruction below to produce such action. In proof of the latter factor being of importance, mention can be made of the experiments of Baumgarten and Albarran. The former failed to produce renal tuberculosis by infecting the prostate and seminal vesicles, while the latter obtained tuberculosis of the kidney by inoculating the ureter and applying a ligature distal to the infection. That obstructions to the urinary passages of man are of importance in causing renal infections no one will deny. The discussion on this point has been carried on for a long time, but the weight of evidence presented seems to justify the conclusion that the majority of cases of tuberculosis of the kidney and ureter result from circulatory infection, that some occur from ascending disease, and that in some instances the kidney and the genital organs are simultaneously attacked. It is an undoubted fact that many conditions favor the growth of the bacteria after they are localized in any part of the economy, and without such predisposing factors tuberculosis would become a very rare disease. The same conditions which favor the development of tuberculosis in any part of the body are equally active here. Traumatism, exposure, infectious diseases, renal stone, floating kidney, and interference with the urinary outflow are all predisposing causes. Gonorrhea, by favoring bladder and genital tuberculosis, is perhaps of importance. That the normal bladder is quite resistant to this disease is shown by the long time which often elapses before it becomes involved after the kidney is attacked.

#### AGE, SEX AND RACE.

Any age is susceptible to this form of the disease. Morris<sup>2</sup> says that the miliary type is seen most often in the young. Winternitz<sup>6</sup> records a case in a child of 18 months, while Tilden Brown's autopsy records from the Presbyterian Hospital, 1893 to 1896, show the extremes of age to be 2½ months and 64 years. Hunner<sup>4</sup> gives the greatest proportions between 20 and 30 years. In this he agrees with Kroenlein,<sup>1</sup> who comments on the frequency of its occurrence in the flowery period of

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Kroenlein: "Ueber Nierentuberkulose und die Resultate ihrer operativen Behandlung." Archiv. f. klin. Chir., Berlin, 1904, lxxiii, p. 277.

2. Morris: "Surgical Diseases of the Kidney and Ureter," vol. 1, pp. 382 and 478.

3. Brown, F. Tilden: Buck's Reference Handbook of Med. Sc., vol. v, p. 345.

4. Hunner: "Tuberculosis of the Urinary System in Women," Johns Hopkins Hospital Bulletin, vol. xv, No. 154.

5. Bab. M.: "Zur Frage der ascendierenden Nierentuberkulose." Munich, 1904.

6. Winternitz: Ungar. med. Presse. Budapest, 1903, viii, p. 621. "Falle von Nierenextirpation bei Kindern wegen tuberkulöser Pyelonephritis."



life. Kroenlein reports 51 cases; 7 occurred between 17 and 20 years; 23 (45 per cent.) between 21 and 30 years; 14 between 31 and 40 years; 6 between 41 and 50 years, and 1 between 51 and 60 years.

Statistics given by different authors do not agree as to the sex most frequently affected. English writers give men as most often attacked, while Continental observers state that women are most subject to this form of the disease. In Kroenlein's<sup>1</sup> recent report, 38 of 51 cases were females. This discrepancy is probably due to the fact that the writers are giving individual experience and their work is largely confined to one sex.

Hunner<sup>4</sup> states in this connection that all of his 35 cases were in white women, although one-fifth of the patients treated in Johns Hopkins Hospital are colored.

#### LESIONS.

Both kidneys are affected in two-thirds of the cases when a general tuberculosis coexists, while when the lesion is limited to the kidneys, in the majority of instances, it is unilateral. Israel gives 90 per cent. of cases as unilateral, while Hunner estimates that 92 per cent. of cases in his series were unilateral at period four and a half years after the symptoms began. Kroenlein's cases coming to operation show the right kidney affected 24 times, the left 23 times, and both 4 times. These statements certainly show these patients to be favorable ones for early operation.

The kidney, in the majority of cases, is affected prior to the involvement of the bladder, although the latter organ and the ureter may be expected sooner or later to become involved. Morris<sup>2</sup> claims that it is not difficult generally to tell the mode of infection when examining a tuberculous kidney after its removal. He says:

When by the blood miliary tubercles are found in the cortical substance the caseous nodules are older and wider about the bases of the pyramids than at the apices, and if they are broken down and have opened into the calices, the open vomicae are small, even though the parenchyma be entirely destroyed. Moreover, there may be little or no extension of the diseased process into the renal pelvis or ureter. When the disease is of the ascending type the ureter and renal pelvis are indurated, thickened and perhaps ulcerated, with a quantity of cheesy material in their walls or in their lumen. The calices share in these changes, the connective tissue and urinary tubes become invaded from below upward, the vessels become obliterated, minute hemorrhages occur into the tissue, and the breaking down process spreads along the pyramids from apices to bases until large vomicae are formed in the kidney, which communicate with the renal pelvis by large openings.

#### PATHOLOGY.

In circulatory infection the bacilli are localized in the neighborhood of the blood vessels, especially in the Malpighian tufts, and there produce the characteristic cell proliferation of tuberculosis. Morris states that the dead bacilli, as well as living organisms, may be the cause of the early cell division. This can only be true to a slight degree, and we may safely claim that all progressive lesions have resulted from the presence of the living organisms. Any dead bacteria present, with good reason, can be considered as dying after their implantation.

The lesion in the kidney may be single or multiple. Tubercle, as seen here, differs in nothing from that tissue wherever found in the body. As these non-vascular nodules increase in size, coagulation necrosis and caseation occur. The process of caseation may progress until the entire secreting structure of the kid-

ney becomes caseous. The process is essentially a slow one and may continue for years before the destruction of the kidney tissue is complete. The presence of a mixed infection is likely to render the tissue destruction more rapid. The *Bacillus coli communis* and the *Streptococcus pyogenes* are the bacteria most frequently present, but in the larger number of cases cultures are free of mixed infection (Hunner). Localized portions of kidney structure may be destroyed or the entire organ may become a cheesy, suppurating mass. The capsule of the organ, naturally resistant, becomes thickened and forms, as it were, the capsule of a cheesy cyst.

Sooner or later, the diseased process extends to the calices, and points of ulceration are seen communicating with the renal pelvis. These openings are minute at first, but soon increase in size. When the ulcerative process destroys a blood vessel, hemorrhage occurs into the renal pelvis and may be observed macroscopically in the urine. Early hemorrhage may result from the congestion produced by the infection, the overdistended vessels permitting the escape of the blood cells into the urinary stream. As the disease progresses, more and more vessels are obliterated until finally very little blood reaches the kidney and the hemorrhage becomes diminished in amount. This seems to agree with Casper's<sup>7</sup> statement that hemorrhage occurs in the first stage of the disease and becomes rarer as the disease progresses.

The flow of bacilli-laden urine through the kidney pelvis and ureter excites a congestion, then an inflammation, and finally a tuberculosis of these structures. The ureter becomes thickened and indurated and finally ulcerated. Microscopic section of its wall may show true tubercular tissue. The bladder apparently resists the infection for long periods of time in many cases, perhaps because of the free escape of urine when it reaches this organ, or on account of the natural resistance of its mucous membrane. It would seem probable that the frequent micturition noted early in this disease is a conservatism on the part of the organism to protect the bladder from the infectious urine. The bladder will show early in the affection, perhaps, nothing more than the pouting of a congested ureteral orifice. There soon follows this a congestion of the bladder on the side of the diseased gland where it is most exposed to the urine from the affected ureter. Still later the entire bladder is inflamed and finally tuberculous deposits and spots of ulceration appear. The other ureter may become inflamed and an ascending infection reach the other kidney which may have escaped up to this time, although such result is not met very frequently.

The ascending form is certainly less frequent than the one just described, and especially so in the female. From a deposit in the epididymis, vas, seminal vesicles, prostate or bladder, the process slowly extends by continuity of tissue to the ureter and finally to the kidney. In this type of the infection, we find the kidney most affected on the side of the greatest amount of bladder inflammation. Ascent of the infection would be facilitated by any obstruction to the urinary outflow, as a stricture of the urethra, an enlarged prostate or a phimosis.

In women, pelvic growths or a pregnant uterus in like manner can aid in the production of an ascending disease. Obstruction to the urinary passages will also favor a descending tuberculosis by retaining in the kid-

7. Casper: "Nierentuberkulose." Deutsche Klinik, Berlin und Vienna, 1904, iv, 3, pp.173-216.



ney bacilli that might otherwise escape harmlessly with free urinary flow. Miliary tuberculosis of the kidney is seen in children who are the subjects of acute miliary tuberculosis. The kidney, usually on each side of the body, is studded with these minute gray tubercles. The infection comes from the circulation and spreads in the same way. The progress of the disease, however, is very rapid, and, according to Morris,<sup>2</sup> it gives no symptoms directly indicative of the renal lesion and does not come within the scope of surgical treatment.

In some cases a form of sclerosis is excited, which is thought by Morris to be due to impaired virulence of the bacteria. The experiments of L. Bernard and M. Salomon<sup>8</sup> show cascating forms resulting from the injection of an ethereal extract of tubercle bacilli, while a chloroform extract gives rise to a sclerotic form.

Hydronephrosis may result from thickening and infiltration of the ureter, and is most likely to follow an ascending infection. Klippel reports a case in which the whole kidney was a polycystic mass and a tuberculous cystic degeneration existed without there being any obstruction of the ureter (Morris). I have seen one case resembling this, and consider the condition as by no means rare. The presence of a mixed infection may result in the destruction of the bacilli and in the formation of an abscess; thus in some instances recovery may occur. In other cases, the abscess invades surrounding structures and there plants a tuberculous process which progresses to a fatal termination. As a result of such rupture on the surface, a sinus may persist for years, or by invading a hollow viscus a fistula may be formed. Such a condition existed in one of my cases, the communication having been established with the posterior wall of the right colon. This case was considered unique until an investigation of the subject showed that several similar cases were on record. Lazarus Riverins and Fernclius<sup>9</sup> have recorded cases of gastro-renal fistula. Morris says that there is some uncertainty in the diagnosis of these cases, but mentions one case, verified by postmortem, in which a fistula from the kidney communicated with the left end of the greater curvature of the stomach. Cases of openings into the duodenum, colon and other portions of the intestine, as well as into the lungs, are on record.

Any of the adjacent structures may become tuberculous as the result of an extension from the kidney, although the resistance of the capsule is likely to prevent such occurrence unless the ureter is obstructed, thus causing tension within the renal capsule.

#### SYMPTOMS.

The onset of the disease is very insidious in the majority of cases, an exception being the sudden onset of pain in a previously healthy patient, probably due to the obstruction of the rigid ureter by clots of blood or by cheesy material. There is pain in the back, varying from a slight soreness to a severe backache, sometimes radiating down the side to the bladder and not much influenced by motion. Bazy<sup>10</sup> gives three points at which pain may be elicited on pressure: 1. At a point level with the umbilicus and about three fingers' breadth away, para-umbilical or superior ureteral pain; 2, below the costal border, right or left, subcostal; 3, above at

the summit of the costomuscular angle, the lumbar. All are usually present, the para-umbilical most often. Painful and frequent urination is often the cause of the complaint, even, as Hunner says, in the absence of bladder involvement. Sometimes the vesical irritation is very distressing. An increased amount of urine may be passed early in the disease, with a diminished quantity later. Morris claims that polyuria (thamuria of Tilden Brown), in a frail patient of tuberculous family, for which no other cause is assignable, should excite suspicion of renal tuberculosis.

Pyuria is present in every case; at least dead cells can be found which are identical with pus cells. Hematuria is often one of the early symptoms of the disease, and in most cases blood can be found at some time in the urine. The blood is usually equally diffused throughout the urine, which is acid in reaction except when cystitis coexists, but at times the hemorrhage is severe and persistent. Cases are recorded in which clots have almost filled the bladder. Albumin is always present when the infundibulum and ureter are involved. Casts are not of necessity present, but were noted in 10 per cent. of the cases in Hunner's report.

The size of the kidney varies, sometimes being normal and again being greatly increased in size. The presence of perirenal inflammation is likely to give the impression of a tumor.

The presence of tubercle bacilli in the urine is an important, but not positive sign of renal disease, as Kahlenden has shown their presence in the urine without pathologic change in the urinary tract. Bacilli, with blood and pus in the urine, in the absence of a diseased bladder or prostate, would seem to be pathognomonic. On the other hand, the absence of the organisms in the urine is not a proof that the kidney is sound. Hunner advises repeated daily examinations for bacteria rather than a number of examinations on the same day, and claims that the differential stain should always be used. Tubercle bacilli were found in 15 of 22 of his cases in which a note was made. Casper<sup>9</sup> found them in 80 per cent. of his cases and confirmed the nature of the germ by cultures and, with more extended time, by inoculation of guinea-pigs. Kroenlein<sup>1</sup> found bacilli in 17 of 31 cases. Tilden Brown<sup>3</sup> claims that cultures should be made from the urine separated by ureteral catheter, and also that inoculations are of great value.

Morris does not attach much importance to the tuberculin test, while Hunner considers it of value in cases free of fever. Casper<sup>7</sup> and Schmidt<sup>11</sup> use the tuberculin reaction. This test seems to me to be of value only to establish the fact that the patient has a tuberculous lesion, the location of the focus to be determined by other means.

The general symptoms are those of tuberculosis anywhere—evening rise of temperature, loss of flesh, anorexia, pallor of the skin, night sweats and, perhaps, edema of the feet. Later, hectic symptoms may be present. I have been surprised to note how well preserved my patients have been, and am led to believe that too much stress has been laid on wasting of flesh as a symptom.

#### DIAGNOSIS.

The diagnosis is to be made by the history, general appearance of the patient, pain less severe than that of stone, and coming on slowly as a rule, dysuria, polyuria,

8. Bernard and Salomon: *Recherches sur la tuberculose renale*. Jour. de physiologie de pathologie, Paris, 1904, vi, pp. 884-893.

9. Quoted by Morris.

10. Bazy: "Du diagnostic de la pyélite et de la pyélonéphrite simples et tuberculeuses." Presse Médicale, Paris, 1903. "Rein tuberculeux, enlevé par néphrectomie." Bull. et mém. Soc. de Paris, 1904, n. s., xxx, p. 367.

11. Schmidt, R: "Fall von initialer lebensgefährlicher Hämaturie infolge der Tuberkulose der Nierenpapillen." Wien. klin. Wochft., 1904, xvii, 27.



hematuria, pyuria in acid urine and the presence of albumin. The demonstration of the bacilli, with the other symptoms mentioned, will be conclusive.

Morris claims that the early diagnosis of renal tuberculosis may save the patient the necessity of a subsequent partial or complete nephrectomy by placing him in a suitable climate and under proper dietetic and hygienic surroundings. While the opinion of this authority carries great weight both on account of his large experience and because of his careful observation of these cases, it must be confessed that the results of such treatment are so uncertain that we are more inclined to operation when we make an early diagnosis of unilateral disease. We are willing to admit that some of these patients live for years, and complete recovery has been known to occur. In any event, an early diagnosis at once gives the attendant an intelligent and clear conception of the case, and he can then judge which is the best plan to follow. The very difficulty of diagnosis should stimulate one to the most careful study of cases presenting symptoms which point to tuberculosis of the kidney. The following are the conditions most likely to be mistaken for this disease, viz.: Renal calculus, pyelonephrosis, renal new growths, tuberculosis of the bladder, cystitis.

Morris states that in the early stages it is difficult, if not impossible, in the absence of the bacilli of tuberculosis, to diagnose tuberculous kidney from renal calculus. He says that the chief reliance should be placed on the constitutional signs of tuberculosis. We are often called on to make a diagnosis before any constitutional evidences of the disease are apparent, and without the history of tuberculosis in the family. The personal history of the patient is of the greatest value in arriving at a correct diagnosis. He will state that for some time he has suffered with a dull pain in one or both loins, with an occasional attack in which the suffering is more acute; that he has had frequent urination and has passed a thick, ropy urine of pale color, or at times it has contained blood. Following the attacks of pain, he may have passed plugs of mucus or blood clots, but no gravel. On the other hand, a patient suffering from calculus will give a history of passing urine which is high colored and concentrated, causing smarting on micturition. He may have suffered several attacks of renal colic, with the severe pain and profuse sweating incident to this condition, following which small, gritty particles may have been found in the urine. Fever is more likely to be observed in renal tuberculosis than in stone. Hematuria is nearly always present in tuberculous kidney, although it may be so slight that only microscopic examination will detect it, while in stone the hemorrhage is often intermittent and follows an attack of colic. Movement of the patient is more likely to excite both hemorrhage and pain in cases of stone than in renal tuberculosis. Pyuria is constant in tuberculosis unless the ureter is blocked, and it is sometimes intermittent in stone. Casts may be found in each and can not be considered diagnostic. In stone, crystals are usually found in the urine; they are rarely present in tuberculosis of the kidney. The demonstration of the bacilli of tuberculosis in the urine in connection with the symptoms mentioned will make the diagnosis positive, provided disease of the bladder and prostate is excluded. Careful cystoscopy and ureteral catheterization will exclude all possible error.

The question of the advisability of catheterizing the ureter in these cases is one worthy of some consideration. There can be no doubt of its value in making a

positive conclusion, but some objections can be offered to catheterization of a healthy ureter in the presence of disease of the other kidney or of the bladder, owing to the danger of infecting the healthy side. That such infection is possible we do not deny, but that it occurs with any degree of frequency we are inclined to doubt. As stated before, the experiments of Albarran seem to show that disease of the ureter only follows infection when an obstruction exists below. Hunner, in speaking of Case 2 of his series, says he thinks it fair to question whether the infection was not carried up to the left ureter by the catheter eight years previously. There is certainly no sufficient proof in support of his conclusion and it would seem more reasonable to attribute the infection to the same source as the one which caused the disease of the right kidney. Hunner claims that by the use of Kelly's speculum with an oblique end sufficient urine may be collected for examination by simply holding it under the ureteral orifice when the patient is in the knee-chest position. In the female, this may be a satisfactory measure, but it will prove more difficult than catheterization in the male and permits of the possibility of error. Albarran advises the use of a catheter in the diseased ureter as large as it will hold, thus obstructing it, and the collection of the urine from the other kidney from the bladder. When the bladder is not extensively diseased, I believe that catheterization of the ureter is justifiable and a means of diagnosis without equal. Moreover, by its use the activity and usefulness of the other kidney can be determined more satisfactorily than by any other means.

From pyelonephrosis the diagnosis is made by its slow course, the absence of high fever, and the evidence of acute sepsis seen in the latter condition, and by the presence of tubercle bacilli. While the urine may be acid in pyelonephrosis, it is usually alkaline, as it is most often a sequel of cystitis.

Tuberculosis of the kidney differs from renal tumors by a much less abundant hematuria, its persistent pyuria, its history, the presence of fever, the presence of other tuberculous lesions, if any, and by the demonstration of the organisms in the urine.

Bladder tuberculosis will not give rise to the lumbar pain or tenderness, and the blood will not be mixed equally through the urine, which will probably give an alkaline reaction. Successful ureteral catheterization will show the absence of bacilli in the urine coming from the kidneys, which would be good presumptive evidence of the absence of renal disease.

In cystitis, the history is quite different from tuberculosis except in the frequency of micturition. The presence of a large amount of pus in an alkaline urine, with great vesical tenesmus and pain, with, perhaps, the history of a local infection, and the absence of lumbar pain or polyuria and of bacilli, will be sufficient for a diagnosis.

When the diagnosis of renal tuberculosis is made, then is to be determined which kidney is affected and the condition of the other organ, both as to disease and efficiency. The gland affected can be determined in some instances from the history of pain, but this has in many reported cases been misleading, especially when both kidneys are involved and an attack is to be made on the one in which the disease has progressed the farthest. The most satisfactory method of meeting all these indications is by ureteral catheterization. The urine segregated in this way will show the presence or absence of bacilli, their abundance if present in each, and by cryoscopy and the urea tests the ability of either gland



to carry on the urinary function can be determined. Wright and Kilmer<sup>12</sup> have proposed a new method of determining the secretory efficiency of the kidney based on the point at which the urine, or blood from which that urine was obtained, will allow complete hemolysis of a standard suspension of red blood corpuscles. They claim by their method to be able to estimate a patient's ability to undergo a surgical operation. Those desiring further study of the method are referred to the original monograph.

#### PROGNOSIS.

Usually the prognosis is quite unfavorable, except in circumscribed disease of one kidney which is recognized early and treated surgically. The gravity is increased when both kidneys are involved and when it occurs in the course of a general tuberculosis, also when the ureter and bladder are extensively affected and when other tuberculous foci are present in the body. While usually progressing to an unfavorable termination, the course is often very slow and years may elapse before the fatal issue. Recovery without operation is possible, but of infrequent occurrence. E. J. Ill<sup>13</sup> reports several cases of apparent recovery, and Morris says "certain well-marked cases of renal tuberculosis have been temporarily or permanently benefited, and some actually cured, by a change of residence and suitable climate, under a proper hygienic and dietetic régime." Cases are recorded where a patient lived for some years with a diseased kidney after one had been removed. In the absence of disease in other organs, the prognosis is much improved by the early partial or complete removal of a single diseased kidney.

The mortality of nephrectomy was given by Gross in 1885 as 40 per cent., by Vigneron in 1893 as 29.8 per cent. operative mortality and 38.40 per cent. general mortality. Israel placed it at 18 per cent. in 1896, and Tilden Brown<sup>3</sup> in 1898 at 7 per cent. Kroenlein<sup>1</sup> records 34 nephrectomies with 10 deaths and 24 recoveries. Two patients died in the first days after operation, two within two months, two within three months, one in four and one in nine months, and one each in seven and eleven years. His operative mortality was 5.88 per cent. and the general mortality 29.40 per cent.

The number of permanent cures is greater after complete nephrectomy, or nephroureterectomy, than after nephrotomy, or any other plan of treatment. Still, in some cases, nephrotomy or partial nephrectomy would seem to be indicated. Morris reports seven cases of partial nephrectomy, in three of which the patients were later subjected to total removal of the organ, while four were known to be well at considerable periods after operation. He also mentions a case in which one kidney had been previously removed, in which he made a partial one-third resection of the remaining kidney, and the patient was alive four years after the last operation.

He records four nephroureterectomies with three recoveries and one death from hemoptysis and pulmonary tuberculosis five weeks later. Hunner reports thirteen such (complete and partial) operations done by Dr. Howard Kelly and his associates without mortality, a very favorable result.

The duration of the disease before the case comes to operation is not readily determined. Kroenlein<sup>1</sup> says in this connection that one-half of his patients had urinary disturbances for a year; the others dated back two, three, four or more years. One patient gave a positive

history on this point, having been seized with sudden, severe pain in the lumbar region after lifting, and was bedridden for seven weeks until he came to operation. In my opinion, when the attention of the profession has been called to this condition, the diagnosis will be made earlier and the mortality will be materially reduced by a prompt and radical attack on the disease.

#### TREATMENT.

Physicians are firmly convinced that this is essentially a surgical disease when it is recognized while it is solitary and when only one kidney is affected; also that by conservative operation much benefit may result even in the later stages of the affection. In cases in which operation is not accepted, or in which it is deemed unwise, much good may result from the use of such measures as are employed in the treatment of tuberculosis in other parts of the organism, viz., good food, fresh air, suitable climate, creosote, cod liver oil, and some of the various tissue builders. Especially important is the use of warm clothing and the protection of the surface from cold. In addition to these measures, the removal of the primary focus of infection is advisable when feasible.

In the light of recorded literature on this subject, it must be concluded that an early and complete nephrectomy, or nephroureterectomy, will offer most for these sufferers. Kelly has demonstrated also the feasibility of a partial extirpation of the bladder at the same sitting, when a portion of that organ is diseased. This is the ideal procedure for such condition, yet there are so many recorded cases in which the bladder involvement has been relieved after nephrectomy or nephroureterectomy that we are justified in leaving the bladder for a time to see if the symptoms will not subside. The results obtained by Morris in seven cases of partial nephrectomy are sufficient to justify a resort to that operation in well-selected cases. It would appear especially useful when both kidneys are involved, the second being subjected to operation after the wound in the first has healed. Albarran has recommended that incision of the kidney be made prior to its removal, first surrounding it with gauze sponges to protect the adjacent structures. This appears to be a very rational procedure and conducive to the best conservatism.

Nephrotomy is only indicated where the loss of the gland would probably result fatally; it is useful when both kidneys are diseased and when fever is present or when considerable tissue destruction has taken place. The results of this operation have not been flattering, perhaps, in part, because it has been employed late in the affection.

Following any of these operations considerable attention should be paid to the functional activity of the remaining kidney, and the skin called to its assistance during convalescence, by the use of heat to the surface, diaphoretic drugs, and the administration of large quantities of water. After recovery from the operation the same hygienic measures advised for non-operative cases are to be employed.

It is unnecessary to mention the technic of operations on the kidney, except to emphasize some points which are worthy of consideration. The most important of these is the protection of the surrounding tissues from infection, whether the attack is made through the loin or through the abdomen. In some cases of perinephritic infection, protection is impossible, but the convalescence will be short or protracted, according to the successful avoidance of contamination from the diseased kidney. Kelly has graphically described the operation of nephro-

12. Wright, A. E., London Lancet, 1904, i, pp. 921-924.

13. Ill: Annals of Surgery, October, 1903, vol. xxxviii, p. 524.



ureterectomy, and his technique may well be followed. The suggestion that the upper end of the ureter, left after nephrectomy, be cauterized and inverted is offered as a safeguard. In order to prevent an excessive amount of infectious material passing into the bladder during the manipulation of the kidney before removal, a ligature should be placed around the ureter near the kidney pelvis, or a clamp may be similarly placed. Even with this precaution the bladder will contain considerable necrotic tissue, and it should be thoroughly washed before the patient leaves the table. The bladder should receive careful attention for some time and such treatment as its condition demands.

#### DISCUSSION.

DR. O. C. SMITH, Hartford, Conn., said that it seems to him that because the tubercle bacillus is such an illusive body, it should not be dismissed without extraordinary search. When it has been found, although it may not be pathognomonic, it is the most distinctive symptom. There may be pyuria, hematuria and other symptoms and still not tuberculosis of the kidney. One can not devote too much time in a search for this bacillus. A twenty-four-hour specimen of urine should be collected, and thorough and repeated search made. If not found, the specimen should be centrifugalized and a guinea-pig inoculated. In this way the diagnosis may be brought out. Cryoscopy is a decided aid in these cases, and Kummel claims that since employing it he has not had a kidney death, i. e., not a death from anuria of the remaining kidney. The procedure requires time and practice. One who is actively engaged in surgical work can not devote the necessary time to cryoscopy and skiagraphy. Dr. Smith has recently advocated before the state society the importance of some one being skilled and equipped in this line of work in every community. In skiagraphic work physicians in Hartford have been somewhat limited, and have not been able to do the work so successfully as those in larger cities, but lately, with improved apparatus, their results have been more satisfactory. Just before Dr. Smith left for the session a calculus was detected in the kidney of a young woman who had suffered for twelve years. Following the advice given in an article by Dr. Lewis Gregory Cole of New York—who made a positive diagnosis in 167 patients, all of whom were operated on, revealing but two errors in diagnosis—the patient was placed on the back with the tube over the abdomen, and the picture taken very quickly, the patient holding her breath so as to limit the excursions of the diaphragm. If any movement is made the shadow will be enlarged. Operation proved the diagnosis to be correct, a stone the size of a marble being removed from the kidney pelvis.

DR. M. H. RICHARDSON, Boston, said that the first question of practical importance is whether or not both kidneys are affected; a second and still more important one, whether, in case of a proposed operation on one kidney there is another kidney, and if there is another, whether it is capable of adequate elimination. It would be absurd to operate on one kidney if the other one was incapable of doing the work of two. It seems to Dr. Richardson that the treatment of tuberculosis of the kidney, which is not an uncommon disease, is clear if it is certain that one kidney alone is affected. If a focus exists in one kidney only, that kidney should be extirpated; it is only in this way that the disease can be cured. Even after the removal of a tubercular kidney the chances of a permanent cure are not worth much, because of the probable incompleteness of even so extensive an operation as nephrectomy; this has been his experience. When there are sinuses dependent on a tubercular focus the prognosis is also unfavorable. The best treatment is the complete removal of the kidney in the very beginning of the tubercular process rather than when ureter, bladder and the other kidney and ureter have had time to become infected. Dr. Richardson has become convinced that in tuberculosis, as in malignant disease, the best treatment is thorough extirpation at the earliest possible moment. Palliative measures should be resorted to in tuberculosis only when surgical treatment is impracticable.

DR. THOMAS W. HUNTINGTON, San Francisco, declared that the opinion of any individual in the face of voluminous evidence gleaned from the experience of frequent operators, must be taken with some allowance. While he is aware that there is excellent authority for partial operations on the kidney under certain circumstances, his experience accords closely with that of Dr. Richardson. Dr. Huntington has found that extirpation of one kidney at almost any stage in the progress of tubercular disease has given results altogether satisfactory, and he recalled three such patients who are now living valuable lives and so far as he can tell, are absolutely healthy. In the first there was a kidney as large as a fetal head, which was converted into a pus sac. It could not be removed through the ordinary incision without first exhausting its contents. The man at the end of four years shows a gain of nearly thirty pounds and is able to follow his ordinary occupation. In the second case there was a persistent sinus due to ureteral involvement for eighteen months. There was ultimate closure of the sinus and return to health. He does not acknowledge that he has been crippled in the least by the operation. The third case was analogous to the previous ones, and the patient is living after five years perfectly well. In two of the cases tubercle bacilli were clearly demonstrated. In the third no research was made. While a wise conservatism should prevail in our estimate of the value of partial operations, nevertheless it is possible that physicians shall grow more optimistic in that regard in the future in dealing with tuberculous disease of the kidney in its early stages.

DR. CASPER W. SHARPLES, Seattle, Wash., said that hemorrhage of the kidney is often the first symptom and may be very trifling in quantity and amount. The first and only symptom sometimes is the small quantity of blood, although some bladder irritation may be present. When these conditions are present it is a pretty good indication that we should be on the lookout for tuberculous kidney. The hemorrhage may occur with or without irritation of the bladder, but is usually accompanied by painful urination. He mentioned a case in which he operated for tuberculous kidney and in which operation was followed by a profuse hemorrhage eighteen hours later. The blood seemed to come from the stomach. Physical examination of the lungs showed no tubercular deposits in the chest and the sputum showed nothing; the patient simply vomited a large quantity of blood and died.

DR. T. W. NUZUM, Brodhead, Wis., said that he saw Dr. Mayo do an operation recently in which, after removing the kidney, he injected into the ureter twenty drops of 95 per cent. carbolic acid, after which he tied it. Dr. Mayo said that very little would reach the bladder and that it would be harmless. This impressed Dr. Nuzum as being of importance in obviating the necessity of removing the ureter.

DR. JACOB FRANK, Chicago, said that there are certain symptoms which are referred entirely to the bladder and not to the kidney at all, and that this is of importance in the diagnosis. He has had two such cases in which the bladder was apparently normal; cystoscopic examination showed it to be normal except for the presence of pus. It has been said that the ureter is generally enlarged in the ascending type, but his observation has been that it is also enlarged in the descending. Dr. Frank thinks that as a general rule when the kidney is enlarged and the physician knows that there is an infection present, and when the adhesions are extensive and there is danger of opening into the peritoneal cavity, nephrectomy should be done in two sittings. When a patient has recovered from the first operation then only is a complete nephrectomy indicated. In one case he was unfortunate enough to open the pleura and the patient died. Postmortem examination showed that the tuberculosis was no doubt caused by stones which were in both kidneys, and whether the patient died from the opening of the pleura or from the failure of the other kidney to do the work of both kidneys, he does not know. If he had another case in which the kidney was enlarged and the adhesions strong, he would prefer to do the operation in two parts. He operated sixteen years ago on a woman with tuberculosis of the kidney who is still alive. Her bladder symptoms have remained, but they are not so severe as they were when she had her tubercular kidney.



This matter is looked on too lightly. It is said that the bladder symptoms entirely disappear after the removal of the kidney, but Dr. Frank's observations are that the bladder symptoms remain, although they gradually wear away in time in a limited number of cases. The bladder having been accustomed to empty itself so frequently that this symptom does not disappear at once. Dr. Frank thinks that if an early diagnosis can be made before the bladder has acquired this habit of emptying itself frequently, the troublesome cystitis after nephrectomy would be very rare. With the aid of the cystoscope early diagnosis should be easy. In all large cities there are means of catheterizing the ureters and if a tuberculous kidney is found it should be removed at once.

DR. J. G. SHERRILL said that he always tries to determine the condition of the function of the other kidney before the operation. It is urged by many that the catheter should not be passed through an infected bladder into a sound ureter. There are many cases in which much can be learned by passing the catheter into the ureter, and if the bladder has normal mucous membrane it is perfectly safe to pass a catheter into the sound side. If the two urines are examined the presence of bacilli, as well as the ability of the kidney to take care of the function, can readily be determined. Recently Wright and Killmer have advised a new method of determining the efficiency of the kidney, a method of hemolysis. Dr. Sherrill said that he feels sure that injecting carbolic acid into the ureter would be a good proceeding if the ureter is but little if any affected, but if it is extensively diseased it would not be successful. The symptoms referable to the bladder are important, and many of the cases start with dysuria and polyuria. This is a very important point. The dysuria and polyuria are caused by the pus in the urine and should lead us to search for Koch's bacilli, and if found this proves the trouble to be tuberculosis. Bladder tuberculosis may be excluded by cystoscopy. If the urine is acid and contains pus it is important. Dr. Sherrill does not search one specimen many times, but many specimens a few times on succeeding days. Persistent search day after day for a week or more will usually result in finding the bacteria in the urine.

## BRAIN INJURIES.\*

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To determine whether or not immediate operative interference in brain injuries is indicated is a question of such serious magnitude as to require the most careful consideration of each individual case as it presents itself. Not infrequently, the life of the patient is in the balance, and his fate is determined by our decision one way or the other. The variety of symptoms presented in this class of cases is so great as to prove most perplexing to the minds of the ablest surgeons, many of whom have found at the autopsy that they have been in error in their diagnosis and decision. I feel fully warranted, therefore, in presenting a few facts as I have found them in the operating room and elsewhere, with the hope that the experience herein related may be the means of eliciting such discussion as will throw further light on the class of cases that has caused me great perplexity in trying to determine the advisability of an operation. It is my purpose to discuss this question from a surgical standpoint alone.

There can be no doubt that there is, and always will be, a distinct field for elective brain surgery. It would, indeed, be most unfortunate should there be a tendency to abandon so fertile a field for such brilliant achievements of surgical skill and such good to suffering humanity. Brain surgery has been so firmly established in recent years, however, that there is little danger now of its position being disturbed.

The symptoms which immediately follow injury to the brain are exceedingly important on account of their diagnostic value in determining the extent and nature of the lesion, and serve to aid in treatment and prognosis. It must not be forgotten, however, that the early symptoms may be misleading, and may not, by any means, reveal the exact nature of the injury. It sometimes happens that the most serious intracranial lesions may be found to exist in the presence of symptoms which would suggest only a slight concussion, while, on the other hand, a patient may quickly recover from an injury the early symptoms of which are so aggravated as to give the surgeon serious concern. The first symptom generally observed in serious head injuries is unconsciousness. It is not easy to determine the full significance of this from the symptom alone. In this connection, the most important question to determine is whether the unconsciousness is due to hemorrhage or to concussion or contusion of the brain. It is also of the utmost importance to know the manner in which the injury was received.

The symptom of unconsciousness alone will not reveal whether it is due to hemorrhage or concussion (unless the hemorrhage be from a cerebral artery, as in apoplexy) and as the hemorrhage due to injury is generally meningeal, it does not produce the degree of coma of a cerebral hemorrhage. The manner of approach of the unconsciousness is a most important diagnostic symptom; it is important to know if unconsciousness occurred immediately, after a few minutes or an hour or two, or if there was a return of consciousness after a primary loss, followed shortly by a reappearance of the former state. As a rule, when the patient has fallen from a height, striking on his head, serious lesion at the base of the brain may be expected; or a direct blow may be received on the convex surface of the skull, in such a manner as to produce a lesion in the cortical or subcortical substance, which will cause loss of consciousness. It is important to know the nature and location of the injury. It may be known that a man has received a blow on his head, but when first observed by the surgeon, the external evidences of the injury may have been so completely obliterated, or may not have existed at all, or may be of such a character as not to reveal the location of the blow, and unless there are present pressure symptoms, or other focal evidences, the surgeon may be deceived as to what has really taken place in the cranial cavity. While this state of false security lasts he patiently waits for a return of consciousness, while an increasing hemorrhage goes on within the cranial cavity. An increasing hemorrhage, of course, produces pressure unconsciousness. If the pressure is caused by a depressed fracture, examination will disclose the fact, and if there are marks of violence over the region of the middle meningeal artery, the fact should aid in the diagnosis. If it is determined that the early symptoms of the lesion are caused by a rupture of a meningeal artery, especially of the middle meningeal, the immediate effects may be regarded as most serious, unless relieved by prompt surgical procedure.

The success in a measure will depend on the surgeon's knowledge of cerebral localization. He must be able to determine with accuracy the location of a clot or lesion, or his surgical skill will fail in giving relief to the patient. He must know that on the cortex of the brain there are certain areas, not necessarily co-extensive with either lobes or convolutions, these centers are the visual, the speech, the auditory, the sen-

\* Read before the Indiana State Medical Association at West Baden-French Lick, 1905.



motor, and the centers of sensation, smell and taste. Cerebral localization has to do mainly with two fissures—the fissure of Rolando and the fissure of Sylvius. A knowledge of these areas aids greatly in determining the location of a blood clot, or other brain lesion, and with more exact methods of localization, with more precise craniocerebral topographical methods, and with constantly improving surgical technic, the percentage of successes has been increased. The readiness with which the surgeon recognizes the emergency, and the promptness with which he operates, has contributed no little to this success.

Fracture of the vault is usually the result of direct violence applied over a limited surface. When violence is attended by much momentum, the force is diffused, and a fissure will usually be found to travel from the point of primary inception to some distant region. A quick, sharp blow produces a local fracture, while violence with momentum produces a fissure. It is difficult to formulate a rule by which the direction traveled by these fractures can be determined. Direct violence to the vault from without results in a larger area of damage to the inner table than to the outer; and rarely, the amount of violence may be sufficient to break the inner table without fracture to the outer. The blow may not result in fracture of either table, yet the vibratory change in the shape of the vault results in a rupture of a vessel, with consequent hemorrhage, or it may result in actual contusion of the brain substance and displacement of cerebrospinal fluid and blood.

Again, we may have a transmission of the force to the opposite side of the vault from the point of the receipt of the injury, resulting in fracture by *contrecoup*. Whether this transmission of force is the result of the wave current, or whether it travels by other means to reach the opposite side of the skull, we are certain of the fact that in some way the force of the blow is transmitted to the opposite side, resulting either in fracture or other injuries.

The length of time that may elapse from the receipt of brain injury until active diagnostic symptoms appear, is indefinite, and may vary from a few minutes to several hours or many days.

Borel, as early as 1677, described a class of symptoms or disturbances the result of contusion of the head, which was neither dependent on a fracture of the bone nor a tear of the blood vessels, but was so transitory and of such slight intensity that an actual wounding of the brain could not be its underlying cause. Later when autopsies were more often made on patients dying from injuries of the head, a question arose which has only recently been answered. Following the most dangerous and severe brain symptoms the most careful autopsy failed to reveal the slightest trace of visible change in the brain of the deceased. In other patients, in whom all brain symptoms were absent, and in whom neither the motor nor the sensory functions had suffered, it was found extensive brain lesions existed, frequently a large portion of the frontal lobe was found crushed to a pulp. It is necessary, therefore, that physicians be extremely guarded in their diagnosis and prognosis in these injuries.

That surgical interference is imperative in these cases there can be no doubt. In a condition of hemorrhage of a typical character there are three consecutive stages that must be recognized, namely: First, a partial or complete unconsciousness, the result of stunning from a blow; second, the recovery from this, and later a

secondary unconsciousness coming on either slowly or with marked rapidity, as the result of pressure from a slowly accumulating hemorrhage; third, unconsciousness occurring as the result of an overwhelming hemorrhage, forming a veritable wet blanket over the brain. It is well to remember, however, that in the case of a rupture of a large branch, and especially the main branch of the middle cerebral, there will be such a rapid outpouring of blood as totally to obliterate the period of consciousness between the two stages.

Hemorrhage may be extradural or intradural, following a blow on the skull, with or without fracture, fissured or depressed. The frequency of hemorrhage in intracranial injury is quite marked. Phelps holds that in from 50 to 60 per cent. of the cases this factor occurs in sufficient quantity and such relation as materially to influence the final result, and to serve as a determinate factor of the symptoms; and that in about one-third of all cases it was either the direct or the sole cause of a fatal ending.

Operative interference is indicated when there are symptoms of compression, whether from hemorrhage, depressed bone, or the presence of a foreign body. The greatest mortality is in injuries caused by falls from a height, striking on the head, such as being thrown from a horse, or falling from a building or scaffold. Gunshot wounds of the brain are almost equally fatal. In determining the question as to whether or not operative interference is indicated, it is necessary that the manner of receipt of the injury, the character of symptoms following, and the rapidity with which certain symptoms come on following the accident, be taken into consideration. If called on to assume the responsibility of a patient presenting such evidences of serious brain lesion as paralysis in some form, clonic convulsions of one side or the other, inequality of the pupils, with possibly unconsciousness or profound coma, and probably with Cheyne-Stokes or stertorous respiration, there is little doubt that the surgeon will readily recognize that surgical interference is imperatively demanded. I desire to emphasize the fact that, in my judgment, the danger to the patient of an exploratory opening with an observance of the highest degree of aseptic technic, is infinitely less than the unreasonable delay that is frequently permitted while waiting for definite diagnostic symptoms. It is in that class of borderline cases presenting only a few of the foregoing symptoms, and maybe in an exceedingly mild form, or in the cases in which it is necessary to depend for diagnosis largely or wholly on the manner of receipt of the injury, together with its character and location, that we are liable to be misled by an apparently unimportant array of symptoms, and to fall short of our duty as surgeons by failing to recognize at the earliest possible time the unusual symptoms pointing to a lesion at some point in the brain that could and should be relieved by operative interference. I would urge, therefore, the importance of the physician observing in detail each case of brain injury from the time of his first visit until such a time as he can reasonably assure himself that no injury has occurred within the cranial walls. It is not intended by any means to sacrifice conservatism, but rather to increase its usefulness by adding to it that degree of conservative boldness born of a knowledge of imperative duty, enhanced by a knowledge of anatomy of the brain, together with the significance of a class of symptoms, and the ability to apply the highest degree of surgical technic for the relief of this class of patients.



In this connection, the following report of two cases will be of interest in illustrating in a manner some of the statements contained herein:

**CASE 1.**—Three years ago I was called to attend a man aged 35, of remarkably strong physique, who, while in a fight, had been shot with a 38-caliber ball from a pistol. The bullet entered the skull from behind and well up toward the top in about the median line.

**Examination.**—It was found that the skull had been literally crushed for a space of an inch or an inch and a half in diameter. The dura was badly lacerated, and many fragments of bone were found approximately two inches down in the brain substance; there was also extensive laceration of the brain tissue.

**Treatment.**—These fragments of bone were removed, and the wound in the brain carefully but thoroughly irrigated with a normal saline solution, quite a quantity of the brain matter escaping. The dura was sutured as well as possible, the external wound closed and dressed and the patient put to bed.

**Result.**—The man made an uninterrupted recovery, and at the end of ten days was able to sit up, and in two weeks left the hospital apparently all right. The only symptom that showed itself following the operation was on the second day, when the man called attention to the fact that he felt something under his back and asked if it could be removed. On investigation it was found that he was lying on his left hand, of which he was totally unconscious so far as the hand was concerned, showing conclusively that the arm center in the brain had been slightly interfered with. This symptom lasted for only a few days, when it cleared up. The man was a coal-shoveler on the fleets, and the last heard of him, about a year ago, he was perfectly well and had suffered no inconvenience from his injury.

**CASE 2.**—A man, while engaged in repairing an electric light wire one day last winter, fell from a scaffold to the frozen ground, a distance of probably twenty-five feet, striking on the left side of his head. The only external evidence of an injury was a slight contusion of the scalp on the left side.

**Examination.**—When seen a few minutes after the injury he presented the following symptoms: Total loss of consciousness, inequality of pupils, the left being more dilated than the right, with slight conjugate deviation of the eyes toward the left; ecchymosis around the left eye, with considerable protrusion of the left eyeball; irregular pulse, and a slight tendency to Cheyne-Stokes respiration. There was a fracture of the left arm and left leg, which interfered materially with diagnosing any paralysis which might have followed the injury. Later it was observed that there was variation in the pupils, the left pupil contracting somewhat, with a slight dilatation of the right. Within twenty or thirty minutes following the accident he showed marked clonic contractions, or convulsions of both the arm and leg on the right side. The knee-jerk was slightly exaggerated on the right, while on the left the result was negative on account of the fracture of the thigh. It was difficult to test his sensory reflexes on account of his profound unconsciousness.

**Treatment.**—Injury of the left side, probably extensive hemorrhage from the left meningeal artery, was diagnosed, and it was decided to trephine. There appeared to be no injury to the vault of the skull whatever, both tables being intact. The opening was made a little anterior to the junction of the temporal, parietal and frontal bones on the left side. There was no extradural hemorrhage, although the dura appeared very tense. On opening the dura it was found that there was some extravasation of blood under the membrane which had followed the convulsions of the brain at this point. Simultaneously with the opening of the dura and the relief of the tension the patient's pulse and respiration became very much improved under the anesthetic. The wound was irrigated with a normal saline solution, the dura sutured, and the external wound closed. The improvement in the patient's condition continued, and was even more marked for twelve or fifteen hours following the operation, when he developed what appeared to be traumatic pneumonia, from which he quickly died.

**Autopsy.**—The autopsy showed some laceration of the brain

tissue, with rather extensive extravasation of blood at several points, and with a stellate fracture at the base, beginning at the junction of the anterior wing of the sphenoid and frontal bones, running backward through the middle fossa to the petrous portion of the temporal bone, and another line of fracture beginning at the same point and running forward through the floor of the orbit, and a third fracture line running through the cribriform plate of the ethmoid and crossing to the opposite side.

I have purposely refrained from taking up at length the various means or instruments suggested for gaining an entrance into the brain. It is believed that each of these various instruments has its advantages in certain cases and its disadvantages in others. This question has been so fully and ably discussed by such men as Keen and Mills and others that it seems unnecessary to consider it except in a general way. In brain tumors or in other diseased conditions, I am partial to the chisel and mallet. In brain injuries with laceration and probably wounded vessels with consequent hemorrhage, the trephine and the rongeur are to be preferred, lest by the use of the chisel and mallet a further injury to the already contused or lacerated brain is had, or an already dangerous hemorrhage from a wounded vessel is increased. These, however, are questions to be determined by the operator when he assumes the management of each individual case as it presents itself.

## FURTHER REMARKS ON THE MODE OF INFECTION IN UNCINARIASIS.\*

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ATLANTA, GA.

At the session of this Association at Atlantic City last year I presented a report of an experiment on a human being to determine whether the larvæ of the uncinaria would penetrate the skin. At that time I reported that, after placing soil containing larvæ on the skin of an individual, an eruption had followed, and that, after a period of seven weeks, the eggs of the uncinaria were found in the feces.

In this paper I report a second experiment, similar to the first, in which the soil containing the larvæ was placed on the wrist of an individual who had shortly before been discharged from the hospital after an operation for hernia, and the eggs of the uncinaria were found in the feces during the sixth week afterward.

In the first case, it was not feasible to obtain photographs of the various stages of the eruption produced on the skin by the larvæ, but in this second case I was able to do this, and present them in the report which follows:

### METHOD OF PROCEDURE.

**Preliminary Arrangements.**—After making arrangements with the patient regarding the experiment, a specimen of feces was obtained containing an abundance of the eggs of the uncinaria. Some soil was next obtained and baked for an hour so as to eliminate any other organism. After cooling this soil, the feces containing the eggs were then mixed with it until the odor of the feces had about disappeared, sufficient water being added to render the mass slightly damp. This mix-

\* Read at the joint meeting of the Section on Practice of Medicine and the Section on Pathology and Physiology at the Fifty-sixth Annual Session, July, 1905.



ture was then placed in Petri dishes and kept at the room temperature.

At the end of twenty-four hours an examination of the soil showed that the eggs had all hatched out, as no eggs could be found, but there was an abundance of the young larvæ.

*Application to Skin.*—An important point to be determined was the age at which the larvæ would penetrate the skin. It was decided, therefore, to place the larvæ on the skin every day from the time they were

the stinging sensation had gradually subsided the day previous, but that during the night the intense itching of the area was so annoying as to interfere with his sleep. On removing the bandage from the wrist the redness over the area was increased, the area was slightly elevated, and the entire dorsum of the wrist was swollen. The patient was instructed to restrain any desire to scratch the area, but to be sure that the area would not be damaged by the finger nails of the patient while asleep the layers of gauze bandage were replaced.

*Constitutional and Local Symptoms.*

—On returning the day following, the patient stated that he had slept scarcely any at all the night before on account of the excruciating itching, and that he had rolled and tossed all night.

Removal of the bandage showed the wrist greatly swollen, the swelling extending downward over the back of the hand and upward a short distance on the forearm. The area which had been covered by the soil was intensely reddened, and vesicles covered the entire area. On direct pressure, however, the patient said that there was very little tenderness. The lack of tenderness was a marked feature throughout the course of the eruption. This was true in the first case. The condition of the

wrist at this time is shown in Figure 2.

On the third day of the eruption, the swelling had extended down over the first phalanx of the fingers and upward to about half way to the elbow. The swelling reached its height at this time. The vesicle had become confluent, forming large blcbs, and the redness was more intense. The itching was still severe, but the patient said he had rested better than on the two previous nights. There was some redness up the inner side of the forearm, but no involvement of the axillary glands.

twenty-four hours old until some result was obtained. Accordingly when these larvæ were twenty-four hours old some of the soil was placed on the wrist, wrapped with a plain gauze bandage and allowed to remain for one hour. At the end of this time the soil was removed and the wrist examined. No effect was apparent and the patient said he had experienced no sensation during the period.

This procedure was repeated when the larvæ were forty-eight hours old, and again on the third, fourth and fifth days. No result whatever was obtained, and this was rather surprising, as the results in the previous experiment were obtained when the larvæ were four days old.

On the sixth and seventh days the patient failed to appear, but he reappeared on the eighth day, and the soil was again bound on the wrist and allowed to remain for one hour.

Within five minutes after the soil was placed on the wrist the patient complained of a sharp, stinging sensation in the area covered by the soil, which increased and persisted during the time the soil was allowed to remain on the wrist. At no time was the wrist of the patient given any treatment whatever before applying the soil. The soil was simply placed directly on the skin, as shown in Figure 1. (About the third day a simple ointment was placed on the eruption to relieve the anxiety of the patient.)

*Treatment of Wrist.*—After remaining on the wrist for one hour the soil was removed, and on inspection the entire area was found to be decidedly reddened. The soil was thoroughly removed and the wrist was then carefully wrapped with a number of layers of plain gauze bandage, and the patient was instructed not to remove this and to return the following day.

On coming back the next day, the patient said that

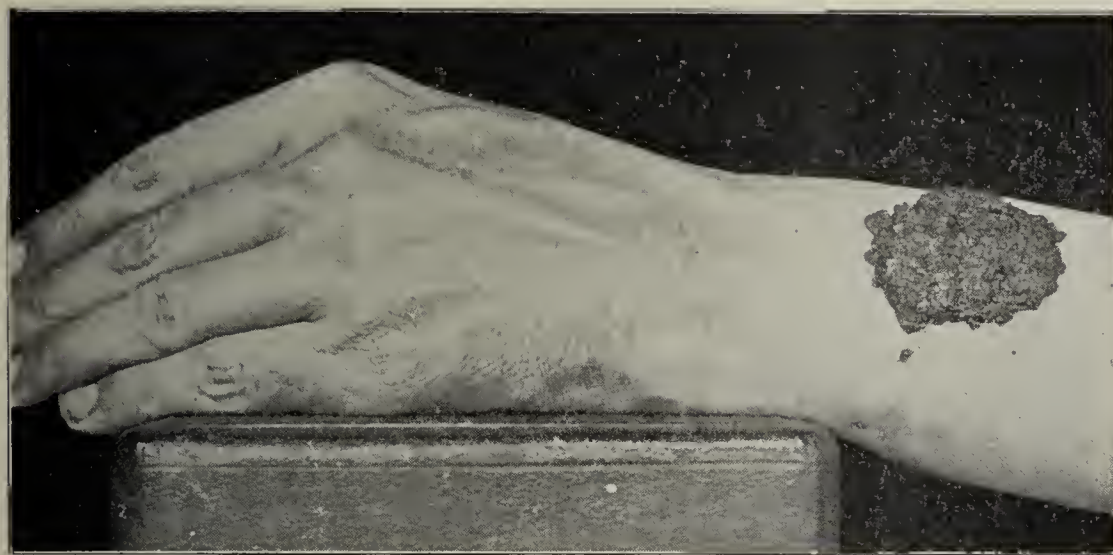


Fig. 1.—The soil containing the larvæ as it appeared on the wrist, the tendons and veins of the hand showing distinctly.

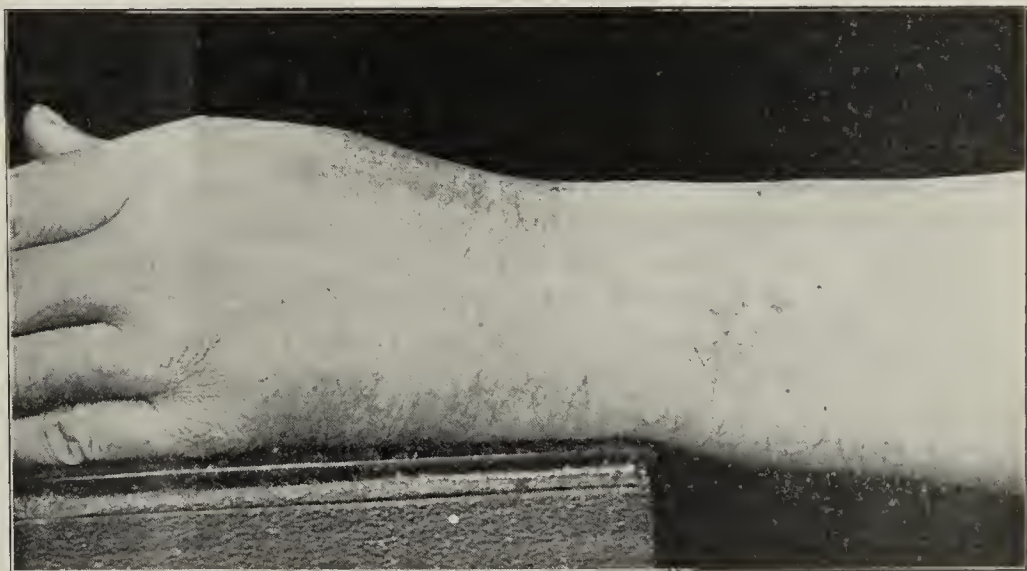


Fig. 2.—Showing swelling of wrist, obliterating veins and tendons of hand and vesicle formation.

On the fourth day, some of the vesicles had ruptured, moistening the bandage, and the swelling had begun to recede. The patient had rested much better than previously. The itching had also decreased in severity.

On the fifth day, many of the vesicles had ruptured, and a crust had formed over a part of the area. The swelling had greatly decreased, the veins and tendons showing well through the skin. Previously they had been obliterated by the swelling. The patient now said



he was feeling all right again. Figure 3 shows the hand at this time.

On the sixth day, almost the entire area was covered by the crust which had formed, only a few vesicles remaining. Only a trace of the swelling remained about the wrist, and the patient said that the slight itching sensation which remained was not confined to the area of the eruption, but was scattered over the entire forearm.

On the eighth day, the crusts which had formed over

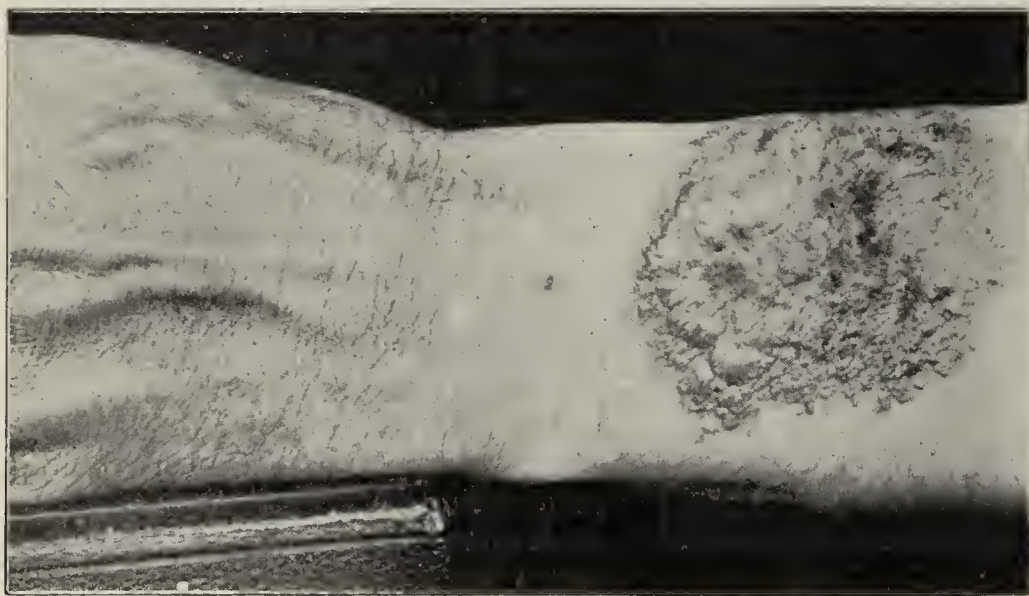


Fig. 3.—Showing the large crust forming over the area and the decrease of the swelling.

the area had begun to scale off, the swelling was practically all gone, and the patient said that he felt about normal again.

*Examination of Feces.*—The feces of this patient were carefully examined at the beginning of this experiment, the feces being washed and centrifugated, as by this method I have found that it is possible to detect the slightest infection with uncinaria, but no eggs of the uncinaria were found. After beginning the experiment, the feces were examined twice a week, but with negative results until the middle of the sixth week after the soil was placed on the wrist. At this time a few of the eggs of the uncinaria were found in the feces, and after this they steadily increased in number.

As this patient was just out of the hospital after an operation, no examination of the blood was made, as under the circumstances this was considered to be of such uncertain value as not to be worth while.

Soon after the appearance of the eggs in the feces, in reply to questions, the patient said that his bowels were inclined to be loose, and a week or so later this had increased to a mild diarrhea. This cleared up in a week or so more, and the patient said his stools were normal.

Eight weeks after the appearance of the eggs of the uncinaria in the feces of the patient, he was given the usual treatment to remove the parasite, i. e., two doses of thymol of 30 grains each, preceded and followed by a large dose of salts. All the stools were saved for twenty-four hours following the treatment, and these were carefully washed and examined. As a result, 596 adult male uncinaria and 752 female uncinaria were found, making a total of 1,348.

Some time after this the feces of the patient were again examined and found still to contain a few eggs of the uncinaria. Since then he has been given the treatment at two different times, but at the present time still has a slight infection.

#### SUMMARY.

In the criticisms of the experiments of Looss, Pieri, the assistant of Grassi,<sup>1</sup> states that the experiments of Looss are uncertain, because Looss can't be sure that the infection in his case was not through the mouth on account of his having handled the larvæ so much.

In this last experiment performed by me, I took great pains to be sure that the patient could not come in contact with the larvæ at any other time than when placed on the wrist by me, and the fact that such an enormous number were found in the intestines would discredit any idea that the infection was through the mouth, as mentioned by Pieri.

The deductions from these experiments, I think, are plain. That the disease is contracted through the skin is supported by the clinical observations which I have reported previously. That this is the only way in which the disease is contracted I am not sure, but it appears to be the mode of infection in the great majority of instances.

These experiments also show that the eruption has no tendency to spread when it is not disturbed by scratching and has a duration of only a few days. When the eruption occurs under natural conditions, however, the individual scratches and tears the eruption, infecting the entire area and spreading the infection over a large additional area, and as a result of this the eruption is often weeks in healing up.

A study of the climatic conditions I find to be of value in determining just when and under what conditions these larvæ penetrate the skin in the natural conditions. These observations have not yet been completed. I hope to be able to report on them later.

Last year I reported some examinations of tissue which had been subjected to the larvæ, but in which I had not been able to locate the larvæ. These experiments I have not had an opportunity to repeat, and, therefore, they are still uncompleted.

#### DISCUSSION.

DR. RICHARD C. CABOT, Boston, said that two great medical achievements have resulted from the war with Spain. We

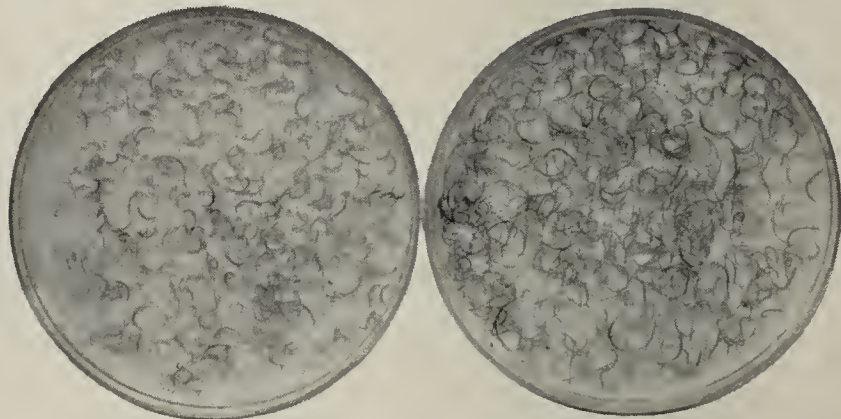


Fig. 4.—Shows 1348 uncinaria removed from the intestines twelve weeks after the eruption on the wrist.

have freed Cuba of yellow fever and we are now freeing Porto Rico from uncinariasis. To Capt. Bailly K. Ashford, U. S. A., and Lieut. W. W. King, U. S. P. H. and M. H. S., we owe much of what has been done. They have conducted a field campaign against the disease among the whole people of Porto Rico. They have field hospitals, tents, etc., which they take from town to town; they camp outside the towns and there they treat the population. The people come

1. Centralb. f. Bakteriologie und Parasit., Erste Abteilung, xxxiv, 1903, 531, and Arch. Italiennes de Biologie, xxxvii, 1902, 269-273.



down to them to be treated. When they have intense anemias to deal with the patients are treated in bed, while those with milder cases take the medicine given them and go home. Every case is diagnosed by means of the microscope, the stools and blood being carefully studied. Two American physicians have organized and pushed a plan to treat practically the entire population of Porto Rico. Dr. Ashford and Dr. King are engaged in this work now, as they have been for a number of months. They were invited to be present at this meeting, but they were detained in the service, and are even now engaged in their splendid work. They ask nothing from us, but their fine service certainly demands from us knowledge of the work and our sympathy. The results have been published in brief, but not in detail in the journals, and are known less widely than they deserve. Dr. Cabot looks on their achievements as destined to be as beneficent as the work of Reed and Carroll on yellow fever in Cuba.

DR. M. H. FUSSELL, Philadelphia, asked if Dr. Smith considers the ground itch as the only source of this parasite in the human being, or if the affection may occur by the parasite being swallowed, and whether he has any idea or made any calculations of how many embryos there may have been in the mass that he placed on the patient's wrist. Dr. Fussell understands that the embryo or parasite does not increase in the intestines of the individual. He said that he would also like to know if the blood was examined and the eosinophiles counted.

DR. PHILIP KING BROWN, San Francisco, stated that in San Francisco physicians have experiences with three classes of uncinariasis. The first class came from Mexico, evidently a pure class. Then came soldiers, returning from the Philippines, without having had any symptoms of uncinariasis before discharge. Some of them were kept in the general hospital with amebic infection, and were discharged, but nothing was known regarding the presence of uncinariasis. Many of these cases came to the county hospital. A peculiar thing about some of these soldiers was the striking symptoms that occurred when there were few parasites. Dr. Brown recalled one patient who came near dying of anemia and yet the physicians could find but seven parasites. The third class of cases was found among the Porto Ricans who were sent to the Hawaiian Islands to replace Japanese laborers on sugar plantations. They were not a success, and were returned to San Francisco, where a large majority of them still remain. They present the type of the disease which has been so thoroughly investigated by Ashford. Attempts have been made by Gunn of San Francisco, who has studied the cases in San Francisco very thoroughly, to find the parasite in infants born since these Porto Ricans left their native home, but thus far they have not been successful. He has, however, discovered several cases of *billarzia* infection in these Porto Ricans.

DR. CLAUDE A. SMITH, Atlanta, Ga., in reply to the questions stated that, while he can not say that the passage of the parasite through the skin is the only way by which it gains access to the human body, yet from the experiments and from the clinical history of the cases this mode of access appears to be the rule and the ingestion through the alimentary canal the exception. In growing the larvæ in the laboratory, it was noticed that they would climb on the sides of the vessel. This would cause us to suspect that they would climb on plants from their natural development in the soil, and if so, it is possible that they might be swallowed by persons eating raw vegetables. He said that it was impossible to count the number of larvæ contained in the soil which he placed on the wrist of the patient. They were intensely concentrated, more concentrated than they would ever develop under natural conditions. There were undoubtedly many thousands in the small amount of soil which he used, as examination under the microscope showed it to be swarming with them. Autoinfection, he said, is practically an impossibility. His experiments indicate that the larvæ will not attempt to enter the tissues before they are four or six days old, and it is not likely that the eggs would remain in the intestines for this length of time, even if they could find conditions suitable for hatching. As before stated, no blood examinations were made in this case, as the patient was just out of the hos-

pital, and such examinations, therefore, would have been of uncertain value. Dr. Smith inclines to the view that the parasites pass into the veins and thus get into the circulation. In the experiments the inflammation of the forearms above the eruption appeared more as a phlebitis than a lymphangitis. The children of all classes in the South go barefoot in the summer, and all are subject to the ground itch, but it is most common among the poorer classes in the country. As the better classes are less exposed to the disease, they usually have a mild form which can only be diagnosed by the examination of the feces, and as there are no objective or subjective symptoms these cases are generally overlooked. It is only the severe cases which interfere with the development of the person and which present symptoms of the disease. Those individuals who have had only one or two attacks of ground itch have only a small number of the parasites in the intestines, and these produce no effect on the development of the person. It is only when there have been a number of attacks of ground itch (usually covering a period of several years) that there is any interference with the development of the body. A study of the climatic conditions shows that in many sections the conditions favorable to the development of the parasite occur only two or three times during a summer. When the conditions are favorable for the development of the parasite one will usually find every child of an entire family infected, but usually there is not more than one who has the severe type of the disease. In the majority of the cases of the severe type of the disease, the patient will eventually "outgrow" the disease; that is, the child will begin wearing shoes at 15 or 17 years of age, and from that time on the parasites gradually die out.

## IRITIS TUBERCULOSA AS DIAGNOSED AND TREATED BY KOCH'S TUBERCULIN.\*

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AND

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CHICAGO.

### HISTORY OF THE CASE TREATED.<sup>1</sup>

*Patient.*—Mr. M. E. S., a clerk, aged 25, consulted Dr. Gamble Aug. 27, 1904, on account of persistent "redness" of the left eye of four months' duration. At no time had there been severe pain. There was no personal history or evidence of syphilis, and the family history of tuberculosis was negative.

*Examination.*—This revealed ciliary injection and an irregular pupil which responded poorly to light and dilated irregularly under atropin with the exposure of numerous posterior synechia. A reddish growth the size of a pinhead was discovered springing from the inferior temporal root of the iris. With the aid of a Berger loupe, a second smaller growth was seen above the first and nearer the pupillary border of the iris. The nodes were semi-transparent and non-vascular. The iris itself was discolored, its markings indistinct and the media hazy. L. vision, 20/70, that of the fellow eye, 20/50 with no improvement by glasses. The patient had a slight cough, an afternoon temperature of 99.5 and slightly sub-normal temperature; pulse, 80; weight, 117 pounds; he is able to be about his work every day.

A general examination by Prof. W. E. Quine reads as follows:

(a) Enlarged glands above the inner third of the left

\*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. This patient was shown before the Chicago Ophthalmological Society, Oct. 11, 1904, when the inflammation was at its most florid stage, and again six months later, March 14, 1905, after an apparent cure had been effected.



elavicle. (b) Leucopenia—only 3,500 whites—8 per cent. of them small mononuclear and 32 per cent. large mononuclear (i. e., 'relative' lymphocytosis). (c) A little cough without expectoration or discoverable pulmonary localization. Suggests involvement of the mediastinal glands. (d) No bacilli found in urine. Findings suggest glandular tuberculosis.

Six subsequent examinations of the sputum for tubercle bacilli were negative.

*Treatment.*—Commencing Sept. 7, 1904, potassium iodid and later mercurial inunctions were used for several weeks. The two nodes not only steadily increased in size and became grayish-opaque, but three additional nodes appeared in the lower nasal quadrant, ciliary injection became more marked and fine precipitates developed over the lower half of the posterior surface of the cornea. These precipitates were not arranged in the classical triangular shape characteristic of serous cyclitis but were spread over the entire lower segment without particular form and indicated rather an extension of

tinatum. The node lies at the lower end of a line drawn through axis 110 degrees, and measures 2.5 mm. in the vertical plane, 2 mm. in the horizontal and 2 mm. in the antero-posterior plane. At least its superior one-half rides free over the iris and obscures four-sevenths of the iris surface measured from the root toward the pupillary border. Four smaller nodes about the size of pinheads are seen, two of them seated in the sinus angle below, one nasal, and the fourth at the pupillary border directly above the largest node. The pupil measures 5.5 mm. in its greatest diameter (axis 110 degrees) and is very irregular in outline from numerous broad posterior synechiæ.

The first injection of 1/500 mg. of tuberculin T. R. caused no perceptible change in the temperature and excited no local reaction. Thereon the injections were continued, the temperature being taken every two hours, as follows: October 26: 1/500 mg., maximum temperature (rectal) during the day 99.8 at 11:40 p. m. October 31: 12/500 mg. at 6 p. m., maximum temperature, 99.2; 24 hours after the injection the temperature was 100.6; 6 hours later, 100.6. During the morning the ciliary injection, especially that just below the iris nodes, increased markedly. Vessels now stood out prominently

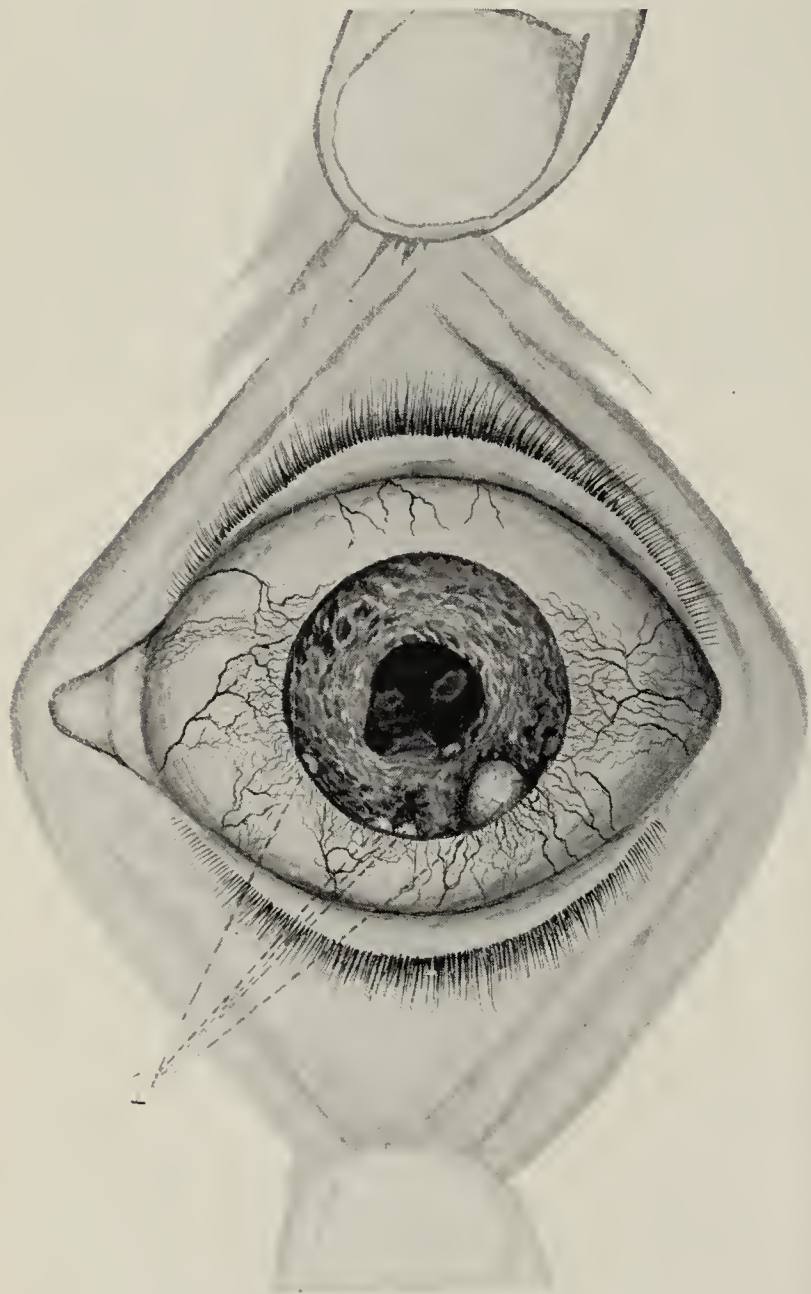


Fig. 1.—Active Iritis Tuberculosa. 1, nodes.

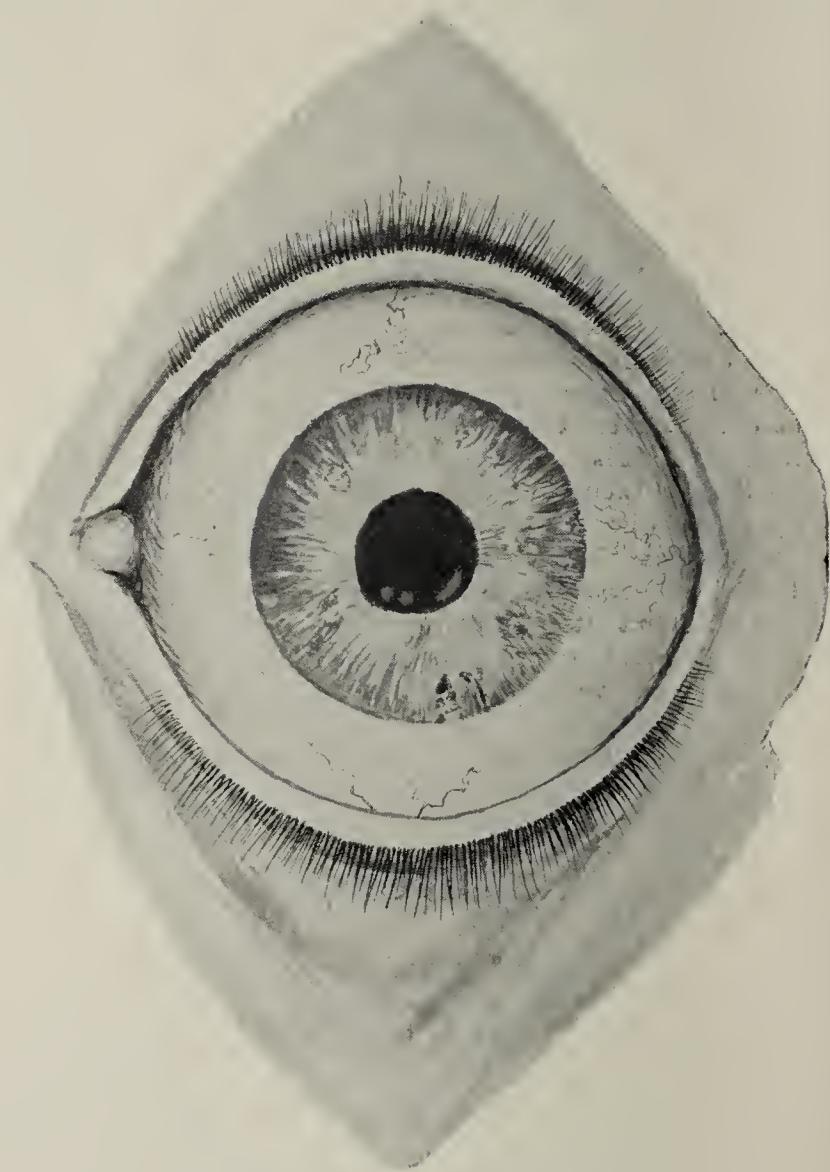


Fig. 2.—Healed Iritis Tuberculosa.

the inflammation from the iris below onto the adjacent cornea.

*Diagnosis.*—Iritis tuberculosa.

*Tuberculin Treatment.*—Oct. 24, 1904, at the suggestion of Dr. Brown, the patient was placed in a hospital and given injections of Koch's new tuberculin T. R., with the instillation of atropin, as advocated by E. v. Hippel (1904). At this time a drawing of the eye was made (Fig. 1) and notes on the condition of the eye as follows:

On focal and transmitted lights one finds: (1) Nearly complete circum-corneal injection; (2) that the posterior surface of the cornea, especially the lower half, is dotted by pin-head sized, thin, yellowish-white masses; (3) that a deep, smooth, vascularized, light-yellow, translucent, pad-like, lens-shaped node, with flattened anterior surface and sharply convex border is attached by a small, constricted base well down toward the very angle of the iris root beneath the opaque corneo-scleral limbus as if springing from the ligamentum pec-

over the surface of the largest node and the patient complained of tenderness of the eye on pressure. This local reaction lasted about 12 hours and then abruptly disappeared. November 2: maximum temperature, 99.7; no injection. November 3: maximum temperature, 99.6; no injection. November 4: maximum temperature, 99.6; no injection. November 5, 10/500 mg. at 6 p. m.; no change in the temperature or in the local condition. Injection of 10/500 mg. of tuberculin T. R. at 6 p. m. Twenty-four hours later ciliary injection was again increased and completely encircled the cornea; the large node was deeply congested and of a brick-red color, remaining so for several hours. The maximum temperature (8 p. m.) was 99.8. November 7: 6:40 p. m., temperature, 98.4. Injected 4 mg. of tuberculin T. R. for the purpose of obtaining a diagnostic reaction. November 8: maximum temperature, 4 p. m., of 100, lasting one hour. The large node especially was more hyperemic and the ciliary injection increased. (Reaction not



considered conclusive.) November 11: The patient left the hospital to report at the office for further treatment.

From Nov. 12, 1904, to May 1, 1905, he continued to receive injections with no untoward effects on the temperature or local conditions. Up to the middle of April a withdrawal of the atropin would cause an immediate increase in the ciliary injection. From this time on one drop a day only was required. Two further attempts were made to secure a tuberculin temperature reaction, and by the use of the old and not the new tuberculin (T. R.), viz.: First attempt Nov. 15, 1904; temperature, 99 at 12 m.; 4 mg. of the old tuberculin injected; about ten hours later the patient experienced a marked chill and his temperature rose to 101.6. (Temperature reaction considered conclusive.)

Second attempt, December 16: Temperature 99, at 10 a.m. Injection of 5 mg. of the old tuberculin; 8 hours later there was a maximum temperature of 102, followed two and one-half hours later by a chill. Soreness of joints, jaundice and poor appetite persisted for two weeks. (Temperature reaction was considered conclusive.)

March 5, 1905: Under the six months' treatment by tuberculin injections and atropin there has been a steady and gradual improvement in the condition of the eye; e. g., all the nodes have entirely disappeared, the iris has regained nearly the color of its fellow, there is no ciliary injection whatever and close work does not redden the eye in the least; vision has improved from 20/70 to 20/30; he has gained 3 pounds in weight and feels quite well, although the afternoon rise in temperature still continues. The appearance of the eye is very accurately represented in Fig. 2.

July 1, 1905: Conditions unchanged; no evidence of the nodes.

Sept. 8, 1905: Eye quiet. Weight, 125 pound, a gain of eight pounds. No temperature for two months past.

#### SUMMARY OF THE DIAGNOSTIC AND THERAPEUTIC USE OF TUBERCULIN IN THIS CASE.

We had here, then, a plastic iritis eventuating in the formation of definite nodules. Such nodules may occur in a number of affections, some of which may be excluded at once, as leukemia and pseudoleukemia, by the blood count, and glioma, by the age of the patient. Furthermore, there is no history or evidence of a hair or other foreign body penetrating the eye and causing an iritis nodosa (Saemisch). Syphilis can be excluded with a fair degree of probability by the failure of the potassium iodid and mercury to effect an improvement, and, lastly, leucosarcoma can be eliminated by the markedly inflammatory nature of the affection. Iris nodes caused by other micro-organisms than the tubercle bacillus have been studied experimentally by Sattler<sup>2</sup> and by Stock,<sup>3</sup> but have not been proved to occur in man. While, therefore, the diagnosis of iritis tuberculosa may rightly be made by exclusion, it is further and finally established as we think:

(1) By the positive general reaction to tuberculin, as shown in the typical sudden rise and fall of the temperature on two separate occasions, and amounting to 2 and 2.5 degrees respectively (allowing for the daily afternoon rise), accompanied by marked chills, pains in the joints, etc. (2) By the repeated local reaction in the eye when the dose of tuberculin injected had reached the physiologic limit of about 1 mg., manifested by a marked increase in the ciliary injection, in the tumefaction and vascularity of the iris nodes. (3) By the persistent afternoon rise of temperature, enlarged supraclavicular glands and slight cough, pointing to a focus of tuberculosis elsewhere, to which that of the eye is probably secondary.

#### REVIEW OF THE LITERATURE ON THE USE OF TUBERCULIN IN THE EYE.

Following the publication of Koch's method in 1890, HENOC<sup>4</sup> reported that he had obtained a marked local and general reaction from tuberculin in a quiet phthisical eye which had been blind for years following a perforating keratitis, and KOEHLER and WESTPHAL<sup>5</sup> reported that they had seen a 4x2 mm. peripheral corneal ulcer develop in a normal eye, with profound general reaction, four days subsequent to a single injection of 1/100 mg. of Koch's lymph.

The next year witnessed the publication of a large number of observations on the use of tuberculin, both for diagnostic and therapeutic purposes, as follows:

ALBRAND<sup>6</sup> reported tuberculous nodes of the palpebral conjunctiva, with positive inoculation experiments and bacilli findings, absorbed in three weeks by injections of 1/1000 to 3 mg.; quiescent 10 months later.

BELLIARD<sup>7</sup> states that Sulzer obtained a marked local and general reaction in three cases of strumous keratitis with aggravation of the disease.

BONGARTZ<sup>8</sup> reported two cases of iridocyclitis tuberculosa, with bacilli; no reaction from 3 injections of 1/1000 mg.; one eye underwent phthisis bulbi and eye had to be enucleated.

COHN<sup>9</sup> (1) No local reaction or improvement, though general reaction in a bilateral dacryocystitis; used three injections of .75 to 1 mg. (2) Same results in two cases of phlyctenular keratitis, with interstitial keratitis.

ENSLIN<sup>10</sup> reported a case of lupus conjunctivæ, corroborated by Cohnheim's experiment; temporary improvement took place, with recurrence and excision. He used large doses.

GEFNER<sup>11</sup> reported extensive bilateral lupus conjunctivæ, with ulceration, healed by two injections of 1/1000 mg.

GRADLE<sup>12</sup> reported three cases: (1) Interstitial ulcerative keratitis, with perforation, influenced by three weeks' injection (0.15 to 0.3 mg.) with marked local and general reaction. (2) Deep progressive central corneal ulcer healed in 12 days by two injections (0.2 and 0.3 mg.) (3) Shallow progressive central ulcer of each eye entirely healed on two occasions in 11 and 15 days and by 0.2 and 0.5 mg. injections, respectively.

V. HIPPEL<sup>13</sup> reported two cases: (1) Obstinate inflammation of each cornea and lids, remarkably improved by one injection of 1/200 mg. in ten days. (2) Eczematous corneal disease of each eye healed by two injections (1/200 and 3/1000 mg.), with marked general reaction.

KOENIGSHOEFFER and MASCHKE<sup>14</sup> reported nine cases: (1) Keratitis interstitialis; clearing of opacities in six days by two injections of ½ mg., with local and general diagnostic reaction. (2) Eczematous corneal ulcer; rapid healing following one injection of ½ mg. (3) Ulcer (4 by 3 mm.) healed in 4 days by ½ mg. injection, with local and general reaction. (4) Ulcer of 2 mm. nearly healed in 5 days, with

4. Henoeh: (1890) "Mittheilungen über das Koch'sche Heilverfahren gegen Tuberculose." Berl. klin. Woch., No. 51, p. 1169-1171.

5. Kochler and Westphal: (1890) "Ueber die Versuche mit dem von Herren Geh. Koch gegen tuberculose empfohlenen Mittel." Deutsche med. Woch., No. 47, p. 1058-1066.

6. Albrand: (1891) "Erfahrungen über das Tuberculin aus der Professor Schoeler'schen Augenklinik in Berlin." Klin. Monatsbl. f. Augen. 1, p. 149-168.

7. Belliard: (1891) "Les effets du liquide de Koch dans la keratite strumeuse." Ann. d. Ocul., cvi, p. 26.

8. Bongart: (1891) "Ueber die Ausbreitung der tuberculösen Infection im Auge auf Grund pathologischer Anatomischer Untersuchungen." Inaug. Diss. Wuerzburg, 20 pages.

9. Cohn: (1891) "Notizen über Einspritzungen Koch'scher Flüssigkeit bei Augenleiden." Berl. klin. Woch., No. 7, p. 175-176.

10. Enslin: (1891) Centr. f. prakt. Augenh'k. d., p. 43.

11. Gepner: (1891) "Ein Fall von Bindehautlupus, nach dem Koch'schen Verfahren behandelt." Centr. f. prakt. Augenh'k.d., xv, p. 1-7.

12. Gradle: (1891) "The Curative Influence of Tuberculin on a Certain Type of Corneal Ulceration." The Chicago Med. Rec. II, p. 544-549.

13. v. Hippel: (1891) "Aus der Klinik. f. Augenheilkunde. Klin. Jahr. (Erganzungsband), p. 682.

14. Koenigshoeffer and Maschke: (1891) "Beobachtungen über die Wirkung des Koch'schen Heilmittels bei Augenerkrankungen." Deuts. med. Woch., No. 2, p. 72-77.

2. Vossius: (1891) Beitr. zur Augenh'k. herausgeg. von Deutschmann, I, p. 142-188.

3. Stock: (1893) Bericht über d. xxx. Vers. d. Ophth. Gesell. zu Heidelberg, p. 77-99.



local and general reaction. (5) Ulcers of 2 mm. and less healed in 2 days by  $\frac{1}{2}$  mg., with local and general reaction. (6) Large ulcer healed in 6 days by two injections of  $\frac{1}{2}$  mg., with local and general reaction. (7) Iris nodes almost entirely absorbed in 10 days by three injections of  $\frac{1}{2}$  to 1 mg. (8) Large nodes on lid margins of each eye absorbed in five days by two injections of  $\frac{1}{2}$  and 1 mg.; temperature reaction only. (9) Small tumor of tarsal conjunctiva absorbed in 7 days by two injections of  $\frac{1}{2}$  and 1 mg., with local and general reaction.

LANDGRAF<sup>15</sup> reported a case of granuloma tuberculosum filling one-half of anterior chamber and invading the ciliary body, reduced to a minimum by 24 almost daily injections of 1/1000 to 1/500 mg., with local and general reaction.

LEBER<sup>16</sup> reported a case of nodes over the whole iris resorbed without a trace in 7 weeks by 10 injections of 1/1000 to 8/1000 mg. extending over but 4 weeks; local and general reaction.

MIKULICZ<sup>17</sup> reported fresh phlyctenule caused by tuberculin injections for a tubercular elbow joint.

PFLUEGER<sup>18</sup> reported conjunctival tuberculosis, with local and general reaction on each of 12 injections (1/500 to a few mg.), with increase in the size of the tubercular areas.

SATTLER<sup>19</sup> reported three cases: (1) Tuberculous nodes and ulcer of palpebral conjunctiva, corroborated by Cohnheim's experiment, permanently healed by 15 injections of 1/200 to  $\frac{1}{4}$  mg. (2) Trachoma-follicle-like fornix tubercular nodes, corroborated by Cohnheim's experiment, healed by 10 injections of 1 to 10 mg. (3) Lupus conjunctivæ, corroborated by Cohnheim's experiment, without definite results in the time treated.

SCHAFFRANEK<sup>20</sup> reported a case of lid and corneal disease entirely relieved by 4 injections of 1/1000 to 8/1000 mg. in 4 weeks, with local and general reaction.

SCHWANN<sup>21</sup> reported an almost lens-sized corneal ulcer healed in 15 days by 6 injections of 1/1000 to 7/1000 mg., with local and general reaction.

SCHWEIGGER<sup>22</sup> reported three cases: (1) Caries and abscess of the lower orbital margin healed completely in 2 weeks by 3 injections of 1.5 to 4 mg., with local and general reaction. (2) Corneal infiltration and eczema much improved by 2 injections of 2 and 5 mg. in ten days, but with no decided local or general reaction. (3) Lachrymal disease, with no reaction or improvement on 7 injections of 1 to 10 mg. (4) Blepharorrhea of the sac, with possible bone disease, without local reaction or improvement, though general reaction on 2 injections of 5 mg. each.

SILEX<sup>23</sup> reported lupus of face and lids somewhat improved at first by the injections, but much worse later, and somewhat improved finally by other treatment; 120 mg. in all were used.

UHTHOFF<sup>24</sup> used 1/5000 to 1/1000 mg. injections in 10 cases of phlyctenulæ, keratitis superficialis vascularis, keratitis fascicularis, corneal ulcer, etc., with general reaction in all, but local reaction in only 3, and a generally favorable and prompt result in the treatment.

WAGNER<sup>25</sup> reported four cases: (1) Three cases of lupus of the lid skin, with fistulous dacryocystitis, healed by 25 injections of 1/200 to 30 mg., with local and general reaction in each. (2) Tuberculous ulcer of palpebral conjunctiva, cured in 4 weeks by 2 injections of 1/1000 to 1/500 mg., with temperature reaction. (3) Node-form tubercular scleritis cured in 6 weeks by injections of 1/200 mg., increased by 3 mg. each dose, with local and general reaction. (4) Tubercular iris nodes reduced to a minimum by injections of 7/1000 to 1/10, with local and general reaction.

Subsequent to 1891 we find the following reports:

HAASE<sup>26</sup> reported a case of iridocyclitis tuberculosa, with general but no local reaction on 9 injections of 1 to 4 mg. extending over 2 months; though the nodes disappeared two months later, the author thinks it was not due to the tuberculin.

KUNZ<sup>27</sup> recommends the use of tuberculin for diagnostic purposes.

ZIMMERMANN<sup>28</sup> reported the case of a patient with severe tuberculosis of the eye, confirmed by a histologic examination, cured by injections of 1/500 mg.; the fellow eye had been removed five years before.

GRADLE<sup>29</sup> used tuberculin in 4 cases of interstitial keratitis, with positive febrile reaction in all.

REIMAR<sup>30</sup> reported that two months' use of tuberculin (6/10000 to 1 mg.) had no essential local or general effect or curative action in a case of tuberculosis of the conjunctiva with bacilli on histologic examination and with positive inoculation experiments.

SCHIECK<sup>31</sup> studied the subject very carefully and reported 5 cases, with a general favorable result, as follows: (1) A large iris node disappearing under injections of 1/10 to 5 mg. of the old tuberculin during 6 months, with recurrence and resorption, and a second recurrence and resorption by 1/500 to 4 mg. of the new tuberculin T. R., with final quiescence of 2 months; temperature reaction. (2) Iris angle nodes disappearing on 2 injections of 1/5 to  $\frac{1}{2}$  mg., with extensive recurrence over 2/3 of iris and resorption in 5 months by 1/20 to 5 mg. and even 18 mg., without essential local or general reaction; second recurrence over two-thirds of iris and final resorption after 2 months of  $\frac{1}{2}$  to 5 mg., and nine and one-half years of quiescence (v. Hippel). (3) Iritis plastica treated 5 weeks by  $\frac{1}{2}$  to 1 mg. injections, without local or general reaction or improvement, but with the development of lupus nodes; all were later cured in 4 weeks under expectant treatment. (4) Iris node in each eye with development of a hypopyon under 1/200 to 7/10 mg. injections extending over 3 weeks and subsequent absorption of hypopyon and nodes under expectant treatment, with 2 years of quiescence. (5) Iris and corneal nodes entirely absorbed under 24 injections of 1/500 to 1 mg. in three months, with no local or general reaction; 5 years of quiescence.

UHTHOFF<sup>32</sup> contributed a notable case of conjunctival tuberculosis, in which the nodes excised gave a positive experimental tuberculosis in a rabbit and tubercle bacilli were found on anatomic study, yet a careful tuberculin test with 2 injections of 1/10 and 0.000375 mg., respectively, gave no local reaction, though some temperature reaction. The disease was not influenced.

15. Landgraf: (1891) "Tuberculose Geschwulst der Uvea, mit Koch'scher Flüssigkeit behandelt." Berl. klin. Woch., No. 11, p. 285-296.

16. Leber: (1891) "Ueber abgeschwächte Tuberculose des Auges." Bericht d. xxi. Ophth. Gesell. zu Heidelberg, p. 44-60.

17. Mikulicz: (1891) Quoted by Cohn, Berl. klin. Woch., No. 7, p. 175.

18. Pflueger: (1891) Bericht d. xxi. Ophth. Gesell. Zu Heidelberg, p. 67-70.

19. Sattler: (1891) "Ueber die Behandlung der verschieden Formen der Conjunctival-Tuberculose mit Tuberculin nebst experimentellen Untersuchungen über die Wirkung derselben." Bericht d. xxi. Ophth. Gesell. zu Heidelberg, p. 33-44.

20. Schaffranek: (1891) "Weitere Mittheilungen über die mit dem Tuberculin gewonnenen Erfahrungen." Deut. med. Woch., No. 32, p. 1199-1200.

21. Schwann: (1891) "Fall von tuberculoesem Hornhautgeschwuer des rechten Auges. Heilung nach 6 Injectionen." Deut. med. Woch., No. 3, p. 116-117.

22. Schweigger: (1891) "Aus der Klinik f. Augenkrankh. Klin. Jahr. (Ergänzungshand), p. 220-224.

23. Silex: (1891) "Robert Koch's neues Heilverfahren." Deut. med. Zeit., p. 165, and Allgem. med. Central-Zeitung, p. 386-387.

24. Uthoff: (1891) "Ein Beitrag zur Behandlung Augenkranker nach dem Koch'schen Verfahren." Berl. klin. Woch., No. 7, p. 1722.

25. Wagner, H.: (1891) "Die Tuberculose des Auges und der Erfolg der Anwendung des Koch'schen Tuberculins bei derselben." Muench. med. Woch., No. 15, p. 266-268, and No. 16, p. 286-287.

26. Haase: (1893) "Ueber Tuberculose des vorderen Tractus uvealis." Inaug. Diss. Kiel., 33 pages.

27. Kunz: (1898) "Ueber die Tuberculose des Auges und seiner Adnexe." Inaug. Diss., Marburg.

28. Zimmermann: (1898) "Experimentelle und anatomische Untersuchungen über die Einwirkung der neuen Koch'schen Tuberculinpraeparate." Die Ophth. Klinik, Nos. 8 and 9, p. 144-148, and No. 10, p. 172-175.

29. Gradle: (1900) "Scrofulous Keratitis." Trans. Sect. on Ophth. 51st Meeting of the A. M. A., p. 44-53.

30. Reimar: (1900) "Casuistische Beiträge zur Conjunctival tuberculosis." Klin. Monatsbl. f. Augen., xxxviii, p. 83-96.

31. Schieck: (1900) "Klinische und experimentelle Studien über die Wirkung des Tuberculins auf die Iristuberculose." Arch. f. Ophth. 1, 2, p. 247-359.

32. Uthoff: (1900) "Bemerkungen zur Scrophulose und Tuberculose nebst einem Beitrag zur Tuberculose der Conjunctiva." Berl. klin. Woch., No. 50, N. 1144-1148.



MORAX and CHAILLOUS<sup>33</sup> reported three cases: (1) Tuberculous nodes over one-half of the cornea and on the lids of each eye absorbed in two weeks after an injection of tuberculin, with a local and general reaction. (2) Iris nodes absorbed in six weeks after one injection of 1/20 mg., accompanied by both local and general reaction. (3) Nodes in the cornea absorbed on one injection of 1/20 mg. and the use of mercury and potassium iodid.

FALCKENBERG<sup>34</sup> reported cases of iris and choroidal, as well as probable bone tuberculosis. No improvement after one month of 1/500 to 1/50 mg. injections, though there was both local and general reaction, and inoculation experiments were positive. The eye was enucleated following a spontaneous perforation, and the patient died one month later from meningitis. (2) Iritis tuberculosa, with no improvement or local or general reaction on 10 injections of 1/500 to 1/20 mg. during 18 days, and enucleation followed by death one month later from meningitis. No bacilli were found, though inoculation experiments were positive. Falckenberg says he thinks the doses were not sufficiently large or numerous.

HAAB<sup>35</sup> used tuberculin for diagnostic purposes in many cases in which the diagnosis was not clear, among them two cases of iritis tuberculosa, with marked local reaction in the nodes, as well as the febrile reaction.

ENSLIN<sup>36</sup> obtained a typical tuberculin temperature reaction in 8 cases of keratitis parenchymatosa, and with local reaction in some of them by 1/10 to 3 mg. injections; also in a case of conjunctival tuberculosis and in a case of iris tuberculosis.

HANDMANN<sup>37</sup> reported two cases: (1) Iris angle nodes reduced to 1/2 or 2/3 by 9 weeks of injections of 1/1000 to 3 mg., and completely absorbed one and one-half years later. (2) Iris nodes in each eye absorbed with scarcely a trace left after 10 weeks of 1/100 to 2 mg. Local and general reaction.

KRUECKMANN<sup>38</sup> considers the diagnostic value of tuberculin to be very great in doubtful cases.

v. MICHEL<sup>39</sup> saw small nodes appear on the iris and sclera a few hours after an injection of tuberculin in iritis.

PETELLA<sup>40</sup> used tuberculin T. R. for diagnostic and partly for therapeutic purposes in two cases, one of conjunctival tuberculosis, and recommends it as the most certain diagnostic means.

PFLUEGER<sup>41</sup> has used tuberculin for diagnostic purposes for the past two years with the most satisfactory results. He considers its diagnostic reaction to be of great weight in doubtful cases.

SALIE<sup>42</sup> reported three cases: (1) Tubercular tarsal-conjunctival excrescences absorbed in 7 weeks by 10 injections of 1/500 to 6/500 mg. with slight local and general reaction; recurrence with a 4x1 mm. ulcer the following year, again healed by injections. (2) Tarsal conjunctival excrescences and ulceration healed by 25 injections of 1/500 to 21/550 mg. in three months. Inoculation experiments were positive. (3) Tubercular granulations and ulcer of the tarsal conjunctiva slowly healed by 61 injections of 1/500 to 21/50 mg., along with 5 cauterizations extending over 4 months. Inoculation experiments were positive.

DARIER<sup>43</sup> reported a case of interstitial keratitis treated with good results; the cornea cleared after a number of injections. There were marked local reactions.

ENSLIN<sup>44</sup> used tuberculin as a differential diagnostic means between lues and tuberculosis in 24 cases of keratitis parenchymatosa; five gave the typical local and general reaction.

HAAB<sup>45</sup> used tuberculin for diagnostic purposes with positive results in suspected tuberculosis of the conjunctiva 2; of the lachrymal gland 1; in severe corneal eczema 1; iritis with and without definite nodes 9; conglomerate tubercle of the choroidea 1; choroiditis 3; neuroretinitis 2; choked disc 2. He obtained the local diagnostic reaction in each case. He saw improvement from tuberculin therapy in uveal tuberculosis a nodular tubercular iridochoroiditis entirely cured by 14 injections, and a choroiditis with striking local reaction, though no curative results, on 4 injections.

MORINAMI<sup>46</sup> reported that Kayser says he obtained a local and general reaction in three cases of a chronic type by the use of 1 to 3 mg. of tuberculin.

WEIGELT<sup>47</sup> reports a large iris tubercle markedly reduced in size by 4 weeks' treatment by new tuberculin, although several smaller nodes appeared in other parts of the iris.

DUPUY-DUTEMPS<sup>48</sup> reported that the results of tuberculin are sometimes unsatisfactory.

GROENOUW<sup>49</sup> speaks at length of the diagnostic and therapeutic use of tuberculin.

HESS<sup>50</sup> has treated 9 cases of iritis tuberculosa with tuberculin T. R. with a favorable result in all, and an unfavorable result in none. He says tuberculin should find more extended systematic use as a diagnostic means.

v. HIPPEL<sup>51</sup> reported ten cases: (1) Iris nodes each eye absorbed by 26 injections of 1/500 to 1/12 mg. in two months; recurrence 4½ years later with perforation of the cornea; nodes absorbed after 33 injections, though phthisis bulbi was inevitable in one eye. (2) Iris nodes absorbed in 7 weeks by 23 injections of 1/500 to 1 mg., with 4 years quiescence. (3) Iris nodes absorbed by 56 injections of 1/500 to 1/50 mg. in 4½ months, with 2 years of quiescence. Histologic corroboration later by Schmidt-Rimpler. (4) Severe corneal and iris tuberculosis with nodes absorbed by 36 injections of 5/500 to 6/50 mg. in 3 months. (5) Iris nodes disappeared on 69 injections of 1/500 to 9/50 mg. in 1 month. (6) Primary tuberculosis of ciliary bodies; iris nodes absorbed and cyclitis completely cured by 68 injections of 1/500 to 40/50 mg. in 5 months. (7-9) Three cases of severe conjunctival tuberculosis permanently healed by tuberculin without lid malposition, after resisting 6 months of other treatment. (10) Severe scleral tuberculosis and corneal nodes absorbed by 1/500 to 1/5 mg. Recurrence and cure after more injections, with 6 months' quiescence.

v. MICHEL<sup>52</sup> remarked that he had seen very severe local and general reaction in iritis tuberculosis after tuberculin injections. A severe pneumonia followed an injection in disease of the lachrymal sac. The persons affected were not especially weak persons. He warns against the therapeutic use of tuberculin, and says it is preferably used for diagnostic purposes.

33. Morax and Chaillos: (1901) "Le diagnostic des affections tuberculeuses de l'appareil visuel." *Ann. d'Ocul.*, cxxvi, p. 119-132.

34. Falckenberg: (1901) "Ein Beitrag zur Pathologie und Therapie der Iridocyclitis tuberculosa." *Inaug. Diss. Tuebingen*, 24 pages.

35. Haab: (1902) "Bericht über d. xxx Vers. d. Ophth. Gesell. zu Heidelberg p. 131.

36. Enslin: (1902) "Ueber die diagnostische Bedeutung des Tuberculin auf ophthalmologischen Gebiete." *Allgem. med. Central Zelt.*, No. 94, p. 1115-1116.

37. Handmann: (1902) "Zur Behandlung der Iridotuberculose mit Tuberculin—TR." *Klin. Monatsbl. f. Augen.*, xl, 11, p. 219-227.

38. Krueckmann: (1902) "Ueber Iridocyclitis syphilitica Bericht d. xxi Vers. d. Ophth. Gesell. zu Heidelberg, p. 117-133.

39. Michel: (1902) Bericht über d. xxx Vers. d. Ophth. Gesell. zu Heidelberg, p. 132.

40. Petella: (1902) "Sulla tubercolosi della conjuntive oculopalpebrale." *XVI Congresso dell' Assoc. oftalm. Ital. and Annali di Ottalm. e Lavori della Clinica Oculistica di Napoli xxxi*, p. 731. *Rev. in Arch d'Ophth.*, xxiii, July, 1903, p. 484.

41. Pflueger: (1902) Bericht über d. xxx Vers d. Ophth. Gesell. zu Heidelberg, p. 131.

42. Salie: (1902) "Ueber die Erfolge der Tuberculinbehandlung bei Conjunctival-Tuberculose." *Inaug. Diss. Goettingen*, 37 pages.

43. Darier: (1903) "Subconjunctival Injections of Tuberculin T. R. in the Treatment of Interstitial Keratitis." *Brit. Med. Jour.*, September 26, p. 721-722.

44. Enslin: (1903) "Ueber die diagnostische Verwertung des Alt-Tuberculin bei der Keratitis parenchymatosa." *Deut. med. Woch.*, No. 8, p. 130-133, and No. 9, p. 155-157.

45. Haab: (1903) "Ueber die Anwendung des Tuberculin bei Augenerkrankungen." *Corresp. f. S. Aertze*, No. 21, p. 725-730.

46. Morinami: (1903) "Beitraege zur Therapie und Diagnostik der Augentuberculose." *Inaug. Diss., Rostock. klin. Monatsbl. f. Augenh'k.*, xlii, 1, p. 115-123.

47. Weigelt: (1902) "Iris-tuberkel mit Neu-tuberculin behandelt." *Die Ophth.*, Klink, S. 372.

48. Dupuy-Dutemps: (1904) "Tuberculose der Choroidea." *See klin Monatsbl. f. Augenh'k.*, xlii, Part I, p. 103.

49. Groenouw: (1904) "Tuberculose," *Handbuch d. gesamt. Augenhellkunde*, 2d Ed., vol. xl, Part I, p. 670-737.

50. Hess: (1904) "Tuberculose des Auges." *See Klin Monatsbl. f. Augenh'k.*, xliii, I, 115-123.

51. v. Hippel: (1904) "Ueber den Nutzen des Tuberculin bei der Tuberculose des Auges." *Arch f. Ophth.*, lix, I, p. 1-30.

52. v. Michel: (1904) "Ueber Versuche mit Tuberculin zu Heilwecken." *Klin. Monatsbl. f. Augenh'k.*, xlii, II, p. 145 and 146.



MOISSONNIER<sup>53</sup> recommends the diagnostic use of tubereulin in doubtful cases.

PUCCIONI<sup>54</sup> reported that tuberculosis, especially when localized in the anterior chambers, reacted to tubereulin. Later anatomic examinations demonstrated the tubercular nature of the disease.

SCHOELER<sup>55</sup> used tuberculin methodically to determine the diagnosis in 48 cases, including scleritis, iritis serosa, keratitis parenchymatosa and choroiditis disseminata. He very strongly advised the use of the drug along with and in preference to other means of diagnosis.

USE OF TUBERCULIN IN OPHTHALMOLOGY.

Findings.	Positive Diagnosis Results.	Good Therapeutic Results.	Injurious Therapeutic results.	No Therapeutic results.
General reaction.	Gradle (1900). Wehrli	v. Hippel (1891) 2. Koenigshoefer & Maschke 8. Wagner 2. Schieck 1. Stanculeano 4,5,6,7,8.	Kochler & Westphal.	Cohn 1, 2. Schweigger 4. Haase.
Local reaction.	Pflueger (1902). Haab (1903). Hess. Moissonnier. Schoeler	Uthoff (1891). Darier. Haab (1903).	v. Michel (1902).	Haab (1903).
General and local reaction.	Henoch. Enslin (1902). v. Michel (1904). Morinami.	Koenigshoefer & Maschke 1, 3, 4, 5, 6, 9. Landgraf. Leber. Schaffranek. Schwann. Schweigger 1. Uthoff (1891). Wagner 1, 3, 4. Morax & Chailous 1, 2. Haab (1902). Handmann 2. v. Hippel (1904) 1, 2, 4, 5, 6, 7, 8, 9, 10. Stanculeano 1, 2, 3. Wehrli.	Beiliard (Sulzer). Pflueger (1891). v. Michel (1904).	Gradle (1891) 1.
Tubercle bacilli found.	.....	.....	.....	Bongartz.
Positive inoculation experiments.	.....	Sattler 1, 2. Salie 2, 3.	.....	Enslin (1891). Sattler 3.
Positive inoculation experiments with general and local tubereulin reaction.	.....	.....	Falekenberg 1.	.....
Positive inoculation experiments and tubercle found.	.....	Albrand. ....	.....	Uthoff (1900). Reimar.
No general or local reaction or positive inoculation experiments or tubercle found.	Kunz..... Petella. Pflueger (1902).	Gepner, Koenigshoefer & Maschke 2, 7. Gradle (1891) 2, 3. Schweigger 2. Schieck 2, 5. Morax & Chailous 3. Handmann 1. Petella. Salie 1. Weigelt. v. Hippel (1891) 1. Hess. Reunert.	Mikulicz ..	Schweigger 3. Silex. Schieck 3. 4. Falekenberg 2. Dupuy-Dutemps.
Histologic examination revealed tuberculosis.	Puccioni...	Zimmermann. v. Hippel (1904) 3.	.....	.....

The small numbers after the author's names refer to case numbers in their reports.

STANCULEANO<sup>56</sup> reported eight cases: (1) Corneal infiltrate markedly improved on 10 injections of 1-5 mg. in 8 weeks. Local and general reaction. (2) Similar cases (6 injections during 7 weeks). (3) Keratitis and iritis with im-

provement by 1 injection of 1-5 mg., extending over 11 weeks. Local and general reaction. (4) Keratitis and iritis improved by 6 injections of 1-5 mg. during 4 weeks. General, but no local reaction. (5) Keratitis, with slight iritis, with general but no local reaction to 4 injections of 1-5 mg. (6-8) No local reaction, though reaction on 1 and 2 injections of 1/10 to 2 mg.

KAYSER<sup>57</sup> gives an extended review of recent diagnostic and therapeutic measures employed in tuberculosis of the eye, including the use of tuberculin.

WEHRLI<sup>58</sup>: A case of lupus cornea, with a certain reaction (temperature of 100.4 degrees).

REUNERT<sup>59</sup>: Tuberculous iris nodes completely absorbed in 7 weeks by 6 months of injections (1/500 to 1 mg.), given every other day, with 4 months of subsequent quiescence. (v. Hippel.)

The accompanying table comprises a summary of the case reported.

CONCLUSIONS.

There is very little question as to the value and reliability of tuberculin as a diagnostic agent. Failure to obtain the reaction on one injection, however, is not conclusive, and, according to Tinker,<sup>60</sup> successive doses of 3, 6 and even 9 mg. should be used before tuberculosis be considered definitely excluded. Our own experience, however, although confined to but one case, would lead us to recommend that the very lowest possible dose be used in view of the profound general reaction which we have seen with a 5 mg. injection. The early view that its use caused a dissemination of the tuberculous material throughout the body has been very much modified in recent years.

Tinker has used it for general diagnostic purposes in over 400 surgical cases, with no untoward results that could be directly attributed to its use. He notes that Virchow's objections were very cautiously expressed and only once, and were based on 21 postmortems made during the first year of the use of tuberculin when very large doses were employed. Even at that time, however, his views were opposed by Ziemssen, Gultmann and Ehrlich, Schede, Curschmann and others. As to its therapeutic value, less may rightly be said, since far too few conclusive cases have as yet been studied, the present case being but the thirty-third detailed report in the literature. Much tuberculous disease of the eye is of a chronic, non-virulent type, with sparse bacilli findings and a more or less pronounced tendency to spontaneous healing, as first pointed out by Leber<sup>16</sup> (1891). Such patients can certainly be helped by tuberculin, and the series of cases contributed by Schieck<sup>21</sup> and v. Hippel<sup>12</sup> in particular show that very advanced tuberculosis can be arrested, improved or entirely cured with years of subsequent immunity.

Professor v. Hippel closes his article with the statement:

"On the ground of the facts which I have contributed I consider it indicated that we possess in tuberculin T. R. a means which, if rightly used, will permanently heal the severest tuberculosis of the eye."

53. Moissonnier: (1904) "Irido-cyclite tuberculeuse." Arch. d'Oph., xxiv, p. 438-455 and Klin. Monatsbl. f. Augenh'k., xlii, p. 596.

54. Puccioni: (1904) "Tuberculosis oculare. Clinica oculistica." Mars. p. 1615-1616. Rev. in Revue Gen. d'Ophthalmologie, xxiv, No. 1, p. 13.

55. Schoeler: (1904) "Vorlaeufige Mitteilung über Versuche mit Tuberculin zu Heilzwecken." Klin. Monatsbl. f. Augenh'k., xlii, p. 606 and xliii, I, p. 115-123.

56. Stanculeano: (1904) "Recherches diagnostique et therapeutique da la keratite parenchymatem an moyen de lu tuberculin T." Ann d'Ocul., cxxxii, p. 340-352.

57. Kayser: (1905) Ueber die Tuberculose des Auges." Klin. Monatsbl. f. Augenh'k., xliii, i, pp. 115-123.

58. Wehrli: (1905) "Die knoetschenfoermige Hornhauttrübung (Groenouw) eine primaere, isolierte, chronische, tuberculoese Erkrankung der vorderen Schichten der cornea—Lupus corneae." Zeits., f. Augenh'k'de, No. 4, p. 322-335; No. 5, p. 461-479; No. 6, p. 558-578.

59. Reunert: (1905) "Ueber die durch Tuberculose bedingten pseudo-leukämische. Erkrankungen und ihre Behandlung mit Neutuberculin. Unter Mitteilung eines mit la tuberculose komplizierten Falles." Deut. med. Woch., xxxi, No. 23, p. 907-110.

60. Tinker: "The Value of Tuberculin in Surgical Diagnosis," Johns Hopkins Reports, vol. ii, 1903, p. 535-565.



## DISCUSSION.

DR. ALBERT E. BULSON, JR., Fort Wayne, Ind., said that he had a similar case of tuberculous iritis under tuberculin treatment at the time, and that he had the pleasure of seeing Dr. Brown's case when it was presented before the Chicago Ophthalmological Society for diagnosis, and at the time suggested the use of tuberculin to establish a diagnosis. He believes that ophthalmologists are apt to be led into error as to the value of tuberculin in establishing a diagnosis unless certain well-defined rules are followed in its use. Dr. Bulson said that while Dr. Brown speaks of using small doses for diagnostic purposes and increasing the dose if no reaction is secured, he is inclined to agree with many observers that a large dose, say from 10 to 12 milligrams, is warranted as an initial diagnostic dose, and if no reaction is secured the dose may be repeated in the course of a few days. Even in the presence of a localized tuberculous infection a small dose of tuberculin may produce absolutely no reaction. It is of the most importance that a record of the temperature for three days prior to the injection be carefully kept for comparison with the record following the injection, as some of these patients having only a localized area of tuberculous infection, as in the iris, will show very little reaction, even with a large dose of tuberculin. On the other hand, a decided reaction should not be accepted as a positive indication that the patient has tuberculosis, for the rise in temperature may be only coincident, as Dr. Bulson has known it to be on two occasions in the practice of one of his confrères. The injections should be sufficiently large and continued over a sufficient period of time definitely to establish the fact that a reaction is or is not being produced by the injections. Syphilis should be excluded, as it has been known to influence reaction from tuberculin injections. The case of tuberculous iritis in a 4-year-old child which Dr. Bulson has under tuberculin treatment at the present time, exhibited a marked reaction on several occasions to injections of 10 milligrams, but has failed to show reaction to doses of half that size. With each injection the eye, which has lost light perception, but gives the patient no discomfort, assumes an angry red appearance, and the seven nodules on the iris become infiltrated and swollen. This local reaction in the eye lasts from twelve to thirty-six hours, leaving the eye about as it was before the injection. Treatment has been carried on regularly for about six weeks, and though the general physical appearance of the patient has improved, the condition of the eye seems to be unchanged. As a means of establishing a diagnosis of tuberculous iritis, the injection of tuberculin is certainly warranted, but as nearly as Dr. Bulson can learn by reference to the literature on the subject, the curative value of tuberculin in these cases depends largely on whether the lesion is localized and on its degree of advancement.

DR. E. V. L. BROWN, Chicago, said that the absolute diagnostic value of tuberculin for tuberculosis, and tuberculosis only, is now very generally accepted. The syphilographers are united on this point. The article by Tinker in *Johns Hopkins Hospital Reports* is very conclusive, and Dr. Brown thinks, can be relied on as being absolutely diagnostic. In reply to a question, he said that the use of air in the anterior chamber in these cases was reviewed by Kaiser recently in the *Klin. Monatsbl. f. Augenheilkunde*.

## PNEUMONIA IN THE YOUNG.\*

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CHICAGO.

Pneumonia is always interesting. In the young, interest is heightened by the statistics and statistical fallacies of its prevalence; by important problems connected with its causation and avenues of bacterial invasion, by modifications in its morbid anatomy and

symptomatology, by the frequency of serious complications, by the apparent difficulties of diagnosis, by the uncertainties of prognosis, and by the chaotic state in which we find the literature of its management.

To estimate fairly the prevalence and fatality of

TABLE SHOWING PREVALENCE OF PNEUMONIA BY AGE PERIODS.

Morbidity.	Age periods.									Total.
	Authority	0 10	10 20	20 30	30 40	40 50	50 60	60 70	70 *	.....
Aufrecht	.....	103	333	437	259	195	83	62	29	1,501
Bamberger	.....	2	23	62	38	28	23	5	6	187
Biach	.....	7	259	489	259	209	128	92	43	1,522
Chomel	.....	.....	.....	83	63	61	38	.....	.....	245
Derpmann	.....	306	257	156	161	137	96	43	20	1,176
Dietl	.....	.....	142	187	127	129	82	61	22	750
Doubleday	.....	2	21	88	60	41	18	16	2	248
Dusch	.....	223	28	.....	.....	.....	.....	.....	.....	251
Elsner	.....	4	33	47	28	23	6	5	3	149
Feldhausen	.....	8	14	11	12	4	4	2	1	56
Flint	.....	.....	13	44	37	17	7	.....	.....	118
Franque	.....	.....	98	260	182	113	98	121	.....	872
Fricke	.....	22	47	46	24	14	11	5	.....	169
Funck	.....	416	65	56	134	136	70	64	.....	941
Fussell	.....	57	27	18	8	13	11	2	.....	136
Graf	.....	10	3	3	11	5	5	5	4	46
Grissole	.....	.....	118	272	175	152	123	63	21	924
Gunsburg	.....	.....	1,500	850	800	500	450	350	550	5,000
Hall	.....	3	16	22	13	5	6	3	2	70
Holt	.....	448	52	.....	.....	.....	.....	.....	.....	500
Holwede	.....	15	.....	.....	.....	.....	.....	.....	.....	15
Huss	.....	9	229	1,041	816	363	125	29	4	2,616
Juergensen	.....	171	22	21	23	22	29	29	13	330
Klssel	.....	52	18	15	11	6	3	.....	1	106
Krause	.....	56	3	.....	.....	.....	.....	.....	.....	59
Lebert	.....	4	34	72	41	37	23	10	1	222
Moelmann	.....	51	31	18	33	25	35	23	6	222
Munich Hosp.	.....	169	187	143	51	68	32	.....	1	651
Norris	.....	71	71	136	84	67	30	13	7	479
Pause	.....	34	36	15	29	19	9	14	13	169
Pye-Smlth	.....	95	93	87	62	54	20	18	5	435
Rall	.....	14	3	.....	2	2	6	5	3	35
Rietz	.....	158	44	18	32	38	22	34	11	357
Roth	.....	1	25	79	43	30	34	15	10	237
Rochester	.....	3	15	43	36	24	18	12	17	167
Sampter	.....	9	64	116	73	41	22	5	1	331
Schapiira	.....	2	71	73	27	24	26	27	8	258
Scheef	.....	25	2	3	3	5	2	4	.....	44
Schlel	.....	25	4	13	27	22	27	19	22	159
Schlesinger	.....	.....	20	31	17	10	2	3	.....	83
Schlesinger, E.	.....	159	18	.....	.....	.....	.....	.....	.....	173
Seroeder	.....	514	116	80	127	101	71	58	48	1,120
Sears & Larabee	.....	.....	66	229	241	191	93	48	19	887
Smith, A. A.	.....	.....	1	18	23	9	5	3	1	60
Smith, H. H.	.....	31	42	123	99	73	34	24	8	434
Speck	.....	2	12	12	7	10	5	2	.....	50
Stecher	.....	13	118	290	90	59	50	24	12	656
Stortz	.....	.....	83	67	38	31	27	22	8	276
Tate	.....	2	9	9	10	11	2	2	1	46
Townsend and	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooldge	.....	10	113	373	217	116	80	32	12	953
Vienna Hospital	.....	7	395	408	231	134	128	58	20	1,410
Waller	.....	.....	20	31	9	8	9	4	.....	81
West	.....	220	246	225	132	96	4	2	.....	925
Wunderlich	.....	4	10	6	8	13	5	3	1	50
Ziemssen	.....	163	23	.....	.....	.....	.....	.....	.....	186
Author	.....	367	86	96	51	65	55	113	53	888

Totals ..... 4,068 5,411 7,021 5,084 3,597 2,291 1,552 1,001 30,025

Percentages ... 11.4 18.0 24.6 17.4 12.0 7.9 5.4 3.5 100

## Mortality.

California, 84	.....	56	9	12	26	34	17	22	10	166
Cleveland, 87	.....	184	15	17	16	21	17	21	20	311
Connecticut, 18861	.....	239	28	59	59	75	199	126	204	889
Massachusetts, 63-81	.....	15104	449	954	2428	2786	3176	3497	6945	35339
New York, 76	.....	1308	41	116	161	178	172	153	179	2288
Ontario, 83-6	.....	1832	308	515	437	453	445	494	570	5054
Pye-Smith	.....	6	7	19	21	31	14	9	3	110
Rhode Island, 65-79	.....	1360	115	207	236	296	341	469	595	3619
Rochester	.....	.....	1	2	5	6	1	5	1	21
Sears & Larabee	.....	.....	7	50	81	82	.....	.....	.....	219
Smith	.....	.....	8	28	37	31	16	16	5	141
St. Louis, 85-6	.....	369	40	92	95	105	113	80	64	958
Townsend & Co.	.....	1	12	69	55	40	44	15	8	244
United States, 80-90	.....	6198	18512	151000	15208	14527	15306	16794	19768	166196
Vermont, 59-81	.....	2214	327	377	323	457	699	1076	2132	7605
ürich, 48-51	.....	991	27	69	104	169	322	321	279	2482

Totals ..... 85625 9906 17686 18291 19291 20782 23298 30763 225642

Percentages ..... 37.9 4.4 7.8 8.1 8.6 9.2 10.3 13.7 100.0

pneumonia in the young is a statistical and judicial feat of no mean proportions. In tabulating and analyzing 30,025 cases of, and 225,642 deaths from pneumonia, the following conclusions may be drawn: During early childhood pneumonia is encountered oftener than at any other period; from 10 to 30 years, much less

\* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



frequently; from 30 to 50, somewhat oftener; subsequently with diminishing frequency. On the contrary, if its prevalence is estimated by comparing the deaths caused by pneumonia with the number of persons living at various age periods it will be found that in early childhood its mortality prevalence is moderate; from 10 to 20 years, it sinks to its lowest level; from 20 to 50, it gradually but moderately advances; beyond this it rises with great rapidity, and is greatest in old age. These facts are clearly shown in the accompanying table.

The apparent inconsistencies shown by these tables may be explainable by a broad survey of the concomitant facts in the case; as, e. g., patients of different age periods do not seek admission to hospitals in equal proportions; consulting physicians do not see patients of various ages in fair proportion; the death rate varies at various periods, etc.

Children of any age may have pneumonia, but the recently-born infant is least liable to be affected; the liability increasing up to a certain illy defined period, to subsequently decline somewhat. The reason for this I shall endeavor to give later.

It is proper for me to state at this time that I acknowledge the infrequent occurrence of pulmonary inflammations from various bacteria, but pneumonia is due only to the pneumococcus. In this connection some pertinent facts pertaining to this germ require consideration: The pneumococcus is present in the upper respiratory passages of a very large proportion—probably 50 per cent.—of healthy persons. It is disseminated by being thrown into the air by coughing and sneezing and by the dust from dried and pulverized contaminated sputum from infected, but not necessarily pneumonic, individuals. As long as the pneumococcus remains in this locality it is usually innocent. If, however, it finds its way into the pulmonary alveoli pneumonia will probably result; if it finds its way into the blood and grows, pneumococcemia follows. The pneumococcus is present in the blood in probably all cases of pneumonia. A child born of a pneumonic mother may be pneumococcemic, and may quickly become pneumonic. I have examined the throat secretions of several recently born infants, but have always found them free from pneumococci. Later when these germs find lodgment in the throat, nostrils, etc., they remain persistently, if not permanently. For example, in several hundred examinations, I have not failed to find the pneumococcus in every person who has once had pneumonia, no matter how long the period since the attack.

The child, once the throat becomes infected with the pneumococcus, is in constant danger of an attack of pneumonia. From this it is protected by the integrity of the sensitive and alert respiratory reflexes. Should these barriers fail, as, e. g., in the profound sleep which may follow exhaustion, or exposure to excessive cold, etc., particles of pneumococci-laden throat secretions may be aspirated into the bronchi, to finally lodge in the alveoli, with pneumonia as the result.

When the alveoli have once become infected, severe symptoms promptly follow in the great majority of cases. In the midst of health, or after a few hours of indisposition, the child awakens from sleep, possibly at an unusual hour, with considerable or high fever, often with vomiting, and evidently seriously ill.

The temperature quickly reaches a markedly higher level than is usual in adults; from 103 to 105 F. is the rule; above 105 is very common; rarely is it persist-

ently under 103; irregular temperatures are very frequent. The pulse is rapid, rarely being under 130; usually ranging above 150; sometimes reaching 180 or 200; with exertion it may become almost uncountable. Respiration is increased in frequency, absolutely and especially in proportion to the pulse rate; rarely is it under 50; usually it ranges between 60 and 80; often it rises above 80, and may exceed 100. The normal pulse-respiration rate is reduced to 3:1, 2:1, or less.

Chill, which is so conspicuously the rule in adults, is absent in infants, and is infrequent in young children. Convulsions, of which we read so much, have been comparatively rare in my experience. They may have been more frequent a generation or two ago.

Pain is present and is manifested by indisposition to voluntary, and resentment to passive movements; by crying and featural expressions of pain, especially on being disturbed; by shallow breathing and an evident disposition to avoid nursing, and every exertion of movement which entails deep inspiration; by evidences of suffering on pressure being made on the abdomen or some portion of the chest. Cough is always present. It is usually short and evidently restrained; it is often heard only when the child is moved or fed, when it may be obscured by the cry, resentment and other evidences of accompanying pain; it is often so inconspicuous as to remain unnoticed by the attendants until attention is directed to it by the physician; it may be a very prominent feature. The well-known expiratory grunt is usually present.

The pneumonic infant usually persistently refuses food, and drinks only at long intervals and with evident reluctance. This is probably due to a disinclination to be moved, to the pain and distress caused by the deeper breathing required in nursing, and to anorexia. Gastro-intestinal disturbances are the rule. Intestinal distention may accompany a profound benumbing of the reflexes, and when followed by diarrhea is of ominous import. At the height of the attack the urine frequently contains albumin, hyaline and granular casts; sometimes red corpuscles; rarely hemoglobin.

The blood contains pneumococci; the serum becomes gradually more and more heavily laden with toxins, including agglutinins; leucocytosis occurs early in the vast majority of cases and continues well into convalescence, the increase being in the polynuclears.

The physical signs of pneumonia are present and discoverable, at some stage, in practically all cases. They may be late in appearing; extraordinary care and skill may be required for their detection; they may be found in unexpected localities. Diminution in the respiratory sound within a circumscribed area, with crepitation, when the child breathes deeply, as with crying, is usually the first sign to be heard. Crepitant râles may be remarkably distinct and exquisitely typical, or they may be indistinct, moist, soft and decidedly atypical. Bronchial breathing may not be audible, because of the weakened respiration; it may be moist and low-pitched; it may be limited to a small area in the back, even when extensive consolidation is present; it may sometimes be heard far beyond the affected region, even to the opposite lung. Friction sounds are heard infrequently, because of their short duration in many cases and the great care required in their detection. Dullness on light percussion is present whenever the consolidated area is of any considerable size. If percussion should be too forcible the dullness will be obscured, or even tympanitic resonance, as, e. g., from vibrations arising



in a distended stomach or intestine may be obtained. In any case the dullness is more accurately described as diminished resonance. In cases with delay in the appearance of physical signs they oftenest first show themselves high up in the axilla, or between the scapula and the spine, and I have been forcibly impressed with the frequency in which they may be detected by careful examination in these localities in cases in which they were supposed to be absent. In my cases the right lung has been oftener affected than the left, although the preponderance has not been as pronounced as in adults. The consolidation is oftener basal than apical. It is usually clearly lobar. Sometimes it takes on a spreading form.

Nervous symptoms are rarely inconspicuous. The child is dull, drowsy and apathetic, but resenting movements and other disturbance. Delirium is rare. Spasmodic twitchings, which cause pain, are frequent. Rigidity of the neck is usually due to otitis media.

Surface pallor is the rule; a natural color is present in some cases; rarely is there a persistent flush of the cheeks; cyanosis, except as a fatal termination is approaching, is uncommon. Various erythemas may be present at some time during the attack. Herpes is infrequent, although I have seen some remarkable examples. Icterus may be present in some rare cases, but it is usually slight and of a dusky hue.

The course, type, severity and danger of an attack of infantile pneumonia will vary in various localities and at different times, depending on the natural or acquired virulence of the strain of infecting pneumococcus. These modifications are so multitudinous as to defy any short analysis.

The duration is somewhat shorter in infants and young children than in adults. Short, evanescent cases are not rare; a duration of somewhat less than a week is the rule; protracted cases may be due to the successive involvement of lobe after lobe, with a moderate interval between, or, and this is oftener the cause of the delay, to an unrecognized, but not unrecognizable, empyema. The attack usually terminates by a rapid decline of all the symptoms, the physical signs continuing longer, the so-called crisis; a gradual and more prolonged ending—lysis—is not rare.

Serious complications are more frequently encountered in pneumonia of the young than in adults. Of these empyema is the chief. Pleurisy is the rule, with plastic fibrinous exudate, which produces adhesions in healing. In these cases there may be more or less abundant effusion of serum, with greater or less admixture of leucocytes and fibrinous coagula. These effusions may fill loculi in the plastic exudate, to be finally absorbed, but protracting convalescence and delaying recovery. The effusion may rapidly reach large proportions, when, with but little invasion by leucocytes, we have the serous pleurisy, which is much less common in children than in adults. If, on the other hand, leucocytes are very abundant, empyema is the result, which is the usual form assumed at this period. Although these are generally extensive, they are yet limited by adhesions, so that in few, if any cases, is the entire pleural cavity filled with the purulent fluid. In these cases the fever declines, but does not disappear, at the time when convalescence usually takes place, to soon rise again, with an irregular curve. The pneumococcus is the organism present in these cases.

If allowed to pursue their natural course, the pus evacuates into a bronchus, or externally, with, after a prolonged and prevarious convalescence, complete or

partial recovery, or the child is worn out and dies from exhaustion. Bearing in view the incidence of this complication, and the modifications of the auscultatory and percutory signs in children, these cases are usually recognizable. If in doubt, use the exploring exhaust needle without the slightest hesitation. As the result of sufficiently large experience, I desire to emphasize the importance of the facts here stated. It has been my observation that the great majority of cases of alleged "unresolved pneumonia" in children are, in fact, examples of empyema.

Otitis media, usually pneumococcic and purulent, is not rarely an important complication. It appears toward the end of or immediately after the pneumonic attack. One or both ears may be affected; rupture of the tympanic membrane is the rule; severe mastoiditis may occur; extension to the cerebral membranes or sinuses is rare. In these cases the mental dullness increases; pseudomeningeal symptoms may appear; rigidity of the neck is often, if not usually, present; tenderness is manifested when pressure is made on the lobe of the ear; recovery, without impairment of hearing, is the rule. Abscess, purulent pneumococcic pericarditis, peritonitis and arthritis are rare complications; ulcerative endocarditis and vascular thromboses are very rare.

The morbid anatomy of pneumonia in early life is modified by the structural and functional peculiarities appertaining to this period. The consolidation is clearly lobar, yet less prominently so than in the adult; it is also not so profound and the tissues are moister; the lobes are affected in a somewhat different proportion; resolution is more speedily completed.

Prognostically, pneumonia in the young is, at present, an unsolved problem. If conclusions are to be drawn from public health and institutional registration, it should be an exceedingly fatal affection; on the contrary, if we appeal to the results of our own clinical observations in private practice, especially of the better classes, I am of the opinion that this verdict must be revised and essentially modified; *id est*, that the fatality of pneumonia in the young is far below that of this malady in adults, and much less than is generally believed. In pneumonia at this period, as later, the changes of importance occur suddenly—the child gets better suddenly; gets worse suddenly; dies quickly and often unexpectedly; recovers promptly. Of the features of good import may be mentioned regularity of appearance and moderation of symptoms and course; absence of complications; slight or moderate virulency of the specific infecting germ. On the contrary, anomalous symptoms and erratic course; the appearance of serious complications; unusual virulency of the strain of pneumococcus, presage unusual or great danger. It is probable that recovery oftener follows an uncompromising assemblage of symptoms and conditions in the young than in those who are older.

The treatment of pneumonia may be faultlessly exemplary; it may be useless or harmless; it may be reprehensibly pernicious. The underlying principles of proper management may be stated, analyzed and formulated, but their application to meet the exigencies of the individual patient is an art which can not be transferred from one physician to another. In this field eminence in this art is attained only by those who have extraordinary native capacity, a broad foundation and keen perception of the pertinent facts and the advantages of long years of practice. Failure is usually due



to inherent incapacity, lack of necessary knowledge and restricted experience.

The fact that the pneumococcus in the blood and hepatized lung produce certain substances, which are as yet known only by their effects, e. g., the prompt occurrence of capillary dilatation and leucocytosis; later the appearance in the serum, within and without the blood vessels, of a specific agglutinin, and still later of a pneumococcic toxin, causing, within a short time, the disappearance from the blood of the pneumococcus, has led to the expectation that an antipneumonic serum would be produced which would promptly and directly cure the disease, but this has not been realized, although hope for the future remains.

Recently there have been made, by Drs. Welch and Rugh, in my wards some elaborate experiments, the objects of which were to demonstrate, if possible, the dynamic, not necessarily the curative, effects of the antipneumonic serums which are on the market. These observations are yet in progress and the facts have not yet been fully analyzed, but sufficient evidence has been obtained to warrant the conclusion that the effects are neither striking nor apparently important. The agglutinin is not noticeably increased; leucocytosis remains unaltered; the urinary chlorids are increased; the blood pressure is slightly augmented.

With our present knowledge it may be asserted that we have no specific for pneumonia; no agent which will certainly destroy the infecting organism nor render inert its toxins. However, there are certain prophylactic and remedial measures which are aimed directly at these points. For example: Keeping the pneumococcus-free child out of range of the infecting germ; avoiding exhaustion and too profound sleep in the pneumococcus-harboring child; cleansing the fluids of the body, intravascular and extravascular, of soluble toxins, in the pneumonic patient.

From the beginning the pneumonic child should be given liquids to drink as freely as they can be taken; in addition normal salt solution, modified possibly by the addition of coffee or other medicament, should be administered per rectum in such quantity and frequency as can be received, retained and absorbed. The presumption is that by these means the toxins in the blood and extravascular serosity is largely washed out, and that those which remain are greatly diluted. Theoretically, these devices should be useful; experimentally, we have no proof of their value; practically, I employ and advise them.

Beginning early, it is my practice to give moderate or large doses of a reliable tincture of digitalis, with the enemata if they are retained. Other vasomotor tonics and stimulants, e. g., caffeine, adrenalin, etc., may be used.

If these little pneumonics have high fever, much dullness or restlessness, they are apparently made more comfortable, rational and normal by systematic sponge bathing. Personally, I prefer tepid sponging, followed by alcohol, repeated as often as required. This failing in its object, guaiacol, in suitable dosage, may be applied to the thin skin of the flexures as an efficient substitute. These may be advantageously supplemented by the ice-cap applied at intervals.

Oxygen inhalations are clearly useful when the patient is not fretted by their use. Strychnia, aromatic spirits of ammonia, etc., may be employed as required. In cases of profound nervous failure, with apathy, surface pallor, abdominal distension, the little patient

may sometimes be aroused by a stimulating glycerinated enema.

The medical attention and nursing should be assiduous and of the highest quality. The child should be disturbed as little as possible compatible with necessary attention. The purest, freshest and most comfortable air obtainable should be supplied.

Complications should receive prompt and careful attention, and in those requiring it (especially empyema) surgical relief should be given promptly.

#### DISCUSSION.

DR. A. C. COTTON, Chicago, endorsed Dr. Wells' therapy in supplying salines. He thinks the time has come when clinically as well as theoretically we can appreciate the importance of maintaining the alkalinity of body fluids, especially in a disease like pneumonia with high temperature and intoxication. This should be done either by enteroclysis, normal salt solution, sodium bichlorid, or if necessary by hypodermoclysis of normal salt solution. If absolutely necessary, intravenous transfusion may be employed. Dr. Cotton considers this a point that will bear a great deal of emphasis and one which is too often neglected.

DR. WILLIAM J. BUTLER, Chicago, said that pneumonia may be either of the lobar or lobular type. The diagnosis of lobar pneumonia in infancy, he thinks, can not be regarded as difficult, though it is usually so considered. Too frequently overlooking a pneumonia is the result of failure to examine the patient. The clinical picture of lobar pneumonia in an infant is quite as typical as it is in the adult. The physical signs are likewise typical for the child. He called attention to one point especially important among the physical signs in infancy: The diminution in the respiratory murmur over the affected area, especially noticeable in the first twenty-four or forty-eight hours. This is frequently the only early physical sign that is evident. Associated with it, however, there usually is a varying grade of diminished resonance sometimes quite marked, even within the first twenty-four hours. Rales are not so frequently heard early in the infant, as they are at a later period of childhood or in adult life; in fact, they are infrequent. The diminished respiratory murmur, sometimes almost complete absence of it, with diminished percussion resonance, are the most conspicuous signs of beginning pneumonia in infants.

DR. BUTLER thinks that rigidity of the neck in pneumonia can hardly be associated with middle ear disease, because it is a noticeable fact that in pneumonias during certain epidemics meningeal symptoms will sometimes predominate the whole clinical picture. In such cases middle ear disease may not be a noticeable factor. Middle ear disease does not manifest itself by opisthotonos in the young. He thinks, therefore, that physicians should continue to style this a pseudo-meningeal symptom.

DR. T. L. RILEY, New York City, has found that with the stethoscope modeled on the plan of the phonendoscope, in many of the so-called pneumonias in children, a diagnosis can be made twenty-four hours earlier than with the ordinary stethoscope. In lobar pneumonia in a child he does not think the mortality is more than 3 or 4 per cent. The pneumonia is not usually a true lobar pneumonia, but resembles catarrhal pneumonia. He thinks that it is customary to give up the old-fashioned poultices, but children generally find a great deal of comfort in these hot applications. Children and old people will generally tell you that they get more relief from these than from the use of an anodyne. The physician who loses the most pneumonia patients is the one who does not see his patients frequently.

DR. ARTHUR W. FAIRBANKS, Boston asked Dr. Wells to what he attributes the extreme fetor sometimes seen in these cases. This is sometimes so extreme that it is scarcely possible to stay in the room with comfort and sometimes continues for two weeks. In some of these cases the temperature lasts several weeks, and there is some uncertainty in his mind whether they should be diagnosed as cases of possible pulmonary abscess.

DR. JOHN LOVETT MORSE, Boston, declared that in the



young it is very important to differentiate between pneumonia in the infant and pneumonia in the child. Pneumonia in infancy is an extremely fatal disease, while in childhood it is a very mild one. He considers the pulse-respiration ratio the most important point in the diagnosis of pneumonia in infancy before the development of physical signs. When, in an infant, the rate of respiration is increased out of proportion to the rate of the pulse in an acute disease with a sudden onset and a high temperature, it is almost certainly indicative of pneumonia. In his experience, children with otitis media complicating pneumonia do not show symptoms pointing directly to the ear. The onset of trouble in the ear is more often shown by a rise in the temperature or else the child merely seems worse. Another point, he said, is the frequency with which the symptoms of pneumonia are referred by the child to the abdomen, or away from the lungs. Dr. Morse thinks that Dr. Wells did not emphasize sufficiently the importance of fresh air in the treatment. Dr. Morse put that first. If the patient has fresh air oxygen will rarely be needed. Dr. Morse does not use poultices except for relief of pain. It has been proved that heat and cold externally have no effect on the temperature or circulation in the pleural cavity. The recent work which has been done in France and in this country on the effect of chlorid of sodium when introduced into the system must be borne in mind. Physicians may be taking chances in giving large amounts of salt solution, as its action may be harmful instead of beneficial. Moreover, the heart is already under great strain and is bearing the brunt of the battle. Throwing a lot of fluid into the circulation makes the heart's work harder instead of relieving it.

DR. A. C. COTTON, Chicago, said that when the right heart becomes overburdened, when dullness extends beyond the right sternal border two fingers' breadth in the fourth interspace, he believes it is time to extract a little blood from the circulation. This may be easily done by leeching, an old-fashioned procedure too frequently neglected. Relief for thirty-six or forty-eight hours may be secured by the application of from three to four leeches, in a child of 2 years, placed over the right hypochondria, and this procedure may be repeated at the end of forty-eight hours if necessary. Dr. Cotton said that he fully appreciates what has been said concerning the overloading of the heart with water, but he believes that the salines should be used by enteroclysis or by hypodermoclysis to meet the waste of alkalinity in the fluids.

DR. EDWARD F. WELLS, in reply to some remarks, said that in his opinion increasing the alkalinity of the blood in pneumonia is a procedure which may be useful, detrimental or innocuous. He has noted carefully the work which has been done along this line, and is sure that it is in the early stages of investigation, and that we have not sufficient facts before us at the present time to say whether or not we should increase, if possible, the alkalinity of the blood. It is well known that the pneumococcus grows most luxuriantly in an alkaline fluid, and that it produces an acid in its growth. Whether that acid should be neutralized or not is an open question. He intentionally omitted any mention of methods of treatment which are in this investigational period. In regard to increasing the sodium chlorid in the system, he said that this is another question which is in its investigational period. He believes, however, that inferentially it may be considered useful. One of the first and most important symptoms of pneumonia is the decline, as a rule almost to absence, of chlorids in the urine. This is more noticeable in the adult than in the infant, because of the naturally small proportion of chlorids in the urine in the latter. We may infer that this diminution of chlorids in the urine is because of the advantage that their retention might be in neutralizing toxins, or in some way acting as a defense to the system. He is in the habit of giving chlorids as freely as possible, but he does not advocate their intravenous injection. If the solution can not be borne by the stomach or rectum it can be introduced under the skin. He is familiar with the experimental work done in introducing chlorids in large quantities, and the alleged danger of producing edema thereby, yet he has no hesitation in pursuing the practice mentioned. In reply to Dr. Morse's criticism anent fresh air, Dr. Wells stated

that he had emphasized the point as much as possible in stating that an abundance of comfortable pure air is of the highest importance. He said that he is not aware that there are any facts before us which can lead us for a moment to believe that uncomfortable air—overheated or overcooled—is more pure, more wholesome or more beneficial to the patient than that mentioned. He said that he wished to emphasize this point as much as he could, as he feels keenly on the subject. In reply to a question he stated that there is not sufficient evidence on which to base an opinion in regard to fetor of the breath. In some cases it is due to the fact that the child does not breathe through the nostrils. The mouth remains open and the secretions in the throat and nose become fetid. In Dr. Wells' experience the majority of cases in which there was rigidity of the neck were accompanied by otitis media, but in otitis media the neck is not uniformly rigid. Rigidity of the neck in his experience has been found most frequently in connection with otitis media. He thinks Dr. Riley's prognosis is too favorable and that his mortality is placed at too low a figure. Dr. Wells believes that what he has said about prognosis of pneumonia in the child, and the facts noted in the statistical portion of his paper will answer this portion of the discussion fully.

### SURGICAL ASPECTS OF DISTURBED DENTITION OF THE THIRD MOLARS.\*

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The third molars generally make their appearance between the ages of sixteen and twenty. The final development of the length of the maxillæ posterior to the mental foramen in the lower jaw and maxillary sinus in the upper, takes place during this period, and in this manner sufficient space is provided for the proper alignment of the third molar when it breaks through the gum tissue. When this development proceeds without any disturbing constitutional causes, no difficulties attend the eruption of these teeth. As, however, all inflammatory actions that arise during this period either from local pathologic causes or by virtue of constitutional disturbances, have a marked effect on the osseous development of these parts we find the normal type of development to be the exception. These departures from a purely normal type vary greatly according to the amount of disturbance that has taken place, and in a large number of cases interfere with the normal eruption of the third molars. This interference with the eruption of these teeth is confined more particularly to the lower jaw. The reason for the lower third molar being exceptionally liable to serious disturbances is due to the difference in the anatomy of the two jaws. On account of the limitations of time and small percentage of troubles encountered with erupting upper molars, these remarks will be confined strictly to the inferior teeth.

The necessity for sufficient room at the angle of the body and the ramus is shown in Fig. 1 (Crver). Fig. A shows the mandible of one of the Fan tribe of West Africa, and there is abundance of room for the third molar. Fig. B is a picture of a Caucasian lower jaw of normal type where there is just barely sufficient room for the third molar. The lessening of this amount of space is one of the most prolific sources of disturbed dentition in this locality. Too frequently there is no room left between the second molar and the ramus, and as a result the third molar finally erupts in some unusual position. During this effort at unnatural erup-

\* Read in the Section on Stomatology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



tion, grave disturbances are very liable to occur. The close proximity of the cribriform tube (Fig. 2, Cryer) to the roots of the third molar, is another anatomic feature which has a marked bearing on the etiology of



Fig. 1 A. (Cryer).—Mandible of a member of the Fan tribe, West Africa, showing abundance of room for third molar.\*

disturbances in this region. In many anatomic specimens the incomplected roots can be seen penetrating the canal itself. The cribriform tube or inferior dental canal (Fig. 3, Cryer) furnishes a pathway of a light resistance to infection, and once involved leads to serious septic conditons. Another marked pathologic condition that results from the close proximity to the inferior dental nerve is that the irritation of this nerve is very likely to produce a stimulation in nutritional supply at this point, so that the normal cancellated bone (Fig. 4, Cryer) through which the erupting tooth can readily force its way, is replaced by the hardest of osscous structure which attempts to force the tooth aside to seek some easy but unnatural mode of eruption. This excitation of bony development sometimes proceeds to such extremes as to encapsulate the tooth in a dense bony cyst in which it becomes impacted (Fig. 5, Cryer). The study of this condition will not be considered at this time, but it is merely mentioned as a possible result where this undue eruption proceeds to its extreme limit.

The unnatural increase in osteoblasts with all the attending inflammatory conditions, produces a marked



Fig. 1 B. (Cryer).—A Caucasian lower jaw of modern type, with barely sufficient room for third molar.

effect on all the surrounding tissue. The resistance is depressed in proportion to the degree of irritation and

this is also further influenced by any disturbances of the general system. When this decreased resistance has reached a certain stage, the parts become an easy prey to infection. In this way, we find the eruption of the third molar which should be a natural physiologic action, complicated by more or less severe pathologic disturbances.

Another etiologic factor that sometimes plays an important rôle in depressing the local vitality, is found in mouths where on occlusion the two jaws come so close together that traumata of the gums over the erupting tooth are constantly taking place, caused by the upper teeth constantly biting the gum tissue over the erupting tooth, and infection frequently ensues.

Another marked point of irritation is found in such mouths where on account of lack of space between the second molar and the ramus, the third molar is pushed forward, and its eruption is impeded by coming in contact with the distal side of the second molar. Frequently, only the slightest impingement on the territory of the second molar will start up an inflammatory action, and the parts become rapidly infected.



Fig. 2 (Cryer).—Close proximity of cribriform tube to root of third molar.

Since 1828, when Toirac gave the first accurate description of this disturbance, French and German authorities have written extensively on this subject. In 1878 Heydenreich reviewed the list of writers on this subject up to that date. According to Magitot (1879) and David, complications ensue in the eruption of 75 per cent. of third lower molars. Some very unique etiologic theories are advanced by some of these authorities. Moty,<sup>1</sup> in 1901, tried to show an analogy between suppurating dermoid cysts and infections of erupting third molars. He found the cause at the end of the root, and speaks of it as an "epithelial inclusion," and it will be instructive to quote from him. He says:

In our opinion, these phlegmons are due entirely to a collection of epithelial cells enclosed at the bottom of the alveolus. This enclosed epithelium is found as a fungous mass which has gradually infiltrated the wall of the alveolus without enlarging the latter. In some cases, this neoplastic tissue becomes encysted. In nearly all cases these epithelial inclusions cause abscesses at the time of eruption of the wisdom teeth or later on. Early extraction may be necessary on account of the pain even before suppuration has set in, but the latter invariably occurs in cases left to themselves. The cause

\* The illustrations are taken from M. H. Cryer's book on "Internal Anatomy of the Face."

1. Moty: Accidents de la dent de sagesse Rev. de Chirurg., vol. 23, 1901, p. 617.



of this non-bacterial suppuration is due entirely to these cells acting as a foreign body.

Epithelial inclusions may be found with other teeth, but only rarely. It is very probable that the enamel body may leave an epithelial focus in the gums which may develop into a tooth (giving rise to a third dentition). These cases themselves are very rare, but grouped with other anomalies (single cusps, an additional cusp or round root added to a molar, large tooth, extra tooth not growing from the gums, etc.) make a large class. Abscesses associated with healthy wisdom teeth and commencing in the depth of the alveolus are sterile. The pus has no bad odor unless a secondary infection has supervened. An odor generally indicates a carious tooth.

If views such as these are correct, it upsets all our ideas of the pathogenic conditions at work in these cases. It is wise, however, to have our attention directed to the different views that are held on this subject, and I have quoted the latter one because it is remarkably well expressed.

they extend to the neck, to the shoulders, and even to the arms. The patient finds it more and more difficult to open the mouth. As infection progresses, the pulse becomes more rapid, and temperature may rise even to

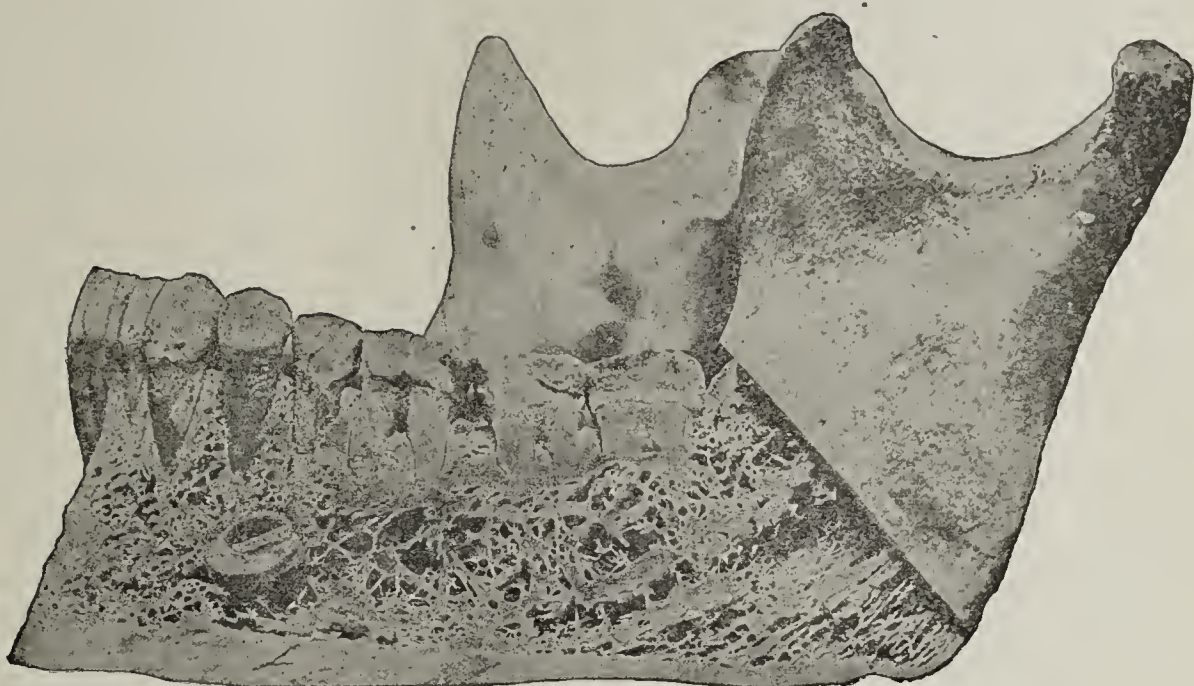


Fig. 4 (Cryer).—Normal cancellated bone.



Fig. 3 (Cryer).—Showing cribriform tube.

Careful observation of clinical data impresses us with the view that there are many predisposing factors to be considered in the etiologic study of different cases.

For the sake of convenience, the subject can be considered in two divisions: First, disturbances which antedate the appearance of the tooth; second, those which take place after the partial eruption of the tooth. Symptoms in the early stages are not much more marked than in ordinary physiologic dentition. There is the usual amount of pain accompanied by congestion of the gums overlying the erupting tooth. The edema becomes more marked, rapidly progressing in every direction and involving the pillars of the fauces and the various glands in the mouth. Neuralgic pains radiate to the ear and eye, and as the submaxillary glands become involved,

103 degrees. A careful digital examination over the gums will readily detect the presence of the tooth underneath. In some cases, the gum becomes attenuated and pale as in ordinary dentition; as a rule, however, this is not the case, but the opposite condition results, which is that of excessive congestion.

Prompt excision of the entire hood of gum tissue is at once called for. The resection of the gum should be so thorough as completely to expose the four sides of the tooth. Many authorities recommend the cautery for this purpose, but the knife is a more valuable adjunct, as the blood-letting itself is very beneficial. Every possible means should now be used to aid in the rapid eruption of the tooth, and the prevention of re-infection of the parts. Foreign writers all unite in a plea



Fig. 5 (Cryer).—Tooth encapsulated in dense bony cyst.

for extraction as the only radical cure in these cases. Whenever it becomes evident that the third molar, by reason of its irregular position and a lack of space in the jaw for its proper berth, can never become a use-



ful organ, the earliest extraction of the tooth is called for.

On the other hand, in a large percentage of cases, the tooth can be brought into proper alignment and occlusion, and under such circumstances there is no valid excuse for its extraction. A strip of gauze should be packed between the gum and tooth around its entire circumference. In case of the second molar acting as an obstruction, this gauze will act to some extent as a wedge in making a proper place for the third molar. The gauze packing should be frequently changed. If possible, the mouth should be sprayed at intervals with a hot borated wash, which at any rate should be used by the patient frequently as a mouth lotion. The focus of infection in most cases under sufficiently energetic treatment will soon find an outlet either into the mouth or the fauces, and the symptoms will rapidly abate.

The trismus, paralysis and edema in these cases involve so much surrounding territory that they are frequently mistaken by the medical attendant for adenitis, stomatitis, pyorrhea, parotitis and diseases due to the condition of other teeth. An error in diagnosis in these cases generally means an error in treatment, and usually results in an unnecessary disfigurement of the face. The frequency of errors in diagnosis of these cases is one of the strongest pleas that can be made for the education of medical men in the principles of dentistry.

The following notes taken from a typical case will illustrate this fact:

*Patient.*—Miss A., between the age of 16 and 17, had been convalescing for two weeks from an attack of measles, when she commenced to have paroxysms of pain in the posterior portion of the mouth; this was accompanied by edema, and a steadily rising temperature.

*History.*—The physician who had attended her was sent for, and he made a diagnosis of adonitis of the submaxillary glands. The temperature twenty-four hours later had risen to 102.5 F., and her pulse was 120. Under his direction Credé's ointment was liberally spread over the neck at the angle of the jaw, and this was covered by rubber tissue. The expectation of the attending physician was that the absorption of the silver salt would arrest the infective infiltration. The result, however, was that it acted as a poultice, and drew the inflammation and infection within the mouth to the outer tissues. Forty-eight hours after this treatment had been commenced, I was called to see the patient because the mother had a suspicion that the teeth might be involved; the patient having continuously complained of pain at the angle of the body and the ramus of the mandible.

*Examination.*—I found the patient suffering severely from neuralgic pains, with a great amount of edema, extending through the entire cervical region, and involving most of the hyoid muscles. A very careful external examination failed to discover any sign of any glandular enlargement, but simply an edema penetrating through all the tissues. On this account it was difficult for the patient to open her mouth, yet a careful digital examination over the mandible between the second molar and the ramus, readily distinguished the outlines of an erupting third molar.

*Treatment.*—The case being turned over to me, I at once dissected away the entire hood of gum tissue which was covering the erupting tooth, and found that the mesial approximal surface of the third molar was impinging slightly on the distal approximal contour of the second molar. Iodoform gauze was packed around the entire circumference of the tooth, especial attention being paid to the space between the second and third molar.

*Result.*—The temperature of the patient dropped immediately to 100.5, and the pulse to 100. Naturally, the ointment and rubber tissue were at once removed from the neck, and hot borinated mouth lavations were ordered every fifteen minutes with the hope of bringing the inflammatory action back again into the oral cavity. A blood count showed 20,000 leucocytes.

The patient was constantly under the care of a trained nurse, and for the following five days, the temperature varied between 99.8 and 101. At this time results of the treatment prevailed, and a purulent effusion made its escape from the tonsils. The packing of the gauze between the two molars was persisted in for about ten days, when sufficient space between the two teeth was obtained, and the third molar was finally erupted into a position of correct occlusion and alignment.

The most serious type of cases are those in which disturbances do not abate after partial eruption of the tooth has taken place. Writers frequently speak of the purulent troubles of third molars that exist even after eruption of the tooth has been completed, but careful anatomic examination will generally show that the eruption of the tooth has not been entirely completed, some obstacle being present which prevents the tooth coming out as it naturally would. This is the class of cases that Moty speaks of in which he classifies the cause as an "epithelial inclusion."

The undue osteoblastic stimulation that would result from the inflammatory action present in these cases, is sufficient to account for this condition which he so graphically describes as "epithelial inclusion," but which is nothing more than an over stimulation of peridental membrane, which, if persisted in, frequently leads to a complete ossification of the parts, and produces an impacted tooth.

In all these cases, every effort should be made in the line of proper orthodontia, so that if possible the tooth can be properly erupted and preserved. The value of the retention of the third molar in a mandible large enough to contain it, should never be overlooked. If, however, it is found impossible to bring the tooth to its proper height and alignment, extraction should be resorted to at the very earliest moment. In such cases it makes no difference how difficult it is to extract the tooth, if necessary deep narcosis must be resorted to, and a portion of the mandible cut away so as to remove every portion of the tooth. The longer there is any delay in such cases, the greater is the danger of severe neuralgic complications and infiltrative osteomyelitis through the inferior dental canal. For this same reason, if extraction of such a tooth has taken place, the greatest care should be taken to keep the wound packed with sterile gauze in order to avoid re-infection which may lead by means of the cribriform tube, to an extensive osteomyelitis. The same rule obtains in cases of abscessed or necrotic conditions in which there is any danger of re-infection and especially where the field of operation is in close proximity to any of the osseous sinuses. This does not necessarily include healthy alveolar sockets in other parts of the jaws.

The following clinical case will illustrate the danger resulting from neglecting to attend to the sterilization of such a socket:

*Patient.*—Mr. S., bachelor, aged about 30, had a third molar extracted which had never completely erupted, but had been a constant source of irritation for many years. The extraction was performed by a specialist in this line, and was said to have been a very difficult one. The later surgical operation demonstrated definitely that the roots of the third molar penetrated the cribriform tube as shown in Figure 2. (Cryer). Inadequate attention to keeping the wound sterile (no packing having been used) was followed by an infection in the alveolar sockets. This spread without any difficulty to the inferior dental canal, and when I saw the patient for the first time in the hospital on July 3, 1900, in consultation with Dr. Howard Lilienthal, he was not far from a moribund state. There was a very rapid and weak pulse, with temperature of 105.5 F.



*Diagnosis.*—An infiltrative osteomyelitis progressing through the passageway of the cribriform tube.

*Treatment.*—The patient was immediately anesthetized, and an external incision made at the angle of the body and the ramus. The bone was chiseled away at this point until the interior of the tube was exposed, when there was an effusion of a large mass of purulent matter, grayish in color, and of most foul odor. The condition of the patient at this time was so serious that the operation was made as short and performed as rapidly as possible, great fear being entertained that he would not survive the ordinary surgical shock. Drainage was established through the external opening thus obtained, and the recovery was very slow. It soon became evident that an entire infected zone of bone had not been removed, and on October 27, a subperiosteal resection was performed, extending from the symphysis of the body to a considerable portion of the ascending ramus. After this, the case went on to complete recovery.

Figures 3 and 4, taken from Cryer, will illustrate most beautifully the parts operated on. The prognosis in such cases is remarkably good, as long as correct surgical principles are used in the operative procedure.

#### SUMMARY.

It would appear that the medical profession are sometimes remiss in their failure to call on stomatologists for consultation in obscure cases of infection in the oral regions. Errors of diagnosis have been the cause of numerous cases of unnecessary facial disfigurement.

On the other hand, stomatologists should realize the value of retaining all the molars if possible. When extraction has to be resorted to, too much and too harsh a criticism can not be used against those practitioners of this specialty who are negligent in taking proper precautions against infection of wounds in this locality.

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#### DISCUSSION.

DR. EUGENE TALBOT, Chicago, said that the line of research work which he has carried on in the last five years is based on the law of economy of growth, i. e., a structure is lost for the benefit of the organs as a whole. Later this law was modified and called the "use and disuse of structures." The appendix, pincal body, etc., are examples of these changes in the evolution of man. In the development of the brain certain structures must pass, and the face, jaws and teeth will suffer. The law of evolution is so fixed that there is no pathologic condition about the face, jaws and teeth but comes under it. This change has been going on ever since the world began and is still continuing. The use of specially prepared flour and coarse foods will not benefit the teeth. If methods of living could be changed from generation to generation, possibly with the mixture of races, in a thousand or more years the jaws might develop and the teeth become dense in structure, but this evolution is going on and a man who has thirty-two well-developed teeth to-day in perfect condition is an atavism. As advance in evolution proceeds degenerates are going to develop faster. Decay of the teeth is increasing and will never be stopped by our present methods.

DR. M. I. SCHAMBERG, Philadelphia, stated that these retrograde changes are going on all the time, and impacted teeth are becoming more prevalent. There is scarcely a week that he does not see wisdom teeth in a marked degree of impaction. Dr. Schamberg did not altogether agree with the authority quoted by Dr. Rhein. He describes the impaction which takes place around the wisdom teeth as due to non-septic pus. Dr. Schamberg knows of no such condition. He believes that the non-septic cyst which is often found at the end of the teeth is frequently mistaken for an abscess. It does not become an abscess until there is bacterial infection. The same is true of these cases of delayed eruption of wisdom teeth, in which there may be serum formed, but the infection spread through the maxillary region is not due to serum, but takes place only after bacterial infection. Often the angle of the jaw comes off so close that a portion of the gum is forced over the tooth, and food may be forced under this, forming a pocket of infec-

tion. In teeth erupting in improper positions there is great danger in endeavoring to straighten them by pressing backward on the inferior dental canal.

DR. F. L. PLATT, San Francisco, said he thinks there are circumstances in which the third molar may be saved to advantage, but in the majority of cases, unless they are desired for the support of bridge work, or partial dentures, the lower third molars would better be extracted. Very few people clean their teeth properly, the vast majority never reaching the third molar. In many cases Dr. Platt has found molars that were exceedingly dirty in mouths otherwise well cared for. The soft tissue comes down close behind the third molar, the buccal tissues overlap it, and it is frequently the seat of infection and decay, and this leads to decay of the distal surface of the second molar tooth. Unless there is plenty of room for the lower third molars, and unless they occlude properly, it is the best practice to extract them. They are of no benefit to the patient, therefore can be no loss, and many good second molars in this way might be saved.

DR. J. S. MARSHAL, San Francisco, said that of course dentists all realize the result of present civilization has been to increase the size of the brain and to shorten the jaw, and to produce more or less crowding of the teeth, and that we are expecting as a result that the third molar will finally disappear, but he is not sure that this can be considered a process of evolution. He is inclined to think that these conditions are more the result of intermixture of races and nations. He had an opportunity a few years ago to examine some skulls of ancient Britons, Romans, Saxons and Danes. With very few exceptions he found no malformation so far as arrangement of the teeth was concerned, but a few centuries later the skulls of English people (made up from the intermixture of the above races), show many irregularities in the alignment of the teeth; the jaws are shorter, there is crowding of the teeth, so that the third molar is out of position or suppressed. He believes that after a few thousand years these things will adjust themselves, and teeth will return to a normal type. He does not believe that as a race we are eventually going to lose our teeth. He thinks Nature will correct these conditions. The composite photograph of the head and face of the American college girl will be the perfected type, and Dr. Marshal believes we are gradually coming to this. When this condition is brought about there will be perfect harmony in the relations of brain, jaws and teeth.

DR. G. V. I. BROWN, Milwaukee, agreed with Dr. Rhein in making an effort to save the third molars. He believes that is a part of our work. Obviously the only way to prevent this difficulty with the third molar is to begin with the individuals before the time of eruption and make room. Dentists must do artificially what Nature fails to do. Whether we are going to have teeth a generation or two from now is interesting in the abstract, but does not cut any special figure in our practices. The trouble with the third molar in most instances is that it wants more room. If we can provide this the proper eruption of the tooth will become a much less serious question. Most dentists, and particularly those who extract without proper care and appliances, and without reasonable possibility of anything like asepsis, go into one of the most critical regions without due preparation. One difficulty in taking proper precautions is that patients think dentists magnify the seriousness of the condition. If all dentists would be rigid about this it would make it easier.

DR. M. L. RHEIN said that Dr. Schamberg fell into error in imagining that he was supporting the views of Dr. Moty of Paris. Dr. Rhein quoted from Moty because he is under the impression Moty is a French authority, and he stated in his paper that if these views were correct dentists would have to change their ideas on this subject. Many European writers agree with Dr. Schamberg in not trying to save the third molars. Dr. Rhein does not want the impression to go out that he is saving all these third molars. As soon as it is evident that the third molar can not be brought to correct occlusion and alignment, extraction should be performed. It is the tendency of the teeth later in life, when approaching senility, to move backward, and the third molar when in position is a sort of back-stop to the second molar, and consequently to the



other teeth. It becomes a question of the view of the practitioner in every case. He should know when to extract and when to try to save. Dr. Rhein's practice is distinctly a family one and unless his patients are willing to abide by his decision he will not treat them. If they will not keep their mouths in a hygienically clean condition he does not waste his services. Patients are largely what dentists make them, and if the dentist can not train them properly we should not take charge of them.

### CHOLERA AND INFECTED WATERS.\*

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PLATTSBURG BARRACKS, N. Y.

The experience gained by the American military surgeons during the Philippine cholera epidemic of 1902 and 1903 has enabled them to correct a few errors in the current theories as to the methods of the spread of this dreadfully fatal disease. From their knowledge of the biologic characters of the spirillum, they were forced into an investigation, first, of the manner in which the living germ was transported into uninfected territory, and, second, of the manner in which it was carried from patient to patient after it was planted in this new territory. The spirillum is a very frail organism, which leads practically a parasitic existence, for it soon perishes outside of the host. Experimentally, it has been determined that it is killed in five minutes by a temperature of 80 C., in two hours by drying, and more quickly still if dried in the sunlight. Hence, as an invariable rule, the living moist germ is carried from place to place either in an infected host or as a culture on moist foods.

It would, then, apparently be a simple matter to trace up the channel of infection, yet all the investigations were hampered by the remarkable difficulty of eliciting truthful information from the patient. It was first supposed that this was merely the characteristic of the Malay, who is notorious for the skill he possesses in evading the truth in his remarks on any topic when he imagines that the truth will react against him. It was found that in American sufferers also it was an extremely difficult matter to get them to confess where they had been eating or drinking. They may have been ashamed to confess that they had been so foolish as to violate sanitary regulations deliberately, but it was doubtless due, in great part if not entirely, to the interruption of the cerebral circulation, which made clear thinking impossible. It is not true that the patients are clear-headed in the throes of this disease, as so often reported.

Investigators, therefore, were compelled to resort to indirect evidence as to sources of infection and methods of spread. Almost invariably it was found that the first case in a new territory was a newcomer who had been infected elsewhere and who showed symptoms very shortly after his arrival. The short period of incubation made this evidence stand out with startling clearness. It is but a few hours after swallowing the germ that symptoms appear, and frequently patients were dead less than twenty-four hours after infection. The shortest case is said to have been ten hours from infection to the first symptoms. Hence, the traveler who brings the infection into a new neighborhood is usually desperately sick on arrival, and a patient is known to

have died fifteen minutes after he left a railroad car in which he had been travelling but an hour and a half.

We can safely say that practically the only way the infection is carried into a new territory is by infected travelers, for the other methods are so rare as to be mere curiosities. Yet foods are now and then the vehicle; for instance, in one town the first eighty cases were directly traced to a fiesta or banquet in which the food was supplied by a native caterer. He cooked the material in Manila, where it was undoubtedly infected, and then smuggled it into the distant town. It proved to be a splendid culture medium, so that when served it was no doubt swarming with spirilla. The cook himself died shortly after arrival and was probably infected from the same source which infected the food.

Curiously enough, it was probably by this rare method that cholera was introduced into the Philippine Islands from China, where the disease had been epidemic a long time. In the Orient, where intensive cultivation is carried to an extreme, human feces and urine are carefully collected and sold to the farmer as fertilizers. They are mixed with water and then sprinkled by watering pots on the leaves, so that a garden in China or Japan is a most foul smelling landscape to which distance lends enchantment. The result is evident. If there is cholera, typhoid, dysentery or any similar infectious disease in the community, the bacteria are deposited in the cracks and crevices of the leaves of cabbages, celery, lettuce and such vegetables, and if they are eaten uncooked the disease is spread broadcast. Hence, in the Orient sensible people always eat their vegetables cooked, but it is to be confessed that a stroll through a Japanese garden generally destroys all desire for oriental vegetables in any shape. Boiled feces may be harmless, but they are not an esthetic condiment.

For these reasons the quarantine authorities in Manila forbade the importation of vegetables or any moist foods from cholera-infected ports, but one ship captain is said to have disobeyed orders and thrown Chinese vegetables overboard. They are reported to have been picked up on shore. What we certainly know is, that along this shore the first cases occurred in an epidemic which destroyed lives estimated variously at from 150,000 to a half million.

Though infected water is the chief means of spreading the disease locally from man to man in an infected territory, it is so rarely the means of carrying the disease into an uninfected area that it can be dismissed. I do not know of a single instance in the large area from which I received reports. Of course it is possible, as where boats take infected water into their tanks and spread the disease at the terminal port, but in that case there is sure to be an extensive epidemic on the boat, which will lead to prompt measures. This is due to the fact that the vibrio perishes in so short a time outside of the host. Experimentally, it has been shown to die in distilled water in 24 hours, in water of canals in one to four days—Koch says in 36 hours. In sterilized milk it lives 10 days; in unsterilized milk, 1 to 2 days; in decoction of tea, 1/200, 8 days; in coffee, 2 hours; beer, 3 hours; acid wine, 1/4 hour.

The subject of the prevention of the spread of the infection into a clean territory is foreign to this paper, but it is appropriate to remark that, theoretically, it seems a very simple matter. If a quarantine can be organized on sufficiently rigid lines, so as to stop every traveler at the point of destination for five days, every infected person could be discovered and his discharges

\*Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



disinfected until he recovers. Unfortunately, the spirilla remain in a convalescent many weeks or even months—they have been found seven weeks after all symptoms had disappeared. To keep him under control, then, is not as simple as it appears. Long after he is apparently well he may be a dangerous source of infection and nothing is safe except returning him to the territory whence he came. The quarantine itself is not always practicable, because it is easy to break through the lines, and this happened so often as to raise a suspicion that it was a useless bother and expense. Indeed, there are some who claim that as a land quarantine is sure to be inefficient and the infection spread in spite of our efforts, it is not wise to attempt any restrictive measures of the sort. This is rather fallacious reasoning and if we apply it to all human endeavors we would never attempt anything, for our efforts are rarely wholly successful. A quarantine does restrict the spread of cholera and to that extent it is an essential measure, for it lessens the number of new foci and restricts the number of deaths while we are waiting for the spirillum to lose its vitality, and this is a matter of only a few months. A marine quarantine is, of course, an entirely different matter and can be more efficient except in the matter of the retention of convalescents in the long period in which they can spread the infection.

It is certain that if on the discovery of the first cases in Manila that part of the city had been surrounded with guards, with orders to shoot any one escaping, and this severe quarantine had been continued for two months after the last case, the subsequent epidemic in the Philippines would have been prevented, but it is also evident that such measures would never be tolerated by public sentiment.

Commerce in dried merchandise need not be interrupted in the least, but moist foods from an infected territory must, of course, be wholly excluded. Particularly in the Orient is this necessary, where, as before explained, the farmers are so filthy. The outcry against quarantine invariably raised by commercial bodies interferes with its efficiency. Indeed, there is much to be said on the side of the merchants. Interference with trade is a very serious matter and may in the end cause poverty, privation, sickness and eventually lay the foundation for more deaths than the unrestricted spread of the cholera. Oriental communities are dreadfully overcrowded, and a large death rate is normal and necessary. Many must die, for the food supply is always short, and there is much to be said in favor of the present attitude of the British sanitarians in India who have in sheer hopelessness given up the task of preventing the spread of plague and such epidemics and are allowing the natives to kill themselves in the way which pleases them most. It seems brutal, but a careful investigation of the whole question generally convinces one that in dealing with Orientals *laisse faire* is more often the best motto than we are willing to confess.

We now come to the most important side of cholera—its spread from man to man, after the spirillum has been introduced into a new territory. Here we have very definite data and we can lay down an invariable law, that without an infection of the water supply an extensive epidemic is impossible. Sporadic cases can occur in a city from infected foods and there may be little local outbreaks here and there, as where a well has been infected, but unless the spirillum enters the water supplied to a great population, that population is com-

paratively safe. The first thing done in Manila was to guard the water supply by military forces, and to this wise measure we can surely attribute the salvation of that city from a terrible disaster.

To be sure, Manila had some thousands of cases, a few no doubt due to wells here and there into which surface discharges drained, but the vast majority were due to the extremely filthy habits of the people in their food supplies. It is said that there are 50,000 people in that city who feed from the little restaurants which exist by hundreds and sell various kinds of soups, stews and other cooked foods. A prospective purchaser will run her hands into the mixture and if it does not suit her will pass on to the next merchant. If she has just helped to attend a cholera patient hidden away in her home, she inoculates the stew from her finger nails, and the mixture, being a fine culture medium, is soon swarming with spirilla. In this manner and from equally filthy household habits almost all of the Manila cases can be attributed. But they were mostly sporadic cases, here one and there one, probably only one member of a family. Now and then a single pupil in a boarding school would be stricken, and investigation would bring to light the fact that she had received food from the outside, say some confectionery or a salad. Flies undoubtedly carried the infection from patients' discharges to exposed food supplies and started cultures this way, but this was of minor importance in the presence of the far more numerous ways of carrying it on the hands of filthy natives.

In the provinces we no doubt had many similar cases, but the bad epidemics of towns were invariably due to infected waters. The streams in the Philippines are the life of the country, and houses are built on the banks or overhanging them, so that the stream acts as a water supply and sewer for every one. It naturally followed that, as soon as a case occurred, the discharges entered the water and there was a general epidemic in the population living further down stream. Where the stream was large and there was a chance that one might drink some of the water without happening to take in a spirillum, the epidemic was not extensive, but where the stream was small and more crowded with spirilla the results were dreadful. In one town of this latter sort, the reports showed that over 25 per cent. of the inhabitants died within two or three weeks of the first case. In prior epidemics towns have been totally wiped out. Where there were many wells in addition to the stream, it was natural that some of them would escape infection and the users of that water escape. In one town, a famous spring supplied part of the people who were quite free of the disease which nearly decimated those using the river, and in those towns where the rich had well-protected cisterns for rain water these families were quite immune, excepting the sporadic cases infected elsewhere or from infected foods.

As before explained, the life of the spirillum in water is quite short. Reports from India show that infected wells and tanks are safe after three weeks, though we made no similar investigations in the Philippines. This fact gives the rational basis for the management of an epidemic. Of course, we must search for and destroy infected foods and prevent the sale of certain vegetables, like cabbage, which can harbor the germs, though many of the fruits and vegetables forbidden in the Manila epidemic were absolutely harmless. Mangoes, for instance, are not known to carry the infection. Bananas are probably safe, though there was a rumor at one time that the circulation of fluids in the plant was so rapid that bacilli



could be carried up from the roots to the interior of the fruit, but it is safe to say that this is merely an illustration of the wild thoughts possible in the nervous tension of an epidemic.

The sterilization of the urine and feces of cholera patients is also of importance to prevent the bacilli being washed into any water supply. Deep burial or sterilization by heat are impracticable, and dependence must be placed on one of the methods of chemical sterilization useful in typhoid. Experimentally it is found that the cholera vibrios are killed in a few minutes by weak solutions of carbolic acid or corrosive sublimate, and by mineral acid, 1/10000, in a few seconds, but for excreta it is thought that milk of lime is the best, in the proportion of 1 part lime to 40 of water.

We must search for the sick, who are invariably concealed to escape quarantine, and we must isolate them to prevent them from fouling a water supply, and finally we must close up for several weeks all wells, tanks and cisterns known to be infected. The British sanitarians are wedded to the plan of disinfecting such cholera wells by adding 2 to 4 ounces of permanganate of potash, in which solution the spirilli promptly perish. The permanganate is said to destroy all dead organic matter and thus to sterilize the water by depriving the spirilli of food so that they die of starvation. To be effective there must be a faint pink tinge in the water the day after the permanganate is used. Foul wells which destroy the color at once should be pumped out, if possible, and cleaned. In the absence of permanganate, alum has the next best reputation, 4 to 8 ounces to a well, but it is a clarifier rather than a disinfectant and carries down the bacteria in the coagula it forms. Finally, lime, 40 to 50 pounds to a well has been used, but it is not a safe means, as we have no data that it destroys the spirilli, whereas the permanganate has been repeatedly known to stop an Indian epidemic in 3 days after it was added to every well in town. Of course, we run the risk of being accused of poisoning the wells, but we will be accused of this, anyhow, so it makes no difference.

The main reliance must be placed on boiled water for all purposes. The more completely we could enforce this measure the more successful was the management of an epidemic. It was quite possible to do this among soldiers, though they were apt to be careless until one or two in a company died through disobedience, but among the natives any such plan was hopelessly impracticable, as a rule. They could not possibly understand why it was necessary to boil the water, and have been known to take boiled water into the house as a fetish of some sort and then drink what they pleased. Hence, among an Oriental population, prevention of spread of the infection is not possible, never has been and never will be. The white man must do the best he can for the natives, but look out for himself. The permanganate method is the best in such circumstances, but where the natives use an infected stream we are helpless, and the natives will die until the stream is cleaned out by a heavy storm. Time and time again in the Philippines have local epidemics ceased after a long heavy rain. It not only washes out the stream bed, but each native collects rainwater to save the trouble of carriage, and there is less use of the infected wells. On the other hand, we have seen local epidemics increase with the rains where the surface filth has thus been washed into wells which were previously sterile.

In regard to patent sterilizers, such as the Forbes-Waterhouse, opinions are divided. This particular one is a complicated contrivance for boiling water and then

to save fuel using this hot water to heat up the incoming stream. It boils the water only a few seconds, but when carefully tested in a laboratory by skilled bacteriologists and intelligent men it delivers a steady stream of sterile water. In the field in actual use it is rarely successful, and I have repeatedly seen it used without heat at all. It is an extremely dangerous contrivance. The same condemnation must be given to all forms of portable filters. If they work easily, they merely act as clarifiers, as the spirilli easily pass through such large pores. When they are efficient they require considerable pressure which can only be obtained in permanent plants. The large permanent filters for public supplies have proved themselves efficient in filtering out cholera spirilli and need no further comment. The use of copper sulphate in minute doses or of copper foil is worthy of trial in wells and cisterns, for it may be of extreme value in the absence of the permanganate of potash.

If it is really true that a strip of copper foil 3 inches square in the water bottles will destroy intestinal parasites accidentally present, we have a most valuable discovery for tropical residents who can rarely depend on filthy natives. Indeed, it is suspected that here and there dysentery may have been due to unboiled infected water introduced by servants after they had stolen the water carefully sterilized by the master himself. The matter deserves the greatest attention in our laboratories. Acidulated water is no doubt efficacious if cholera is present, as the bacilli are destroyed by mineral acids, but it is unpleasant and will not be used except under compulsion, and the copper foil treatment is, therefore, an advantage if it proves to be germicidal. The use of acid in wells is apt to be resented by the natives much more than the permanganate and is probably less efficacious.

The extreme ease of personal prophylaxis is comforting at least. We lived for a year in the midst of this disease, sometimes seeing the natives die all around us, and in our houses, even in our kitchens, but if we were sure to drink only boiled water, or bottled fluids known to be sterile, and ate only cooked or canned foods from scalded dishes, there was not the slightest danger. The patient himself is as harmless as one with typhoid, and if his discharges are sterilized or buried he never transmits the disease to his nurses. Cases could be cared for in the main hospital or, indeed, anywhere, for isolation was wholly unnecessary. In the first excitement of the epidemic, rather hysterical orders were sent out to cremate the bodies of the dead and burn down their houses, but this was all unnecessary. The buried corpse was harmless, for the spirilli perished at once. One military campaign was made in Mindanao in territory where every stream was infected and the natives were dying in large numbers, but not a soldier was taken sick. If soldiers violated orders and drank from streams, the results were dreadful. In another campaign the commanding officer of one company and eight or ten of the men died from this carelessness.

The spirillum is such a pure parasite that it will soon die even in India, so that it is kept alive by constantly passing through new hosts in those regions where it is endemic. Outside of India it loses vitality in its excursions from host to host, so that in the course of time it is too enfeebled to infect a new host, and the disease dies out. In any one locality its virulence diminished in a few months or even weeks, so that toward the end of a local epidemic many patients recovered and the physicians in attendance built up fine reputations for curing their cases. My own experience and the supervision of very many different methods of treatment led me to the

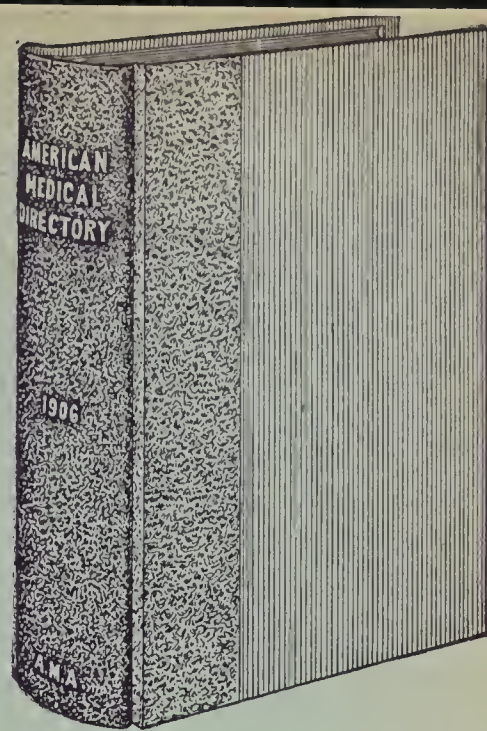


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American Medical Association

DIRECTORY DEPARTMENT



103 Dearborn Ave., CHICAGO, Oct. 14, 1905

DEAR DOCTOR:-

You are aware that the House of Delegates of the AMERICAN MEDICAL ASSOCIATION, at the meeting held in Portland, Ore., authorized the publication of a directory of the legally qualified physicians of the United States. As you will remember, one of the desirable objects mentioned in the report of the Committee on Organization, adopted at the St. Paul meeting in 1901, was the publication of a directory. The reasons were given at that time why the medical profession should control such a book. The profession is now sufficiently organized to do several things that were outlined in that report, and among them, none is of more importance than the publication of a directory that shall contain the names of those who are legally qualified to practice medicine, and none other. We take it for granted that you, as well as every reader of THE JOURNAL, are sufficiently interested in this movement to lend it your co-operation. We ask you to consider the following questions as directed to you personally:

Will YOU support a directory in which information regarding college graduation and state licensure will be verified from official records of colleges and state boards of health?

Will YOU assist in preparing such a directory by furnishing personal information regarding yourself NOW, and thus save the ASSOCIATION the expense of acquiring this data in some other way at a greater outlay of time and money?

Will you kindly subscribe now, if you desire a copy of the directory, and thus save to the ASSOCIATION the expense of further solicitation?

In a word, will you aid us by supplying AT ONCE, all the information desired regarding yourself, as well as by subscribing for a copy of the directory?

The blank on the reverse side contains space for all the information desired for the Directory, as well as for the Biographical Card Index; also a subscription form.

Will you fill in this blank and forward it at once?

Very truly yours,

AMERICAN MEDICAL ASSOCIATION.

George H. Simmons

General Secretary.



# American Medical Directory

The American Medical Association is preparing material for a general directory of the Medical Profession of the United States and Canada. The book will be issued early in 1906. It will contain only the names of legally qualified physicians and graduates of recognized medical schools. It will furnish exactly the same information in regard to each physician whether he is or is not a subscriber to the book. It will contain a list of the important hospitals, medical colleges and societies, medical practice laws of each state, and other information of interest to physicians. It is desired that this directory shall be absolutely correct, and to this end personal information is requested from each physician practicing in the United States or Canada. It will be necessary to furnish this information once only, as it will be preserved in permanent form in a Biographical Card Index of the American Medical Profession. The following data will be given in the Directory, regarding each physician:—Name, year of birth, literary degree received in course, Medical College and year of graduation, address, with office address and office hours

Please fill out the blank form printed below and return to Directory Department, American Medical Association, 103 Dearborn Ave., Chicago. This will insure that all information given in the Directory about YOU will be absolutely correct.

## INFORMATION BLANK

1. I was born at \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_ 18\_\_\_\_
2. My preliminary education was obtained at \_\_\_\_\_  
State if common school or collegiate.  
\_\_\_\_\_  
If the latter, give name of college and date of degree.
3. I was graduated from \_\_\_\_\_ in the year 1\_\_\_\_  
Give name of medical college in full.
4. My state certificate was issued by \_\_\_\_\_ in \_\_\_\_\_  
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5. My school of practice is \_\_\_\_\_
6. I am a member of the following medical societies \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. I have practiced at my present location \_\_\_\_\_ years, and at the following places for the years named: \_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
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Give hospital and college positions, insurance companies for which you are examiner, etc.  
\_\_\_\_\_  
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\_\_\_\_\_
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(OVER)



conclusion that there was nothing to be done for the patient, except make him as comfortable as possible. Morphin, hot applications and massage for the cramps, with strychnin and other heart stimulants later, were about all that could be done. Remedies by the stomach were only rejected, and saline injections, either intravenous or hypodermic, only passed into the intestines within a few minutes and drained off more blood serum. If the patient lived through the acute stage, he could be saved by skillful management of his food and stimulants, but the treatment of the acute stage is hopeless. It is purely a matter of the patient's resistance and the virulence of the particular culture of spirillum he has swallowed.

Haffkine, in India, and Murata, in Japan, have apparently produced a certain degree of immunity by injecting the killed spirilli, and Strong, in Manila, has encouraging results with the fluid from which the killed spirilli have been filtered. Strong's filtrate causes a serum to form in man and animals which has high bactericidal and agglutinative power, though but slight antitoxic power. Work along these lines gives our only hope of future success.

Our main reliance, then, in cholera epidemics outside of India is to quarantine the infected area as rigidly as possible, protect water supplies, close up those known to be infected, use permanganate in the wells and cisterns, remove the sick to where they will be harmless, try to get the natives to use boiled water, prevent the sale and exposure of foods which are good culture media, and patiently wait until the spirilli have lost their virulence.

The above paper contains the conclusions to which we came as a result of the personal management of a severe and widespread epidemic, and it is also based on several score reports which came into my hands as chief surgeon of two of the brigades in the Philippines. As it would be meaningless and a waste of time to quote names, places, dates and statistics, these have been omitted, but it may be remarked that the official reports themselves are on file. It was requested that this paper would also include an account of the *Spirillum cholerae asiaticæ*, but we have discovered nothing new about this organism which is not already in the text-books.

We can conclude that we need never be afraid of a cholera epidemic in America, as sufficient is known to prevent it if we will not interfere with the sanitarians. One more Oriental plague has been removed from the list which has been the dread of the Occident, and once again we have a lesson that the people for their own protection had better give more authority to the sanitarians.

#### DISCUSSION.

DR. DENSLOW LEWIS, Chicago, stated that his experience with cholera is necessarily very limited, being confined to observations in Europe in 1892, at which time he visited the principal European cities as a special commissioner from the Health Department of Chicago and from the Illinois State Board of Health. Cholera broke out at Hamburg at that time and there were cases in Paris and a few in London. In Great Britain, the matter became of very serious importance on account of the isolated condition of that country, and Dr. Thorn-Thorn, now deceased, and Dr. Shirley Murphy of the health department of London were up in arms against the entrance of cholera into England. Great excitement prevailed, and fear was expressed, not only that the cholera might spread, but that commerce would be interfered with. Dr. Lewis noted at that time the great value of having an effective sanitary organization throughout a country. In place of quarantining the ships, which would have interfered most seriously with commerce, it was possible in discharging the passengers to have each one under surveillance, so that no

matter to what little town in England, Ireland or Scotland he should go, there would be a health officer there who would keep track of him and isolate him in case he showed any suspicious symptoms. Dr. Lewis said that it would be well in this country if our sanitary measures could be centralized to some extent, so that such a system of surveillance in case of necessity might be possible. It is easily seen what very great value this system has under these conditions. Dr. Lewis recalled a conversation he once had with Commander Lucien Young, in which the latter informed him that when his ship was in an infected harbor, the exceptional health of his men was remarked on. The sailors of other ships became ill, and many of them died, but his sailors were well. He attributed this freedom from disease to the use of alcohol, which he recommended on that occasion, and Dr. Lewis asked Dr. Woodruff's opinion regarding this matter, because, if alcohol under these conditions is of value, it is an important fact for physicians to know, for the lives of many of our sailors may depend on their knowledge.

DR. WOODRUFF said that with regard to quarantine at the port of entry, the British solution is the proper one for them. The existence of Great Britain depends on its trade, and any interruption of it, even for a short time, would be fatal. Two-thirds of the people get their food from America, and at times there is on hand, so it is said, only three or four weeks' supply, so that they would really suffer from want of food in case of an interruption of their traffic for more than that time. That is the reason why war between Britain and America is utterly impossible; the British would not permit it. Consequently, they must have some means of following up cases and of preventing interruption of trade, and their splendidly organized sanitary service allows them to do that; but there is no other place in the world that Dr. Woodruff knows of where it can be done. All other places would have to keep a ship under surveillance. If there were any sick, they would be isolated, but the others could not be turned loose until it was certain they were not infected. With regard to alcohol, he said that the evidence is conclusive that any irritation of the stomach from alcohol permits the bacillus to get through into the intestine. It seems as though a person on a spree who drinks infected water is very apt to have cholera; Dr. Woodruff has seen that occur a number of times among soldiers. The stomach is undoubtedly able to dispose of an enormous number of spirilli, and in an epidemic people must be drinking spirilli all the time, but as they are killed in a few minutes in any acid solution, even one to ten thousand, the stomach juices in good health will destroy them. A man is safe unless he drinks an exceedingly large number of the germs; but if a soldier is allowed to go on a spree or to acquire in other ways an acute gastritis, it alters the tone of the stomach and probably lowers the acidity of the juices. Dr. Woodruff found many cases of soldiers dying shortly after drinking large quantities of alcohol. There is no evidence that small quantities of alcohol do any harm, but he does not think that alcohol is beneficial except in the case of acid wines. The spirilli will not live on the cut surface of a lemon, for instance, and acid drinks of all kinds are beneficial. The majority of physicians agree that it is better not to be a total abstainer in the tropics, but they are not willing to go on record, because it is so revolutionary. The very foundation of our faith in tropical hygiene is total abstinence, but Dr. Woodruff is convinced from the statistics that he has gathered that a little stimulant with lunch and dinner, but at no other time, is a very good thing, though excessive drinking is exceedingly bad.

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A Voice from the Tombs Warning Against Quacks.—There is said to be a monument in the graveyard at Hameln, in Germany, over the graves of two children who died in 1792, which bears the following inscription. It states that the children were sent to death "by a charlatan's hand—a warning to the entire land. Trust your life only in the hands of a sure physician: if you die then you will at least have done your duty."

Wir sind durch eines Pfuschers Hand zu früh hierher geschicket.  
Zur Warnung für das ganze Land und den, der dies erblicket.  
Sein Leben traue jedermann nur sich're Aerzte Händen an;  
Geht er dann auch die Todesbahn, hat er doch seine Pflicht  
gethan.



## Special Article

### IMMUNITY.

#### CHAPTER XXVII (CONCLUDED).

##### TUBERCULOSIS.

The essential principles in the prevention of tuberculosis consist of first, the early recognition of the disease, so that the patient may be properly treated and cured, if possible, with the result that a new center of contagion is avoided; second, the rendering of well-developed cases harmless by suitable isolation and proper disposal of infected excretions; third, the disinfection of the rooms, clothing, linen and surroundings of tuberculous patients. A fourth point, the prohibition of marriage among the tuberculous, is of great consequence, although we have little ground to hope for its realization on account of sociologic considerations. A fifth point, not yet fully established, is the possibility of universal vaccination against the disease.

In most cases the burden of early diagnosis falls on the family physician, and in addition to the usual clinical and bacteriologic methods of examination, the use of tuberculin is often of value when given as described below. That tuberculosis of the lungs and cervical lymph glands is curable in a large percentage of the cases when subjected to modern methods of hygienic or surgical treatment is now sufficiently well known. Aside from radical intervention, as practiced in surgical cases, the most important procedures are those of keeping the nutrition of the patient at the maximum and providing for a life in the fresh air and sun.

The collection of infected sputum in properly constructed water-proof paper boxes, which, with their contents, should be burned daily, is the safest method of disposing of this material, and the most effective means of preventing infection of the patient's surroundings. Metallic, glass or earthenware sputum-cups containing 5 per cent. carbolic acid are serviceable, but the frequent cleansing to which they must be subjected is not without danger to others. When sputum is collected on a handkerchief the latter should be boiled within twelve hours and not allowed to dry; that the hands of the patient are likely to be contaminated from the handkerchief is evident. In coughing, the handkerchief should be held to the mouth to catch droplets of sputum and saliva which are expelled. The ordinances and rules which prohibit expectoration in street cars and public places should be enforced. When bacilli are discharged in the urine and feces or in the pus of tuberculous abscesses and sinuses, these secretions should be disinfected by suitable means (chlorid of lime). Healthy persons should come in contact with the tuberculous as little as possible, and the eating utensils of the latter should be used by no one else.

The floor of a room which is inhabited by a tuberculous person should always be moistened before it is swept, in order to avoid stirring up the dust. After the death or removal of a patient, the entire surface of the room and all its contents should be thoroughly disinfected by appropriate means. The proper disinfection of the premises which were once occupied by a consumptive should be a legal requirement, just as similar procedures are demanded in the case of smallpox and some other contagious diseases.

The special hospital in which the indigent tuberculous may be properly cared for and isolated has been a powerful factor in causing the decrease of tuberculosis which has been noted in many countries. The removal of a patient to such an institution means the elimination of an infected focus from the community.

Cold-blooded animals (fish, amphibians, reptiles), and most birds are not highly susceptible to tuberculosis, although special varieties of the bacillus cause the disease in certain of them under natural conditions. When tubercle bacilli are injected into the circulation of birds, they may remain in the blood and organs for months, producing little or no tissue change, although they retain their virulence for other animals

(guinea-pig). No animal exceeds the guinea-pig in its susceptibility to this disease. Goats and sheep are fairly resistant, and the same is probably true of the horse, although its artificial infection is not difficult. That different races of a species may vary in their susceptibility is illustrated by the

field mouse, which is highly susceptible, and the white mouse, which is relatively immune. Although similar variations may exist among different races of men, they are not readily demonstrated. The high susceptibility which appears to exist among certain races, as the negro, may be explained in part by unhygienic methods of living, in which safeguards against infection are not taken.

The discovery of healed or healing tuberculous foci in 70 to 90 per cent. of all autopsies, in contrast to the 15 to 20 per cent. of deaths from tuberculosis, shows that susceptibility and immunity are subject to marked individual variations. The ability of an individual to overcome a tuberculous infection is referred in a vague way to an unusual resistance on his part; his defensive powers are said to be strong. Although we remain to a large extent in the dark concerning these defensive powers, they seem to rest chiefly in the ability of the tissues to destroy the bacilli; that is, the resistance is antibacterial. Many bacilli may be destroyed by leucocytes or endothelial cells before they are able to cause tissue changes. It was stated previously that healing in many instances depends on isolation of the focus by epithelioid, lymphoid and plasma cells, and by connective tissue. On general grounds we may assume that a tissue reaction of this nature takes place with greater vigor and rapidity in a strong, healthy person than in one of lower vitality. Aside from the question of individual resistance, recovery or progressive infection may depend on the smaller or larger amount of bacilli which gained entrance to the body, as well as on their virulence. Experiments show that susceptible animals recover from minute doses, whereas they succumb to somewhat larger doses of bacilli.

Various external influences increase susceptibility and resistance. Tuberculosis is to no small degree a disease of the poor, who so frequently live in an under-nourished condition, in crowded, dirty rooms, with little sunlight and fresh air. The disease is more common in the city than in the country, where an outdoor life is the rule. Alcoholism, diabetes, measles, scarlatina, whooping cough often, and influenza not infrequently, are precursors of tuberculosis. Conditions which favor anemia, as pulmonary stenosis (rare), predispose to pulmonary tuberculosis, whereas insufficiency of the left heart, accompanied by congestion of the lungs, is not often associated with the disease, although it has no influence in preventing infection in other organs. Tuberculosis is more frequent during the first two or three years of life, when children are so commonly confined, than from the third to the fifteenth years, when they live in the open air so largely. From the fifteenth year to middle life or later the disease increases in frequency because of greater exposure to infection. Physicians who are familiar with tuberculosis in Scandinavian countries and in America comment on the extent to which tuberculosis develops among Scandinavians after they come to this country.

Nothing is commoner than the occurrence of several successive cases of phthisis in the members of a family, and the expression, heard on all sides, that "tuberculosis is in the family," indicates the general belief that a family tendency may be transmitted from generation to generation. During recent years, however, closer analysis of the conditions has led many to doubt the existence or, at any rate, the importance of family tendency or inherited predisposition, and to refer the frequent occurrence of tuberculosis in a family to the greater exposure to infection which is occasioned by close contact with a pre-existing case. Cornet, who has made a close statistical study of tuberculosis, discredits entirely the hypothesis of hereditary predisposition, and Cornet and Meyer refer to the "*habitus phthisicus*," which we are disposed to look on as an objective evidence of hereditary tendency, as a result rather than a cause of pulmonary tuberculosis. It is fair to say that the development of tuberculosis in several mem-

**Racial and Individual Variations.** field mouse, which is highly susceptible, and the white mouse, which is relatively immune. Although similar variations may exist among different races of men, they are not readily demonstrated. The high susceptibility which appears to exist among certain races, as the negro, may be explained in part by unhygienic methods of living, in which safeguards against infection are not taken.

**Predisposing Influences.** Various external influences increase susceptibility and resistance. Tuberculosis is to no small degree a disease of the poor, who so frequently live in an under-nourished condition, in crowded, dirty rooms, with little sunlight and fresh air. The disease is more common in the city than in the country, where an outdoor life is the rule. Alcoholism, diabetes, measles, scarlatina, whooping cough often, and influenza not infrequently, are precursors of tuberculosis. Conditions which favor anemia, as pulmonary stenosis (rare), predispose to pulmonary tuberculosis, whereas insufficiency of the left heart, accompanied by congestion of the lungs, is not often associated with the disease, although it has no influence in preventing infection in other organs. Tuberculosis is more frequent during the first two or three years of life, when children are so commonly confined, than from the third to the fifteenth years, when they live in the open air so largely. From the fifteenth year to middle life or later the disease increases in frequency because of greater exposure to infection. Physicians who are familiar with tuberculosis in Scandinavian countries and in America comment on the extent to which tuberculosis develops among Scandinavians after they come to this country.

**"Hereditary Tendency."** Nothing is commoner than the occurrence of several successive cases of phthisis in the members of a family, and the expression, heard on all sides, that "tuberculosis is in the family," indicates the general belief that a family tendency may be transmitted from generation to generation. During recent years, however, closer analysis of the conditions has led many to doubt the existence or, at any rate, the importance of family tendency or inherited predisposition, and to refer the frequent occurrence of tuberculosis in a family to the greater exposure to infection which is occasioned by close contact with a pre-existing case. Cornet, who has made a close statistical study of tuberculosis, discredits entirely the hypothesis of hereditary predisposition, and Cornet and Meyer refer to the "*habitus phthisicus*," which we are disposed to look on as an objective evidence of hereditary tendency, as a result rather than a cause of pulmonary tuberculosis. It is fair to say that the development of tuberculosis in several mem-



bers of a family is not *prima facie* evidence of the existence of a family predisposition for the disease. Where there are tubercle bacilli there is likely to be tuberculosis, and the occurrence of the infection in one furnishes the prerequisite, that is, bacilli, for the development of the disease in other members of the family. It is probable that the verdict of family tendency has often been pronounced erroneously. At the present time, however, we may not be justified in considering the subject a closed chapter.

It is the commonly accepted opinion that recovery from tuberculosis does not confer immunity to subsequent attacks.<sup>1</sup>

#### Concerning Acquired Immunity.

Cornet and Meyer suggest as an explanation of this condition that the local lesion is so strictly isolated that a sufficient amount of toxin does not escape into the circulation to cause a general reaction, hence the formation of antitoxin or other antibodies is impossible. This explanation seems inadequate, however, when we remember the strong antitoxic immunity which develops in tetanus and diphtheria in spite of the localization of the bacteria. The results of artificial immunization, in which unlimited amounts of toxic material or bacilli may be injected without the formation of satisfactory antitoxins, seem to indicate that the toxic constituents of the tubercle bacillus lack the power of causing the formation of a strong antitoxin.

In opposition to the prevailing opinion, certain observers find ground for the belief that recovery from local tuberculosis of the lymph glands, skin or bones, actually does render the patients immune to pulmonary consumption (Maragliano and others). In early experiments Koch noted that when tubercle bacilli were injected subcutaneously into guinea-pigs which were suffering from general tuberculosis, the subcutaneous inoculation remained as a local infection and not infrequently healed after sloughing. The general infection would seem to have increased local resistance. Although other investigators failed to duplicate the observation of Koch, this result is said to have suggested to him the idea of active immunization as a cure for tuberculosis, a method subsequently practiced by treatment with the various tubereulins.

In the United States, Trudeau and de Schweinitz, and in Europe, Koch, Behring, Maragliano and Baumgarten, with their followers, have practiced assiduously the artificial immunization of animals with the tubercle bacillus or various preparation from the organism, with the hope of producing active immunity to the disease. Some of the procedures, especially those of Koch, have been transferred to man as curative measures. In addition to active immunization of man, Maragliano especially has prepared an antituberculous serum, to which he assigns antitoxic and bactericidal properties, and which he and others claim to have used with good results in the treatment of tuberculosis. Marmorek also prepares an "antitoxic" serum.

The results of this work have shown the possibility of so increasing the resistance of various domestic animals (guinea-pig, sheep, rabbit, dog, calf, cow, etc.), that they withstand doses of bacilli which are invariably fatal for control animals. When the bacterial cells are used for immunization it is customary to begin treatment either with killed bacilli, or with living cultures which are naturally of low virulence, or the virulence of which has been lost by prolonged artificial cultivation. Relatively avirulent strains as those cultivated from fish, turtle or fowls, have been utilized for the first injections. As immunization progresses one of two processes may be followed: either the quantity injected may be increased gradually, as when killed or avirulent bacilli are used, or the immunization having been begun with avirulent living cultures these of higher virulence may be substituted gradually. In any case immunization is extremely difficult and slow, and many animals may be lost from cachexia or from tuberculosis which develops from hasty progression in dosage. The subcutaneous injection of intact cells has the disadvantage that local abscesses frequently develop, and to avoid this the intravenous injection of smaller doses has been practiced in some instances. For active immunization the "new tuberculin" of Koch, containing all the cellular constituents in a finely

divided form has the advantages that it may be given subcutaneously without abscess formation and is absorbed with some rapidity. An animal or person immunized with TR is immune to all the constituents of the bacillus. The condition produced by active immunization is one of increased resistance rather than of absolute immunity; large doses of bacilli may cause infection. The nature of the new resistance is not satisfactorily established, although Maragliano refers to the formation of antitoxic and bactericidal substances.

Inasmuch as tuberculin is used not only for diagnosis but also for curative purposes in man (active immunization), and since the principles of action are similar in both instances, the use of tuberculin may be considered at this point properly. From 0.5 to 1 c.c. of tuberculin may be injected into a

#### Tuberculin in Diagnosis.

normal guinea-pig without the production of local or general changes. When, however, 0.1 to 0.15 c.c. is given to a tuberculous guinea-pig the animal dies in from twenty-four to forty-eight hours. A healthy man likewise is not susceptible to moderate doses, but a tuberculous man is even more susceptible to the toxin than the tuberculous guinea-pig, since 0.001 c.c. often causes an intense reaction. E. Weigert classifies the disturbances which tuberculin may produce in the tuberculous as thermal, circulatory, respiratory, digestive, nervous and vasomotor, and secretory. Necrosis may be produced at the point of injection. In so far as the diagnostic use of tuberculin is concerned, we are interested chiefly in the thermal disturbances, which are accompanied by chills, malaise and muscular pains. Following injection of a suitable quantity, a period of incubation of from eight to fourteen hours follows, and at the end of this time the temperature rises progressively for two or more hours and may reach a maximum of from 40 to 41 C., and after remaining at this point for from two to six hours, recedes rapidly. In addition to this general reaction, the toxin causes congestion, redness and swelling at the site of the tuberculous lesion, i. e., the foci become surrounded by an inflammatory reaction. This is seen most readily in the tubercles of lupus vulgaris, and in the lungs is manifested clinically by an increase in the râles and expectoration which is caused by the exudation accompanying the inflammatory reaction.

For diagnostic purposes the technic of administration is as follows: It must first be assured that the patient has no continued fever by noting the temperature every two hours for several days. A quantity of 1 mg. of tuberculin is injected subcutaneously, this amount being obtained by suitable dilution of the original solution. If no temperature is produced by this amount, 5 or 10 mg. may be given in a second injection after an interval of two or three days. When the quantity is determined which causes a rise in temperature of one-half degree C. or more, the dose is to be repeated after the temperature produced by the first injection has subsided. Two such reactions should be considered necessary for positive diagnosis. One who after injection of 10 mg. on two different occasions gives no reaction is to be considered free from tuberculosis (Marx).

Experience has taught certain limitations to the diagnostic value of tuberculin: 1. The test can not be applied to febrile cases inasmuch as the pre-existing fever could not be separated from that which the tuberculin might produce. 2. Cases of advanced tuberculosis frequently fail to give the reaction. The tissues of such patients have become resistant to the poison. 3. It is said that tuberculin frequently causes a similar reaction in those suffering from leprosy, actinomycosis and syphilis. Cornet and Meyer suggest that the phenomenon as it occurs in leprosy and actinomycosis, is to be considered in the nature of a "group reaction" in view of the close relationship of the tubercle bacillus to actinomyces and *Bacillus lepræ*. It does not always occur in syphilis, and in positive cases a latent tuberculosis may be responsible for the reaction. By a number of writers the facts just stated are taken to indicate that the reaction is not of specific character, and that it may often be obtained in the tuberculous by the injection of apparently indifferent substances as trypsin, peptone (albumose), sodium cinnamate and the "mycoproteins" of other bacteria provides additional support to

#### Limitations in Diagnostic Use of Tuberculin.

1. Similar conditions prevail in relation to pneumonia, influenza, erysipelas.



this view. On the other hand, since relatively large amounts of these indifferent substances are required to produce the reaction, whereas minute amounts of tuberculin suffice, others hold that the specificity of the latter substance may be maintained.

Early cases of tuberculosis react to tuberculin in the most typical manner. On account of the fact that latent or healing cases may respond to the test, its positive outcome gives no indication of the seriousness of the patient's condition, which is a practical question of some importance.

The fear that tuberculin, in producing an inflammatory reaction around tuberculous areas, might cause a dissemination of the bacilli, has acted strongly in preventing the use of the

#### Danger (?) in Use of Tuberculin.

toxins for both diagnostic and therapeutic purposes. On *a priori* grounds, such an event would seem to be a possibility, for with the inflammation, the vessels surrounding the

tubercles become congested, new leucocytes

accumulate and there is an extravasation of fluid. Since during the subsidence of the inflammation a certain number of leucocytes may again leave the area and as the extravasated fluid returns to the circulation, bacilli may be carried away by the leucocytes or the fluid. Contrary to such reasoning, however, the observations of Koch and his followers in animal experiments and in the diagnostic and therapeutic use of tuberculin in man, lead them to say that tuberculin when properly administered never causes an aggravation or extension of the disease. Similar conclusions were reached by Trudeau, Baldwin and Kinghorn in animal experiments in which, "as in previous observations, a favorable absorptive influence was noted on the diseased focus." Bearing in mind the limitations mentioned above, and the possibility of the reaction being induced by leprosy, actinomycosis and syphilis (?), the statement of Osler may be quoted that "in obscure internal lesions, in joint cases and in suspected tuberculosis of the kidneys the use of tuberculin gives most valuable information."

The original unfavorable results which were obtained in the therapeutic administration of tuberculin are referred by Koch,

#### Tuberculin Therapy.

Petruschky and others to improper selection of cases. Those in a febrile condition and those in whom destruction of tissue is advanced are not suited for the treatment, and

in them little or nothing is to be hoped from administration of tuberculin. Its curative value is supposed to depend on the local inflammatory reaction which it causes around tuberculous foci, and perhaps also on the necrosis which Koch claims is caused in the tubercles themselves. It must be the object during the whole course of treatment to administer the toxin in such doses that a moderate or minimum local reaction occurs. Larger amounts which would cause febrile reactions and eventually render the patient resistant to tuberculin and thus preclude the local changes are to be avoided. It is customary to begin with 1/10 to 1/20 milligram and gradually to increase the amount injected. If fever is caused by a particular dose, larger amounts are not to be given until fever ceases to follow this dose. By the time a dosage of 50 milligrams is reached, which may require many months, the patient usually has lost the power of reacting and the injections are to be interrupted until he again becomes sensitive to the toxin (from three to six months), after which treatment should be resumed. Cure is recognized when the patient has lost permanently the power to react, his condition then being identical with the healthy man. Numerous German writers on the basis of practical experience assign an unquestionable curative power to tuberculin when administered as described. Its use has not extended widely.

The principles on which the action of tuberculin depend are hypothetical. Marmorek says that the fever and local changes are due to a special toxin (the true toxin), which the bacillus secretes under the stimulation of the tuberculin. Ehrlich supposes that cells adjacent to the tubercles have been injured moderately by the tuberculin which is produced *in situ*, and that as a consequence of this injury such cells are particularly susceptible to the additional tuberculin which is injected, and react to the stimulus by proliferation (Marx). In accordance with this conception the fever also in some obscure way is related to the local reaction. Investigations are needed to clear up this point.

In active immunization with TR, in which the solid constituents of the bacilli are injected rather than the toxic tuberculin, the cure is supposed to depend on the development of immune bodies rather than on local tissue changes. Koch published "New Tuberculin." favorable results from its use, but reports from other sources were less satisfactory.

The most recent preparation of Koch's, *Neutuberculin* (*Bazillenemulsion*), consisting of finely powdered bacilli with all their toxic constituents, suspended in equal parts of glycerin and water, is used in a similar manner. Koch proposes to use the agglutinating power of the patient's serum as an index of the immunity caused by the injection. The formation of agglutinins perhaps indicates in a general way the ability of the patient to form antibodies, but from the well-known fact that the agglutinating power does not go hand in hand with the protective power of serum in relation to many infections, this method of estimating the degree of immunity does not rest on a good basis. The agglutination reaction is carried on with the emulsion which is used for immunization. Treatment in man is begun by the injection of 0.0025 mg. of solid substance and the amount is increased rapidly every day or two until a reaction occurs with a temperature of from 1.5 to 2 C. After a pause of a week the injections are begun again and eventually a dose of 20 mg. may be given. During treatment the agglutinating power of the patient's serum is tested frequently, and if it is not sufficiently high intravenous injection of the fluid portion of the emulsion may be practiced. The agglutinating power may go as high as from 1 to 25 to 1 to 150, rarely 1 to 200 to 1 to 300.

With both TR and the last preparation animals may be successfully immunized against tuberculosis.

Maragliano, after many years of experimentation and treatment of human tuberculosis, concludes: "1, that it is possible to produce a specific (serum) therapy for tuberculosis; 2, that it is possible to immunize the animal organism against tuberculosis as is done in other infectious diseases, and

#### Serum of Maragliano.

that there is good reason to hope for an antituberculous vaccination for man." He speaks in rather broad terms of the defensive powers of the body against tuberculosis and seeks the demonstration of such powers in properties of the serum. He recognizes bactericidal, antitoxic and agglutinating properties of the serum as normal defensive powers of the body, and says that these powers are increased as the result of immunization. The bactericidal power of the serum is determined by its ability to inhibit the growth of cultures of the tubercle bacillus; its antitoxic power by its ability to neutralize a test poison which is obtained from cultures by macerating them in hot water; and its agglutinating power is tested with the homogeneous cultures of Courmont and Arloing. For the immunization of animals a soluble toxin prepared by the filtration of young cultures, and also the intracellular toxins which are extracted by water from killed virulent bacilli, are injected. By using both substances, antitoxic and other antibodies are said to be formed.

The serum of immune animals (horse, calf and cow) is used by Maragliano in the treatment of human tuberculosis, and the unusual claim is made that the serum is effective not only because of its own properties, but because it causes the tissues to form additional antibodies. Without discussing this apparently paradoxical condition we may only note the very favorable reports, from Italian sources especially, which have followed the use of the serum. Concerning 2,899 collected cases Maragliano says: "These statistics show that out of more than 250 patients with circumscribed non-febrile tuberculosis 38 per cent. were cured and 49 per cent. were much improved; that out of 938 patients with circumscribed febrile tuberculosis 18 per cent. were cured and 54 per cent. were improved; that out of 665 patients with diffuse tuberculous bronchopneumonia without microbic associations (mixed infection) 14 per cent. were cured and 43 per cent. were improved. Out of 332 patients with diffuse tuberculous bronchopneumonia with associated microbic infection 9 per cent. were cured and 36 per cent. improved. Of 712 patients with cavities 6 per cent. were cured and 40 per cent. were improved. Of all these patients 2,396 were in a febrile condition. The fever disappeared in 1,111 cases, i. e., in 46 per cent." Marag-



liano insists on the best hygienic surroundings for his patients, and under these conditions additional statistics show that a larger percentage of recoveries takes place among those treated with serum than among those who depend on hygienic surroundings alone. It is claimed that the serum manifests its curative powers and causes an increase in specific antibodies when given *per os*.

Maragliano also advocates a method of mixed active and passive immunization in man, in which a cubic centimeter of serum is given subcutaneously every second day for twenty days; for a second period the same quantity of serum is given, but supplemented by increasing amounts of the toxic extract of bacilli; and for a third period the toxic extract is injected in increasing doses during from three to four months.

The same authority thinks it may be possible to vaccinate against tuberculosis by a single subcutaneous injection of a vaccine (killed bacilli?). He states that in both man and animals antibodies are formed in the serum following the vaccination, and that in animals their resistance to infection with living bacilli is increased. Marmorek asserts that killed tubercle bacilli which have been treated with his antitoxic serum are readily absorbed from the subcutaneous tissue, and proposes the use of such bacilli as a vaccine.

As stated above, Marmorek discredits tuberculin as the specific toxin of the bacillus. His "true" toxin is prepared by growing young and virulent bacilli ("primitive" bacilli) in a medium which contains leucotoxic serum, liver extract, glycerin and bouillon. The leucotoxic serum is prepared by immunizing calves with the leucocytes of guinea-pigs. Theoretical considerations which we need not detail suggested the use of this medium. The cultures are filtered after a few days of growth and the formation of tuberculin is avoided as much as possible. The immunization of horses with this filtered toxin yields the antitoxic serum of Marmorek. Conflicting reports concerning its value are published from French sources. Schwartz announces the complete cure of a case of tuberculosis of the larynx, and another of virulent tuberculosis of the conjunctiva and cornea by the exclusive use of Marmorek's serum.

Both Maragliano and Behring affirm that the immunizing substances are excreted in the milk of cows which have been strongly immunized against tuberculosis, and both have suggested that the use of such milk by infants may render them more resistant to tuberculosis.

The agglutination reaction has been suggested by Courmont and Arloing and others as a means of diagnosis in tuberculosis. Others who criticise this idea affirm that agglutinins are not developed sufficiently in the tuberculous to render the test of value, and that the serum of normal man may be as highly agglutinating as that of the tuberculous. In view of the fact that the tubercle bacillus grows in coherent masses in ordinary cultures special manipulations are necessary to render it suitable for the agglutination reaction. Courmont and Arloing prepare a homogeneous culture by first growing the organism on a certain potato medium and then in glycerin bouillon, which is frequently shaken. The cells are said to be well isolated after this procedure. Koch uses the emulsion of powdered bacilli for the test. The serum of man or animals as a result of immunization may reach an agglutinating power of 1 to 2,000 exceptionally (Maragliano).

## Clinical Reports

### AN UNUSUAL CASE OF SUNSTROKE.

J. G. JONES, M.D.

VINCENNES, IND.

I report this case because of the extreme rarity of sunstroke in this region during the autumn months, when the temperature usually ranges in midday from 78 to 88 F. in the shade, and also to demonstrate the occasional excessive susceptibility

to an attack of sunstroke by an individual who has previously been stricken.

*Patient.*—A well-developed girl of 11 years of age, always in good general health, had been suffering with slight headaches for a few days previous to the attack. She had until recently been an inmate of the County Orphan's Home, when she had been taken for trial by some country people with a view to adoption. Her parentage history was rather obscure.

*History.*—On Sept. 15, 1905, at 11 a. m., the patient was standing near a tree in a garden on the hillside only partially exposed to the solar rays, awaiting the return of her companion. This individual returned within two minutes after leaving the girl to find her fallen to the ground and unconscious. The girl was carried to a neighboring farm house, where I saw her within three-quarters of an hour after the attack.

*Symptoms.*—The patient was in a deep coma; rectal temperature, 107 F. The skin was dry and flushed; pulse, 133 a minute, full and bounding; respiration, 33, irregular and deep. Clonic spasm of abdominal and respiratory muscles was brought on by touching the patient; in the intervals the muscles relapsed into flaccidity. Urine examination was negative. The eyes were suffused and staring. The pupils were widely dilated and remained in that condition for an hour, after which they contracted down to pin-point size, gradually reaching normal within another half-hour. In short, the classical symptoms of sunstroke of the hyperpyrexial form were present.

*History of Previous Attack.*—On inquiry, I found the history of a previous attack of unconsciousness while at the Orphan's Home during the summer of 1904, but could get no information as to what the diagnosis had been, yet, from the description given, I am sure it was a sunstroke. I excluded, with fair satisfaction, all the causes of coma, except sunstroke, and even with this negative diagnosis added to so classical an array of positive symptoms I found it difficult to accept that diagnosis, for the day was pleasantly cool, with a temperature of only 85 F. in the city at noon.

*Treatment.*—The treatment was very simple. The child was kept for several hours in a cold pack, with an ice bag at the head. Frequently changed cloths rung out in cold water were applied over the abdomen and precordial region, with an occasional rectal injection of cold water. Consciousness returned two hours after the attack, accompanied by some nausea. The temperature returned to normal by lysis within 24 hours, with no remission. There was complete recovery from the prostration in three days.

*Remarks.*—Some authorities speak of the pupils being contracted in sunstroke and consider this one of the diagnostic points, but it is my experience that they are nearly always first dilated for from 20 to 60 minutes and then contract to "pin point," where they remain for a variable period.

### RUPTURE OF INTESTINES BY KICK OF A HORSE.

W. A. JOLLEY, M.D.

BOULDER, COLO.

*History.*—A. W., a stout farm hand, was kicked in the abdomen by a heavy horse at 12 m. He was thrown some distance by the blow, falling on his shoulder, and lay unconscious for several minutes. He vomited once, but presented no signs of shock. The abdomen showed only a small bruise and was not very painful, for 1/16 grain of morphin relieved the pain. He rested easily and complained more of the pain in his shoulder than of that in his abdomen, until 7 p. m., thirty hours after the accident, when he began to vomit and to present evidences of shock which rapidly increased. He died at 11 a. m., forty-seven hours after being injured.

*Autopsy.*—No external signs of injury. Internally, a general peritonitis from a transverse laceration of the small intestine about eighteen inches from the stomach. The laceration was one third of the circumference of the intestine.

I report the above case, as it illustrates that a very severe injury of the intestines may be present without giving any evidences until too late for surgical aid.



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SUPPLEMENTARY COMMENTS ON THE RECENT WORK  
ON THE PNEUMOCOCCUS.

The studies on the pneumococcus under the auspices of the Medical Commission for the Investigation of the Acute Respiratory Diseases of the Department of Health of the City of New York<sup>1</sup> have resulted in valuable contributions to our knowledge of methods of identifying the pneumococcus, of differentiating it from the streptococcus and other simulating or closely related organisms and of its distribution and viability under various conditions.

The method adopted by the commission was, first, to secure the co-operation of twenty bacteriologists in various cities who made independent studies along the lines suggested, and, second, to establish a central laboratory or "clearing house," to which, ultimately, cultures from the various independent workers were sent for comparative study under a single group of observers. The birth of this species of organized "control" work will be hailed with delight by all who appreciate the susceptibility of an individual to error. And the wisdom of the plan is borne out by the results—many of the workers contributing valuable independent observations, while the central committee has served to minimize errors of identification and thus to increase the value of statistics to be ultimately based on the whole series of cases.

Bacteria were studied from the mouths of normal individuals, from pneumonia patients, from autopsies and from the sputum and exudates from pathologic cases other than pneumonias. Although the technique for identification varied considerably, the work is, in the main, supported by that of the central committee.

From the study of the morphologic and cultural characteristics, from other simulating or closely related organisms and absorption experiments the principal organisms encountered are divided into typical pneumococci on the one hand and typical streptococci on the other. In addition there were isolated a large number of related organisms which will require further study before they can be classified satisfactorily.

While the work of various foreign and domestic investigators left little doubt that a certain percentage of normal individuals harbor pneumococci in their mouths, it seemed desirable to repeat these observations in the

light of recent developments in our knowledge of the biology of pneumococci and streptococci. The work of the commission leaves no doubt that about 50 per cent. of healthy persons harbor typical pneumococci in their mouths. Thus in one series of 78 "normal" cases the pneumococcus was found in 50 per cent.

In the majority of cases when pneumococci were not found streptococci were isolated. These, together with influenza-like organisms, were sometimes associated with the pneumococcus.

If positive conclusions can be drawn from a comparatively small series of cases we may infer that a greater percentage of individuals in crowded centers harbor the pneumococcus than in country districts; and that though some may always harbor virulent pneumococci, others, as a general rule, are more apt to do so in the winter months than in the fall or spring. And this seems in accord with what is known concerning the transmission and viability of the pneumococcus. It would seem necessary to continue these studies with special reference to the occurrence of pneumococci in the throats, as well as in the mouths of human beings.

In testing the virulence of the strains isolated from various sources, the technique of one investigator varies so much from that of another that it is impossible to correlate statistics on this point. In one series, in which a uniform procedure was carried out by the subcutaneous inoculation of rabbits (chiefly) with "mass cultures," the following percentage of virulent strains was found:

Amount Inoculated.	Pneumonia Cases.	Healthy Individuals.
4.0 c.c.	87 per cent.	69 per cent.
0.1 c.c.	51 per cent.	31 per cent.

In another series, in which 51 cultures of mouth pneumococci were tested by injecting white mice subcutaneously with the second "generation" grown for 24 hours on serum agar slants, 78.5 per cent. were virulent and 21.5 per cent. avirulent. About the same proportion of avirulent pneumococci were found in the mouths of pneumonia patients (77 per cent.) as in the mouths of normal individuals (79 per cent.). Reasoning from analogy, pneumococci from cases of pneumonia are probably of increased virulence for human beings and, since the virulence (for experimental animals) of pneumococci from normal cases can be rapidly increased, it becomes clear that all possible measures should be taken to restrict the dissemination of pneumococci by prohibiting public expectoration. In connection with this, the suggestion is made that the value of various lotions in ridding the mouth and throat of pneumococci and other pathogenic bacteria merits careful investigation.

There seems to be some evidence opposing the belief that pneumococci are permanent inhabitants of the human mouth, except possibly in the case of certain individuals. It was found that they may persist for days or weeks in the mouths of patients who have recovered from pneumonia, and individuals who have been repeatedly found "negative" may acquire the pneumo-



coccus by association with pneumonia or with "positive normal" cases.

The very complete study of the important question of the viability of the pneumococcus shows that its life duration in moist sputum, in the dark at room temperature, averages less than two weeks (11 days); and in strong light less than 5 days. In dried sputum in the dark it lives for an average of 35 days; in diffuse light, 30 days; in sunlight, less than 4 hours. In powdered sputum, even when kept in the dark, the death of the pneumococcus takes place in from 1 to 4 hours, and if exposed to sunlight death occurs within an hour. When dried on cloth it lived slightly longer than on non-absorbing surfaces, such as glass, tin or wood. Moist sputum *en masse* may be considered innocuous except to persons handling recently contaminated clothing, bedding, etc. When such masses are dried and then powdered by sweeping, dusting, etc., the organisms do not remain long in suspension and die off within an hour in sunlight or diffuse daylight, or in about four hours in the dark. Danger of infection from powdered sputum may be avoided by free illumination and ventilation of the sick room and by the substitution of moist antiseptic cleansing for dry sweeping or dusting. Further, the experiments, as applied to the pneumococcus, support the theory largely advanced by Flügge and his co-workers—that the transfer of pathogenic bacteria from one person to another is possible by the aerial transmission of fine spray particles (Flügge's drop infection). In the act of coughing, sneezing, expectorating or talking, a pneumococcus host expels particles of sputum or saliva containing virulent pneumococci, which may remain suspended in the air for a number of hours if the ventilation of the room is good. Whether suspended or dried on surrounding objects, however, the pneumococci become harmless in about an hour and a half, while many in the spray succumb to strong light in a few minutes. This is time enough for pneumococci so expelled to become lodged in the mouth and throat of exposed persons. In the light of these experiments, it will be seen that the risk of infection is chiefly borne by those in direct contact with one harboring the pneumococcus. From the point of view of prevention, the great question seems to be how to get rid of pneumococci in the mouths and throats of persons convalescent from pneumonia.

We see that these studies concern especially the pneumococcus; they deal with one phase only of pneumococcus infection; the other side of the pneumonia question, the side presented by the patient, has not been considered.

#### CONTRIBUTIONS OF PHARMACOLOGY TO PHYSIOLOGY.

In his first Hertter lecture<sup>1</sup> at the Johns Hopkins Medical School, Professor Hans Meyer of the University of Vienna calls attention to the biologic results that we owe to pharmacologic methods of investigation.

He points out that drugs, i. e., chemical substances, penetrate into the interior of the body and reach parts inaccessible to scalpel and electric current, formerly the essential weapons of the experimental physiologist effecting there disturbances of function which, when correctly interpreted, throw desired light on difficult physiologic problems.

The first examples cited are the physiologic discoveries that have been made from the pharmacologic study of curare poison. Further, because it has been shown that centrifugal and centripetal nerve tracts react differently to poisons, it may be concluded that they are chemically different, although morphologically alike. Langley found that nicotine paralyzes the sympathetic ganglia and through them the preganglionic nerves, while the postganglionic escape; by this method it may be decided whether a nerve ends in a ganglion or passes through it.

From the fact that tetanus toxin, when injected into the extremity of an animal, is absorbed by the motor nerve endings and carried upward in axis cylinders into the spinal cord, we learn the hitherto unknown fact that there is constantly flowing through the axis cylinders of motor nerves a protoplasmic stream that reaches the neurocytes themselves, a fact of significance for nerve nutrition and the disturbances in central ganglia following nerve section. Meyer has found that there occurs a similar flow of diphtheria toxin in the nerves and the same thing may be true also of certain metals like lead. In case a centripetal stream like this passes along peripheral sensory nerves, its course is arrested by the spinal ganglia. If the posterior nerve roots between the ganglia and the cord are injected, however, there arises the so-called tetanus dolorosus, characterized by periodical, extremely painful seizures, thus showing the existence of special, central pain-subserving structures in the spinal cord.

As an example of the advance in knowledge of the physiology of glands made through the use of pharmacologic agents, Meyer, among other results, mentions the fact that recently Wertheimer and Lepage have shown that the pancreas possesses at least two distinct secretory mechanisms, namely, one which is excited by pilocarpin, physostigmin, or muscarin, and in this case the secretion does not contain enterokinase, and one which is stimulated by secretin and other substances, but in this case the secretion does contain enterokinase.

It has been found, further, that experiments with pilocarpin point to the secretion in the swimming bladder of fishes, of oxygen by the epithelial membrane, which differs from ordinary diffusing membranes in that it is not penetrable in either direction. Other experiments indicate that the alveolar epithelium of the lungs permits ammonia gas to pass into the blood but not outward from the blood.

The study of cardiac poisons has contributed much

1. Science, Oct. 6, 1905.



to our knowledge of the physiology of the heart, but details are not considered in this lecture.

Phloridzin diabetes and adrenalin glycosuria, the discovery of glycuronic acid in poisoning by camphor and of the relations of lactic and amido-acids to intermediary metabolism in phosphorus and arsenical poisoning are cited as illustrations of the influence of pharmacology on the study of metabolism. Indeed, numerous chemical processes of reduction and oxidation were first discovered through studies with chemical or pharmacologic agents. Herter's infusions of methylene blue have revealed with especial clearness the oxygen requirements of muscles and the avidity with which muscles appropriate oxygen from oxyhemoglobin and other reducible substances.

The degree of narcotic activity of alcohol, ether chloroform, etc., compares very closely to the solution—tension or affinity—of these substances for lipoid substances like lecithin, and it has been concluded from this that in the union of the lipoid substance with the narcotic lies the origin of narcosis and that the lipoid constitutes an integral part of the "life-center" of the cells.

Finally, Meyer dwells on the value of the pharmacologic method of study of fundamental cellular and biologic phenomena, and mentions the important results obtained by Loeb from the study of the effects of metallic ions on general life processes, particularly the production of heliotrophisms and of parthenogenesis by definite chemical agents and procedures.

From this abstract of Professor Meyer's lecture we see that pharmacology, in addition to its direct practical importance, has been the means of furthering our knowledge of various biologic processes and that by the pharmacologic method of study it seems possible slowly to reach a better insight into the chemical constitution of protoplasm and the chemical interpretation of its functions. Great interest has been taken in experimental pharmacology in this country and some of our first universities have full professorial chairs of pharmacology. On account of the general and medical importance of this branch of biology it is hoped that before long pharmacologic investigation may receive increased encouragement from the establishment of full professorships in those of our real universities in which pharmacology as yet is inadequately represented.

#### FAMILY TREMOR.

The occurrence of minor ailments of a hereditary character or with family grouping is of interest in connection with major diseases of a like familial distribution with which the minor ailments may possibly be interchangeable or represented in an abortive form. There are those who believe that the comparatively harmless migraine may thus be correlated with epilepsy, that periodic attacks of mental depression in healthy individuals correspond, in a sense, to the more severe peri-

odic insanities, and that the rather rare hereditary or familial tremor may represent, *in petto*, as it were, Huntington's chorea.

Family tremor is perhaps less well known than many other family diseases, though Dana in this country was one of the first to describe it carefully. Occasional reference to the condition is found in the literature as early as the end of the eighteenth century, though the symptom-complex has been carefully studied only in the last twenty years. Schmaltz<sup>1</sup> has recently called attention to the condition once more, and has reported one family in which thirteen tremblers occurred in four generations. Aside from the hereditary or familial element, the etiology of this form of tremor is obscure, though there is some evidence that the excessive use of stimulants by the ancestors of those affected may play at least a subsidiary part. A history of the immoderate use of coffee, alcohol, or tobacco in the ancestors is sometimes found, but these factors are so common and the disease so rare that some other condition must also be present. Some observers, and especially those of the French school, regard the tremor as merely one of the signs of a widespread nervous degeneration, and point out that evidence of this is usually present, though not always marked. Still, some families with the tremor may have relatives who are epileptics, or belong to that class of borderland individuals who are described as "peculiar." Sometimes the tremblers themselves exhibit signs of nervous instability, are subject to emotional crises, are intolerant of alcohol or tobacco, or are frankly neurasthenic. The disease is not transmitted, like hemophilia, from the female to the male line, but may come from either side of the house; indeed, it may appear as a family disease without transmission from the forbears, or, in rare instances, it may skip a whole generation to reappear in the descendants.

The tremor generally takes the form of a rhythmical vibration with slight excursions and a slow tempo of from three to nine movements a second. Occasionally choreiform movements may occur. The control over the tremor varies in different individuals, though in many instances it appears as an intentional tremor and may lead to the diagnosis of multiple sclerosis. Some of the patients, however, have been able to carry on occupations requiring great delicacy of touch, such as watchmaking. Häbler had a patient who was unable to raise a glass to his lips without spilling the contents, but was an excellent marksman. Psychic influences usually seem to increase the tremor. The hands are the parts mostly affected, the legs next, and lastly the face.

The condition is doubtless confused at times with the tremor of old age, or, if the tremor is of the intentional variety, with that of multiple sclerosis. Such confusion should not occur if the exquisite familial character of the affection is considered, and if the absence of disturbances of the special senses, apoplectiform seizures,

1. Münch. med. Wochft., iii, No. 14, abstracted in THE JOURNAL, June 5, 1905, page 1816.



and paresis is noted. The condition, though apparently rare, is probably not infrequently overlooked, for the disease in itself may cause but little inconvenience, especially in its milder form, and the tremor in such cases may be taken for that of alcohol or neurasthenia. Like many previously rare diseases, it will probably become more common after the attention of the profession at large has once been called to it.

#### CARCINOMATOUS OSTEOMALACIA.

According to Woodyatt, who describes a remarkable case of diffuse carcinomatous infiltration of the bones, with softening, in a woman of 40, the primary tumor being situated in the breast, carcinomatous bone metastases, which are of rather frequent occurrence, may develop as multiple, circumscribed nodules, in which osteoplastic processes have the upper hand, and more rarely as diffuse, soft infiltrations in which bone resorption occurs.<sup>1</sup> When fairly widespread, this latter form has been called carcinomatous osteomalacia (first described by Hawkins in 1841). Because carcinomatous osteomalacia, though a very rare condition, may be confounded with true osteomalacia and with *ostitis deformans*, it merits special notice. In six of the seven generalized cases unearthed by Woodyatt, the primary carcinoma was situated in the breast; in the seventh its seat appears to have been unknown. Whether the malacic changes in the bones in any way are due to substances elaborated by the mammary gland can not be said.

Further observations are necessary in order to determine whether carcinomatous osteomalacia is connected exclusively with carcinoma of the breast. Among the special symptoms of this form of osseous disease are rheumatic pains in the regions involved; the pains are commonly described as deep-seated and gnawing or burning in character. Sometimes there is tenderness on pressure. Eventually the bones may become pliable and great deformity ensue. Cachexia and secondary anemia develop as the result, in part at least, of carcinomatous invasion of the marrow. Numerous nucleated red corpuscles and myelocytes (6 per cent. in the cases reported by Woodyatt) may appear in the peripheral blood. Microscopically, the stroma of the osseous metastases is like that of carcinoma elsewhere. The stroma is in very clear relation to disappearing bone surfaces and fragments, but whether the bone is first softened by some chemical process and then replaced by stroma or the stroma cells attack healthy bone substance can not be definitely stated, according to Woodyatt. The rôle played by the carcinomatous cells themselves in the bone resorption is also, as yet, largely a matter of speculation. Generally there is a layer of stroma between the epithelium and the bone, so that the epithelial cells probably do not directly absorb bone.

There is no ground for the view expressed by von Recklinghausen that these cases in reality are cases of secondary bone carcinoma implanted on existing malacia. Probably there is first decalcification and softening of bone (*halisteresis*), the exact factors in which we do not understand, possibly it may be due to substances produced by the cancer cells, and this is then followed by removal of the changed bone by the stroma. Naturally, the exact chemical processes concerned in these complex changes as yet can not be determined.

#### THE GREAT AMERICAN FRAUD.

Elsewhere in this issue will be found extracts from the first paper on "patent medicines" which appears in *Collier's Weekly* October 7. We have only space for a part of the article, neither can we reproduce the illustrations, which are most telling. Physicians should read these articles and should do all they can to disseminate the contained information, especially for the reason that the public press, in the main, can be depended on to preserve a notable silence regarding the disclosures. Some points made by Mr. Adams deserve emphasis. First is the showing that fraud, well advertised, is the basis of the nostrum trade. Then, sundry folks will feel uncomfortable when they read his conclusion that testimonials are "the expression of a low order of intelligence." The most important of his disclosures is photographic evidence of the blackmailing method of suborning the public press, through the notorious "red clause" of the advertising contract, by which every country newspaper is compelled to fight against anti-nostrum legislation or at once to lose all its nostrum ads. Mr. Adams also shows how one of the best-known Chicago newspapers, in order to obtain a profitable nostrum advertisement, sent its reporters to secure "testimonials." Thus, for a little money, a daily paper of professed high ideals, active in reforming everybody else, entered into a conspiracy to swindle its readers. One of the investigator's telling points is in his inability to see any real difference between "patent medicines" and "proprietarys," and as a corollary he shows too truly that the medical press, as a whole, is as much under secret medicine control as is the daily and weekly newspaper. This layman's scorn for our subsidized medical press should stimulate us to work for a better condition of affairs.

#### THE PROPORTION OF NIGHT LABORS.

It is a common idea that the great proportion of labor cases terminate at night, especially after midnight. White,<sup>1</sup> after analyzing 1,500 cases, points out that the popular idea is probably erroneous. In his series of cases a very slight fraction over one-half terminated during the night. The difference was too slight to have any weight. As an explanation for the fallacy, he suggests that night cases, because they disturb sleep, attract more attention and make more impression than cases in the day time. He suggests the consideration of further statistics so that the truth or falsity of this popular idea may be definitely decided.

1. Trans. Chicago Path. Society, 1905, vi, 306.

1. American Journal of Obstetrics, October, 1905, p. 527.



## BEHRING'S ALLEGED CURE FOR TUBERCULOSIS.

The newspaper reports concerning Professor Behring's alleged cure for tuberculosis do not contain anything that one is justified in regarding as definite or reliable. There is no basis of facts in the reports on which to build any idea as to the real nature of the curative substance. Indeed, there is no reason to believe that Professor Behring ever announced, in the manner reported, the possession of a sure cure of tuberculosis in man, the efficacy of which has been established. It is more likely that Professor Behring reported to the tuberculosis congress the results of investigations in the immunization of cattle against bovine tuberculosis with reference, perhaps, to the possible application of the same methods to human tuberculosis. Under these circumstances, we must await further developments with patience. The newspapers, naturally, have made of this all they possibly could, and we must read what is published in them with considerable allowance. The hint that Professor Behring is holding back information for commercial purposes it is hoped is not true, although the scandal connected with his name and the manufacture of Behring's antitoxin for diphtheria will be revived in the minds of many physicians.

## TREES AND MALARIA.

Old notions die hard. In spite of the scientific proof of the origins of yellow fever and malaria, there are physicians in districts where these diseases abound that reject the mosquito theory and still believe in the old miasmatic emanation ideas of malaria and the transmission of yellow fever through infected clothing and other articles. As for the laity, we can hardly expect them to be in advance of even the laggards of the medical profession, and in evidence of this we have the shotgun quarantine of the south and the spectacle of the governor of a state practically forcing the resignation of self-respecting health officers because they could not honorably carry out his panic-dictated directions. As regards malaria, the old notion that it is a swamp emanation still holds sway in certain quarters, as witness the following quotation from a lay journal relative to the planting of the sweet gum tree in public streets and parks. "These trees exhale a balsamic odor that is healthful and they are said to absorb malaria from the soil and convert it into healthy gases by the action of the balsam of the tree." How far the balsamic odors of these or any other trees will aid in the prevention of a mosquito pest may be a question, but there is undoubtedly a connection between tree growth and the absence of malaria in some regions, and therefore the above expressed idea, absurd as it is in a scientific point of view, has perhaps a remote sort of justification. Certain trees, like the eucalyptus, are said to act as drains to the soil and to have abolished malaria in certain regions in this way. Owing to the arrangement of their foliage, they are said to give less shade than other trees and therefore do not diminish the natural evaporation to so great an extent, but, though their special odors are, in a concentrated form, inimical to mosquitoes, their action in this particular way for reducing malaria can not, with our present knowledge, be very well esti-

mated. The effects are perhaps sufficiently accounted for by the drying up of surface pools, etc., which accompanies their growth in large numbers. It has been proposed, indeed, to utilize the eucalyptus for this purpose along the route of the Panama canal. There is no sufficient warrant, however, for the expectation expressed by some that eucalyptus planting will eradicate malaria and control tropical floods in that region. There is need, however, of every possible aid in the combat with disease on the isthmus, and every little helps. There is no doubt that a eucalyptus forest would be far more sanitary than the natural dense tropical vegetation, especially in the conditions which follow the carrying out of such undertakings as the digging of an interoceanic canal.

## LAY "MEDICAL SCIENCE AT FAULT."

One Richard Weightman, posing as a Washington correspondent of the *Chicago Tribune*, and probably of other newspapers, in times past and present has afforded much joy to medical readers of that paper by certain ponderous deliverances on things medical. Mr. Weightman is intensely antimedical, but he has no idea how funny he is at times. In the *Tribune* of October 4 he says: "The case of Captain . . . is a curious illustration of the rudeness with which destiny too often treats the best-laid horoscopes of medical science." He then relates that a naval medical board told "the captain" that he had Bright's disease, and how, after treatment and the lapse of four years, he finally passed the physical examination. "Now he 'ups and dies' of apoplexy without a word of warning from the oracles of science. Amazing are the manifestations of sapience in the various learned professions." What odd pranks does ignorance play with a man's discretion! The poor newspaper simpleton, totally ignorant of the meaning of the terms "Bright's disease" and "apoplexy," which he nevertheless presumes to use with such show of confidence, of course does not know that Bright's disease is an affection of the circulatory system as well as of the kidney and that apoplexy is one of its frequent accompaniments and terminations. Blissfully unknowing of the long-recognized and very intimate relationship between Bright's disease and apoplexy, Mr. Weightman courageously entitles his little paragraph "Medical Science at Fault." A correspondent who, before writing, ascertains what he is writing about, would be of service to the *Tribune*, but some physicians would be deprived of their morning joke.

## Precautions Against Cholera in London.

The outbreak of cholera on the continent of Europe has caused Dr. Williams, health officer to the port of London sanitary authorities, to issue an order that all vessels coming from ports infected or suspected to be infected with cholera be stopped at Gravesend and visited by a health officer. Every person on board is to be medically examined before being allowed to land, subject to furnishing name and address of destination. Then the health officers of the various districts to which the passengers are proceeding are notified and keep them under inspection during the incubation period of cholera. Three health officers are engaged in the work of boarding vessels at Gravesend. Persons found suffering from symptoms even suspicious of cholera are immediately removed to the port sanitary hospital at Denton and the vessel and all infected effects are thoroughly disinfected.



## Medical News

### CALIFORNIA.

**Fires.**—The Southern California State Hospital for the Insane, Patton, had a narrow escape from a disastrous fire September 15. Damage amounting to \$2,000 was done.—The residence of Dr. David B. Fields, Weaverville, was destroyed by fire September 27.

**New Hospital.**—Early in October the new Santa Fe Hospital, Los Angeles, will be opened for use. It is probable that it will be used jointly by the Santa Fe, Southern Pacific and Salt Lake roads. The buildings are seven in number, connected with covered passages, and have cost altogether about \$200,000.

**Free Clinic Established.**—On October 2 a free medical and surgical clinic was opened at the hospital, Los Angeles, which is under the charge of the Sisters of Charity of St. Vincent De Paul. The surgical department is under the direction of Drs. Ernest A. Bryant and E. T. Dillon. The heads of other departments will be announced later.

**Vital Statistics.**—During August, 1,844 deaths were reported in the state, of which 281 were due to tuberculosis, 194 to violence, 172 to heart disease, 114 to cancer, 90 to cerebral hemorrhage, and 89 to pneumonia. About 1 death in 7 was due to tuberculosis, 1 in 11 to heart disease, 1 in 20 to cerebral hemorrhage and pneumonia, and 1 in 25 to senility, nephritis and diarrhea.

**Coroners Organized.**—The coroners of the southern portion of California met at Los Angeles September 18 for organization. The object of the association is to bring about collective and organized action among the coroners in studying the rights, duties and privileges of coroners so as to have proper legislation passed, to have conflict on laws in coroners' duties cleared up and corrected, and to have defects in practice eliminated.

**Personal.**—Dr. John I. Stephen, San Francisco, chief surgeon of the Emergency Hospital service, has been deposed and Dr. Charles F. Miller has been appointed his successor.—Dr. John D. Dameron, superintendent of the San Joaquin Hospital, near French Camp, was stabbed in the back by a patient September 21, is paralyzed from the waist down and it is feared may not recover.—Dr. Herman E. Hassey, chief surgeon for eighteen years of the Soldiers' Home Hospital, Sawtelle, has resigned.—Dr. Robert C. Howe, sanitary inspector, San Francisco, suspended under charges of being absent without leave, has resigned.

### COLORADO.

**Sanitarium Dedicated.**—The new Evangelical Lutheran Sanitarium for Tuberculosis, north of Denver, was dedicated with appropriate ceremonies September 10.

**Death and Disease in August.**—Seven hundred and ninety deaths were reported during August, equivalent to an annual rate per 1,000 of 13.92. Typhoid fever caused 28 deaths and diphtheria 4. During the month 248 cases of typhoid fever were reported, an increase of 18; 31 cases of smallpox, an increase of 18; 33 cases of scarlet fever, a decrease of 1, and 24 cases of diphtheria, a decrease of 13.

**Personal.**—Dr. and Mrs. Albert Atwood Blackman, Colorado Springs, sailed for Germany September 5.—Dr. Ella A. Mead has been appointed city physician of Greeley.—Dr. Orson B. Adams, Pueblo, has been appointed mine surgeon for the Colorado Fuel and Iron Company, with headquarters at Tercio.—Dr. Frank A. Washburn, Boulder, has sold his interest in the Place Sanitarium to Dr. Olney G. Place.

### CONNECTICUT.

**Epileptic Commission Appointed.**—In July last the governor appointed Drs. Max Mailhouse, New Haven; Frank K. Hallock, Cromwell, and Edwin A. Down, Hartford, a commission to investigate plans and methods for the care and treatment of epileptics, to report at the session of the legislature in 1907.

**Personal.**—Dr. Walter G. Murphy, East Hartford, probation officer, has resigned.—Dr. Charles James Fox, Willimantic, has removed to Hartford and announces that he has limited his practice to diseases of the digestive tract and skin.—Dr. Anthony J. Hill, Torrington, has returned after a year in Ireland.

**Bequests.**—By the terms of the will of the late Mrs. Mary A. Stevens, Danbury, the bulk of her estate will eventually go to the Danbury Hospital for an addition to the institution, to be known as the Darius Stevens annex. There is a prospect, however, that the will may be contested.—Mrs. Edward R. Harkness, New London, has donated \$1,000 to the Memorial

Hospital, to be expended in the improvement of the sanitary equipment of the preparatory and operating rooms.

### DELAWARE.

**Cost of Typhoid.**—In a letter prepared by the chief engineer of the water department of Wilmington, asking for an extraordinary appropriation to be used in the construction of a permanent filtration system for the city, he alleges that the annual loss to the community from typhoid fever exceeds \$280,000.

**Personal.**—Dr. James A. Draper, Jr., has been elected a member of the surgical staff of the Delaware Hospital, Wilmington, vice Dr. Howard Ogle, deceased.—Drs. Albert Robin and Harold L. Springer have been elected pathologists and members of the staff of the Delaware Hospital.—Dr. Joseph H. Chandler, a lifelong resident of Centerville, has moved to Wilmington.

**Donations for Hospital.**—Mrs. Julia E. Gibbons and her daughter, Mrs. George A. Elliott, have presented \$5,000 to the Delaware Hospital, Wilmington, to endow a memorial bed for the late Richard P. Gibbons.—Mrs. Alexis I. Dupont and her children have completed a laboratory for the hospital, and Mrs. Eugene Dupont has changed the Bush ward into a lecture room at her own expense.

### DISTRICT OF COLUMBIA.

**Transferred to the Government.**—The tract of land near the district line, which has been selected as a site for the Army General Hospital, Washington, was formally transferred September 8. The consideration was \$98,222.90.

**Personal.**—Dr. and Mrs. H. L. E. Johnson returned from a trip to the Pacific Coast, Alaska and Canada September 17.—Dr. Hirschel Baldwin has been appointed resident physician and superintendent of the Eastern Dispensary and Casualty Hospital, Washington.

### GEORGIA.

**Fire at Glennville.**—A fire in Glennville September 27 destroyed the storehouse of Dr. F. R. Cross and the office of Dr. W. H. Mann.

**Personal.**—Dr. Maury M. Stapler, Macon, returned from Europe October 4.—Dr. Claude A. Smith, Atlanta, has been elected city bacteriologist and chemist, vice Dr. Henry F. Harris.—William E. Braswell, Loganville, has been given a beneficiary scholarship in the department of medicine of the University of Georgia, Augusta.

### ILLINOIS.

**School Closes.**—The Emerson school of Bloomington has been closed on account of an epidemic of diphtheria.

**New Hospital.**—The contract for building the proposed Catholic Hospital at Taylorville has been let for \$18,058. The hospital is to be completed on or before Feb. 1, 1906.

**Typhoid at Pana.**—An epidemic of typhoid is reported to be raging in the German settlement northeast of Pana. The infection is said to be due to the use of ice from an infected pond.

**Releases Mortgage.**—Matthias Schnell of Rock Island, who took a mortgage from the Sisters of St. Anthony's Hospital for \$10,000 in 1904, entered release of the mortgage September 25.

**Physician Wins Suit.**—In the case of Katie Helen against Dr. T. J. McKinney, Gifford, in which damages to the extent of \$5,000 were claimed by the plaintiff for malpractice, the jury found for the defendant.

**Hospital Plan Rejected.**—At a meeting of the Fairhope Improvement Association October 3 in Oak Park, a resolution was adopted to block further progress of the Oak Park Hospital Association toward accepting the offer submitted by Dr. J. W. Tope to buy the property and turn it over to Catholic sisters for a hospital.

**Personal.**—Dr. W. L. Wylie, Sparta, has returned from a visit to Colorado.—Dr. B. C. Green, Keithsburg, is convalescing from injuries received some weeks ago by being thrown from a fractious horse.—Dr. J. H. Porter, Clinton, was operated on September 28 in Chicago for cholelithiasis.—Dr. J. W. Morgan, Moline, has returned to the city after a year in the Southwest.—Dr. H. W. Wayles, Leno, is reported to be failing rapidly in Pennsylvania, where he is a patient.—Dr. E. C. Aeley, Quincy, has returned from Portland, Ore.—Dr. Martin W. Cushing, Joliet, had a slight cerebral hemorrhage October 4.



## Chicago.

**Annual Gynecological Society Meeting.**—The twenty-seventh annual meeting will be held at the Auditorium Annex, October 20, at 8 p. m. The business meeting and election of officers will be followed by the banquet.

**Personal.**—Dr. N. Ellis Oliver has gone to England for a trip of six weeks.—Dr. J. R. Lynch was robbed of his watch by holdup men September 30.—Dr. and Mrs. Cole, Englewood, will soon leave for Los Angeles for the winter.

**New Hospital Planned.**—The directors of the Chicago Lying-in Hospital are planning the crection of a new hospital to cost \$250,000 as the present quarters are entirely inadequate. The proposed new hospital will have accommodations for about seventy patients and will possess facilities for handling cases from all grades of society, the main object being to establish a place where wives of the wage earners can be cared for at slight expense.

**Months of Low Death Rate.**—October and November are the two months of lowest death rates in Chicago, and October has opened with satisfactory promise. For the week ended October 7 the death rate was at the annual rate of 12.36 per 1,000, which is considerably lower than the average October rate for the decade 1895-1904, which was 13.16 per 1,000. Of the total deaths reported the indicated decreases as compared with the previous week are: Typhoid fever, suicide and whooping cough, each 3; diphtheria, 4; apoplexy and tuberculosis, each 5, and acute intestinal disease, 8.

**The Summer Mortality.**—During the summer of 1905, which ended September 23, 6,889 deaths occurred, or 794 more than in the summer of 1904, the respective annual death rates per 1,000 being 13.24 and 12.24. Of children under 1 year, 1,837 died in 1905 and 1,478 in 1904; of children between 1 and 5, 717 in 1905 and 522 in 1904; and of individuals over 60 years, 1,117 died in 1905 and 1,058 in 1904. The most important causes of death were: Acute intestinal diseases, consumption, 732; violence, including suicide, 599; heart diseases, 521; Bright's disease, 472; pneumonia, 383; and cancer, 311.

## INDIANA.

**New Sanitarium.**—A site has been purchased in Princeton, on which a sanitarium is to be erected, to cost \$20,000. Drs. Franklin Blair, A. Ziliak and Robert S. Anderson are the promoters of the enterprise.

**Illegal Practitioner Fined.**—Gilbert Williams, charged with practicing medicine without a license in Evansville, was fined \$20 and costs September 22. He says he will appeal the case. He has been practicing with his brother under the firm name of "the Dr. Bert Company."

**Physician Goes to Prison.**—Dr. Charles L. Landfair, Bluffton, sentenced to the penitentiary for a term of from three to fourteen years and to pay a fine of \$100 for criminal malpractice, was taken to the Indiana northern penitentiary, Michigan City, September 23.

**Personal.**—Dr. Charles C. Morris, Rockville, has taken a trip to Portland, Ore.—Dr. Sherman B. Hitt, Greensburg, was the lucky holder of a ticket entitling him to a \$600 automobile at the drawing held September 25.—Dr. John P. Salb, Jasper, has been appointed division surgeon for the Southern Railway.—Dr. Albert E. Powell, Marion, is in a serious condition since his return from Toledo, where he underwent operation.

## IOWA.

**Raises Fee for Itinerants.**—Dubuque has raised the license fee for traveling doctors to \$5 a day, or \$150 a month.

**The Last of Kraus.**—The notorious itinerant, who calls himself "Phenomenal Kraus," and his associates, have agreed to abandon Des Moines and Polk County as a field for the sale of their nostrums and their alleged miraculous cures, provided the cases pending against them be dropped. They agree to pay all costs incurred.

**Law Defense Company.**—A corporation—the Law Defense Company—has recently been incorporated with a capital of \$100,000, whose object is to protect doctors, lawyers and dentists against damage suits, as well as individuals and corporations against various kinds of legal prosecutions. Only the expense and trouble of litigation, not judgments and damages, are to be insured against.

**Washington County Medical Society.**—The annual meeting of this society was held September 19. The program included papers on "Chylous Ascites," "Appendicitis," "Artificial Feeding of Infants" and "Pneumonia." In the evening a public lecture was given on "Food and Drug Adulterations." The fol-

lowing officers were elected for the ensuing year: President, Dr. William H. McCaw, Winfield; vice-president, Dr. Emmett T. Wickham, Washington; secretary, Dr. Clyde A. Boice, Washington (re-elected).

## MARYLAND.

**Personal.**—Prof. Hans Horst Meyer, the Herter lecturer at the Johns Hopkins University, with his two sons, was the guest of Prof. J. J. Abell during his stay in Baltimore last week.—Dr. S. Suzuki of the Imperial Japanese navy was the guest of Dr. William S. Halstead at Baltimore October 7, and inspected the Naval Academy at Annapolis on October 8.—Prof. Harry Friedenwald delivered the opening address at the College of Physicians and Surgeons, the evening of October 3.

**Diphtheria.**—The epidemic of diphtheria at the Naval Academy, Annapolis, is abating. Between 40 and 50 of the midshipmen are still receiving treatment at the hospital, but there have been no new cases for several days. The midshipmen are improving as well as the two marine officers at the Marine Barracks, and a young child of one of the naval officers. The quarantine restrictions placed in force by Rear Admiral Sands will not be raised until a few days before October 16.

**Health Report.**—The health report of Baltimore for September shows 813 deaths and but 800 births, 293 (36.04 per cent.) of the former occurring in children under 5 years. Some singular contrasts are seen, viz., while 327 white males and 282 white females died, the corresponding numbers among the colored were 94 and 110; again, of the births there were 303 white males, 340 white females, 78 colored males and 79 colored females. There were 198 cases of typhoid reported and 79 cases of tuberculosis. The figures for September, 1904, being, respectively, 128 and 47. Measles, whooping cough and pneumonia are on the increase.

## MASSACHUSETTS.

**Changes at Harvard.**—Dr. Chauncy Williams Norton has resigned as assistant in anatomy at the Harvard Medical School. Franz Pfaff, M.D., has been appointed professor of pharmacology and therapeutics. The administrative board for 1905-1906 will be: William Lambert Richardson, dean; John Collins Warren, Frederick Cheever Shattuck, William Fiske Whitney, Charles Montravelle Green, Charles Harrington, Frany Burf Mallory, Walter Bradford Cannon and John Warren.

**Springfield's Typhoid.**—Springfield has been having an epidemic of typhoid fever. About 140 cases have occurred since August 1. Dr. George B. Magrath was sent as an expert from Boston by the State Board of Health, and his investigations make it probable that the street venders and push-cart peddlers of fruits, vegetables and other food materials are responsible for the spread of the disease. For the earliest cases occurred in their families and the local board of health has found a condition of great filth on the two streets where most of them live.

## MICHIGAN.

**City Accepts Hospital.**—The city council of Flint has formally accepted the bequest of \$25,000 and a tract of land left to the city by the late James J. Hurley for a public hospital.

**Sanitarium Organized.**—The Marine City Sanitarium was organized September 23 with a capital stock of \$60,000. Dr. Robert B. Baird was elected president of the board of directors.

**Off to Prison.**—Dr. Scott F. Hodge, Detroit, convicted of manslaughter in connection with the death of Anna Lehman, in an attempt to produce abortion, was taken to the state penitentiary at Ionia September 22 to serve an indeterminate term of imprisonment of six to nine years.

**Question of License.**—W. H. Griswold, Battle Creek, charged with practicing medicine without a license, who in his appeal claimed that as he had been in practice prior to the enactment of the amendment of the law of 1903 he was not obliged to take out a license, was non-suited by the Supreme Court September 22.

**Dr. Hull's Will.**—The will of the late Dr. Harry D. Hull, Adrian, provides for a \$3,000 lavatory, and creates a fund to keep in repair neglected monuments and markers in Oakwoods Cemetery. A provision in the will also directs that all accounts against patients, except those which would go to offset creditors' accounts, be marked off his books.

**Medical Reading Room Opened.**—A special reading room for physicians, nurses and medical students was opened at the Ryerson Library, Grand Rapids, September 25. In this room there are between 30 and 40 medical periodicals from America



and abroad, and a collection of more than 4,000 volumes transferred by the old medical library association. The physicians of Grand Rapids have agreed to contribute to the library not less than \$50 a year for medical periodicals for a period of five years.

#### MINNESOTA.

**New Hospital.**—The new hospital at Luverne will be ready for occupancy early this month.

**College Opens.**—The eighteenth annual session of the College of Medicine and Surgery, University of Minnesota, Minneapolis, opened September 19. Dr. Arthur Sweeney, St. Paul, delivered the opening address on "Ideals in Medicine."

**Physician Acquitted.**—Dr. Malcolm McKinnon, Fosston, who was charged with criminal assault, was discharged at his preliminary examination, the defense showing that the complaining witness was in a state of hysteria and was wholly irresponsible.

**Plan Postgraduate Work.**—At a meeting of the St. Louis County Medical Society at Duluth a plan was discussed to form a medical study academy to take up postgraduate subjects. It is proposed to include the practitioners of Superior and the Iron Range in this work.

**The Afflicted.**—"Dr." Michael Mitchell, who was in trouble with the authorities of Washington County on account of practicing medicine without a license, died insane at the Stillwater Hospital September 17.—Dr. Edward J. Clark, Minneapolis, while shooting near Rush City, received a heavy charge of birdshot in the palm of the left hand by the accidental discharge of a gun, and will be deprived of the use of the hand for a considerable time, if not permanently.

**Personal.**—Dr. John B. Town, Hibbing, has resigned from his position on the staff of the Rood Hospital and will practice in Topeka, Kan.—Dr. George Crossette, Minneapolis, has taken a position on the staff of the Rood Hospital, Hibbing.—Dr. Harry K. Reed, Minneapolis, will soon remove to Hibbing and associate himself with the Rood Hospital.—Dr. Alexander H. Dunlap, Crookston, has been appointed physician of Polk County.—Dr. E. W. Gagg has been appointed physician of Breckenridge, vice Dr. L. W. Armstrong, resigned.—Dr. Ernest A. Woods, Clear Lake, has moved to California.

#### MISSOURI.

**College Opens.**—Ensworth-Central Medical College, St. Joseph, opened for its annual session September 19. Mr. George L. Zwick delivered the address of the evening.

**Appropriation for Quarantine Hospital.**—The House of Delegates, October 3, passed a council bill appropriating \$75,000 for the construction of a municipal quarantine hospital south of St. Louis.

**Illegal Practitioner in Jail.**—"Dr." J. T. Davis, Harrisonville, was arrested at Pleasant Hill October 3 for practicing medicine without a license. He was unable to pay his fine of \$50 and costs and is now serving his time in the county jail.

**Hospital Employes Poisoned.**—Nearly 100 employes of the St. Louis City Hospital, doctors, nurses, attendants and clerks, were taken violently ill with ptomain poisoning September 30, due, it is supposed, to infected milk or oysters. All, however, recovered.

**Cost of City Hospital.**—The cost of the new city hospital at St. Louis up to date is stated to have been \$657,732.72, divided as follows: Past construction, \$573,991.62; pathologic building, \$39,046; fence, \$4,910.10; administration building, \$34,785, and grading, \$5,000.

**Typhoid at State University.**—After investigating the typhoid fever situation at Columbia, the State Board of Health issued a statement that there was no occasion for alarm among students and commending the action of the city authorities in the campaign for sanitation.

**Small Proportion of Claim Allowed.**—In the suit of Dr. David S. Booth, St. Louis, against the estate of the late Dr. Washington West, in which a claim of \$10,000 was made for professional service rendered to Dr. West and to a guest of his, the probate judge allowed settlement for \$750 September 14.

**Personal.**—Dr. Charles E. Gimbel, St. Louis, has been committed to the insane department of the County Hospital, Denver.—Dr. Frank Riley, St. Joseph, suffered a cerebral hemorrhage September 25.—Mrs. Edward C. Runge, widow of the late Dr. Runge, has been appointed librarian of the St. Louis Medical College, and has been put in charge of the co-operative store at the college.

**Buchanan County's Insane.**—Dr. Charles R. Woodson, superintendent of State Hospital No. 2, St. Joseph, who is charged

with using county funds for state purposes and with charging Buchanan County excessive rates for the support of patients, and who on September 11 demanded immediate payment of bills due the hospital from the county, declaring that unless the bills were paid by 11 a. m., September 12, he would turn the 200 indigent insane from the county out of the hospital, received a warrant on that date from the county for \$12,233.80, which, on presentation to the county treasurer, was returned stamped "not paid for lack of funds." The warrant was accordingly sent to protest.

#### NEW JERSEY.

**Finding Adulterated Milk.**—Much adulterated milk is being found by the pure food inspectors in their work in different parts of the state. Their last monthly report shows that 437 specimens were collected, of which 121 were found to be adulterated. Out of 32 samples of cream 8 showed adulterations.

#### NEW YORK.

**Personal.**—Burglars entered the home of Dr. J. Carl Schmuck at Lawrence, L. I., on October 3 and carried away silverware and valuables worth about \$2,000.

**The Work of Consolidation.**—Dr. Joseph D. Bryant, president of the Medical Society of the State of New York, and Dr. J. Riddle Goffe, president of the New York State Medical Association, have each sent letters to the members of the respective bodies, stating that after consolidation of the Medical Society of the State of New York with the New York State Medical Association all members of the consolidated body in good standing will be entitled to vote on the question of the Principles of Medical Ethics of the American Medical Association when ordered by the court, as provided in section 7, which states that it is covenanted and agreed by the parties hereto that as soon as practicable after the entry of an order for the consolidation of the corporations the following proposition shall be submitted by referendum to the vote of the members of the society, namely: "The Principles of Medical Ethics of the American Medical Association being suggestive and advisory, shall be the guide of members in their relations to each other and to the public." A copy of the Principles of Medical Ethics, adopted unanimously at the annual session of the American Medical Association, held in New Orleans, was enclosed with the letter.

**State's Mortality Higher.**—The State Department of Health reports that the mortality of the state in August exceeded by 1,000 the average mortality for that month in the last seven years, which is 10,800. The July mortality exceeded the average by 1,300. This large increase was due to local diseases and general diseases which are not epidemic. There was a considerable increase in the number of deaths from whooping cough and typhoid fever. Since the first of January there had been 60,000 cases of typhoid fever in this state, with 500 deaths from this cause alone in Greater New York. This is attributed to the increased volume of sewage pouring into the streams of the state. It will be the fixed policy of the state health department hereafter not to grant any permits to discharge sewage into public waters, except where imperatively necessary. It was thought that summer resorts were polluting the lakes and streams and a systematic investigation of these resorts would be made. Of the total number of deaths for the month of August, 1,090 were from consumption, 10 per cent. of the whole number. The report urges the registration of all consumptives with the local health boards. It is noteworthy that while the urban mortality was 1,200 less in August than in July, the deaths in rural towns were increased by almost 10 per cent., and their diarrheal mortality was increased by 60 per cent. from that of July.

#### New York City.

**Fewer Medical Students.**—The registration in the School of Medicine of Columbia University shows a falling off from last year, there being a decrease of 107 in the number of matriculates.

**Personal.**—Dr. and Mrs. William T. Bull will sail for Europe on October 10.—Dr. and Mrs. John G. Perry sailed for Europe on the *Koenig Albert* on October 5.—Dr. A. J. McCosh arrived on the *Kaiser Wilhelm* on October 3.

**Low Death Rate for City.**—The weekly figures of mortality show that in the week ended September 30 the death rate was lower than ever before for that time of year. The rate was 15.75 per 1,000, as against 17.14 for the corresponding week of 1904. In the borough of Richmond there were only 10 deaths.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended September 30, 380 cases of tuber-



culosis, with 146 deaths; 171 cases of diphtheria and croup, with 18 deaths; 113 cases of typhoid, with 24 deaths; 73 cases of measles, with 2 deaths; 51 cases of scarlet fever, with 5 deaths; 2 cases of cerebrospinal meningitis, with 5 deaths, and 23 cases of varicella.

**Fresh Air Season Ends.**—The New York Association for Improving the Condition of the Poor reports that during the season which closed October 4, 3,900 women and children have had ten days on the beach, 15,500 enjoyed day excursions, and 165 sick wage earners were boarded in the country for two weeks or more. The work for tuberculous crippled children will be continued through the winter, \$30,000 having already been offered toward the permanent hospital.

**New Laboratory.**—The capacity of the New York University Medical School, which opened October 4, has been greatly increased by the completion of the new laboratory, which is six stories in height and adjoins the college building. This made it possible to admit an unexpectedly large freshman class this year. More than 1,000,000 cases were treated last year in the clinic connected with the college, and this building will also permit of the extension of this work.

**Danger in Brooklyn Water.**—The Health Department has published a statement regarding the results of the analysis of samples of Brooklyn waters which show the presence of the colon bacilli. The report states that the dangers of the situation are not so much in present conditions as in the fact that they are forerunners of serious conditions which may obtain at any time. Sand filtration is the remedy suggested, and until this can be effected home filtration and boiling are recommended.

**Unclean Bakeries.**—Announcement has been made that the Board of Health, in connection with a delegation of the Central Federated Union, had inspected forty-two bakeries in Manhattan and that a large majority of them were found in an unsanitary condition. The health commissioner stated that he had made plans to have every bakery in Greater New York inspected and those that were found insanitary would have to comply with the law. It is alleged that out of 2,000 bakeries in New York 400 are in an insanitary condition. The inspectors have found no bakers suffering from tuberculosis so far.

**Board of Health Wants More Money.**—The day before Dr. Darlington appeared before the board of estimate to ask for an appropriation of \$2,516,396, as against \$1,685,077 allowed last year, he sent a special delivery letter to each member of the board of estimate explaining the urgent necessity for the increase that he asked. The additional funds were not asked for the purpose of increasing any salaries, but for medical school inspection. Dr. Darlington met some opposition in the person of Comptroller Grout, who claimed that the department was trying to do more work than the law required, and that they did not have authority to go into all the schools and examine the children.

**Summer Milk Depots Closed.**—Most of the Nathan Straus pasteurized milk depots have been closed for the season. The maximum capacity of the laboratory was reached this summer, and the necessity for enlarged facilities for the immediate future is apparent. So far this year there have been 2,668,397 bottles of milk dispensed, as against 2,149,194 for the previous year. The Health Department statistics show that the death rate among children under 5 years of age in 1890, previous to the use of pasteurized milk by the poor, was 96 per 1,000, while for the year 1904 the rate was 63 per 1,000. A movement is on foot to have the work of supplying pasteurized milk so extended as to include practically the entire supply of the infant population. It is expected that the city or state will shortly take up the question.

**Report of Health Department.**—The report from the Health Department for the first six months of 1905 shows that the number of inspections made by officers of the sanitary bureau was 999,658, against 799,161 in 1904; 8,668 nuisances were abated by personal effort of the inspectors. Under the child labor law, which assigns to the department of health the issuance of certificates permitting the employment of children between the ages of 14 and 16, 6,700 certificates were issued and about 2,000 applications rejected. Thirteen thousand mercantile establishments have been inspected. There was a diminution in the number of contagious diseases reported, 17,456 being reported, as against 39,114 for the corresponding period of the previous year. The report estimates that 25 per cent. of the children in the schools are suffering from morbid conditions that interfere with their development. Although the work of inspecting the schools is very rigid, only 10,585 children were excluded from the schools between January and July, as opposed to 51,644 who were excluded in the

first months of 1903. The death rate for the first six months of 1905 was 19.03 per 1,000, as against 22.24 in the previous year. This death rate corrected on the recent population of New York would be only a little over 17. The report emphasizes the necessity of preventing expectoration in public places, and recommends that inspectors be better paid.

## OHIO.

**College Opens.**—The Cleveland College of Physicians and Surgeons opened September 20.—Dr. Milton J. Lichty delivered the address of the evening.

**Physician Acquitted.**—Dr. Lucien W. McKinley, Columbus, bound over to the grand jury for causing, as alleged, the death of Carrie Bennett, by an illegal operation, was not indicted by the grand jury.

**Tuberculosis Clinic a Success.**—The clinic for tuberculosis recently opened at Cleveland has proven to be so popular that at present more than 60 patients are under treatment and it seems probable that branches must be opened in various parts of the city to provide for those applying for treatment.

**Objects to Advertising.**—At a meeting of the Ottawa County Medical Society September 13 a resolution was adopted that the names of attending physicians be omitted from all newspaper reports of injuries or sickness, because of incorrect and often exaggerated reports in the newspapers and because it is considered contrary to medical ethics for physicians to advertise.

**Hospital Staff Changes.**—At a special meeting of the medical and surgical staff of the Mahoning Valley Hospital at Youngtown, September 26, Dr. Howard B. Hills was elected president to succeed the late Dr. Jared E. Cohen; Dr. William E. Ranz was elected head of the surgical staff and Dr. Elmer W. Coe, assistant. Dr. John MacCurdy was elected vice-president; Dr. Thomas J. Arundel, secretary, and Dr. Howard B. Hills, chairman of the training school committee.

**Right of Way for Toledo Physicians.**—Dr. A. D. Hobart, Toledo, Ohio, during his last weeks in the city council, framed and had passed an ordinance "granting to physicians and ambulances the right of way in the city of Toledo, Ohio." The badges, selected by a committee of the Academy of Medicine of Toledo and Lucas County, with the approval of the city clerk, have arrived and are being purchased by the physicians who drive carriages. This is the first ordinance in Toledo for the protection of the medical profession of the city.

**Condemns Water Supply.**—At the meeting of Lake County Medical Society, Paynesville, Dr. William T. Miller, Cleveland, member of the State Board of Health, read a paper on "Water Filtration," with particular reference to the conditions which obtained at Paynesville. He declared that the outlet of sewage system of Cleveland was only about seventeen miles from the place from which Paynesville obtains its supply of drinking water and that within three hours the sewage of Cleveland would at times reach Paynesville. The members of the society were unanimous in condemning the present plan of emptying waste matter either into the river or the lake.

**Personal.**—Dr. Martin L. Williams, Warren, is seriously ill with pneumonia.—Dr. William J. Taylor, East Liverpool, has resigned as city physician.—Dr. and Mrs. George F. Brubaker, Springfield, returned this month from an extended stay in California and the West.—Dr. and Mrs. Bryant M. Tower, Conneaut, have returned from Colorado Springs.—Dr. Charles S. Green, Fostoria, was thrown from his buggy in a runaway accident and sustained a fractured rib and severe cuts and contusions.—Dr. Jerome Bland, Bueyrus, who has been seriously ill for a long time, is now convalescent.—Dr. B. Decatur Smith, Cincinnati, has been appointed surgeon for the C., H. & D. R. R., Pere Marquette System and C., C. & L. R. R.—Dr. Leo Danziger, Cincinnati, is critically ill at the Deaconess Hospital.—Dr. and Mrs. E. Luther Trimmer, East Liverpool, have moved to San Luis Obispo, Cal.—Dr. James H. Lowe and family, Piqua, who have been making a trip through the West, returned September 25.—Dr. William H. Booth, Salem, is making a good recovery from typhoid fever.—Dr. Orville A. Rhoads and family, Salem, expect to leave soon for a winter's trip to the Pacific Coast and the South.—Dr. Marion Squire, Randolph, sustained severe bruises in a runaway accident at Ravenna, September 28.

## OREGON.

**Personal.**—Dr. F. Cauthorn has been appointed city physician of Portland.

**Pays Dividend on Subscription.**—The committee of arrangements of the Portland session of the American Medical Association has returned to its subscribers a dividend of 51 per cent.



**College Opened.**—The medical department of the Oregon State University, Portland, opened September 17. Dr. Simeon E. Josephi delivered the opening address. Dr. O. P. Wright has succeeded the late Dr. Alexander D. McKenzie as lecturer on clinical medicine; Mr. W. L. Brewster succeeds Mr. Fenton as lecturer on medical jurisprudence; Drs. L. H. Hamilton and Frank M. Taylor have been added to the faculty as lecturers on electro-therapeutics and demonstrators of electricity and x-ray therapeutics, and Dr. George S. Whiteside has been appointed lecturer on genitourinary and skin diseases.

#### PENNSYLVANIA.

**Money for Hospital.**—The Lancaster General Hospital was the recipient of a gift of \$10,000 from Mrs. Mary L. Bear to endow a bed to the memory of her husband, Reuben F. Bear, deceased.

#### Philadelphia.

**Charity Hospital Report.**—In Charity Hospital during September 1,062 patients were treated and 754 prescriptions compounded.

**New Ambulance for Samaritan Hospital.**—The Women's Samaritan Club of Tioga, by a series of enterprises, secured funds sufficient to purchase the new ambulance for the Samaritan Hospital. The ambulance was presented by the club October 2.

**To Enlarge Hospital.**—Efforts are being made by the officials of the American Hospital for Diseases of the Stomach to enlarge the institution considerably. The present building accommodates 30 patients, but by the establishment of the present plan of enlargement many more can be cared for. The staff of the institution is composed of Drs. John B. Deaver, Lewis Brinton, John B. Shober, Sherbourne W. Dougherty, James Thorington and Ludwig Loeb.

**Health Report.**—The deaths reported last week numbered 404. This is an increase of 20 over the number reported the previous week, and an increase of 20 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 16; whooping cough, 7; diphtheria, 7; pulmonary tuberculosis, 39; cancer, 16; apoplexy, 22; heart disease, 63; acute respiratory disease, 21; enteritis (under 2 years), 35; enteritis (over 2 years), 7; Bright's disease, 30; accidents, 22; marasmus, 12. There were 191 cases of contagious disease reported, with 28 deaths, as compared with 161 cases and 18 deaths for the previous week. The new contagious diseases reported were as follows: Diphtheria, 70; scarlet fever, 29; typhoid fever, 92.

#### TEXAS.

**Typhoid in Krum.**—More than 40 cases of typhoid have developed in Krum during the last six weeks, and 6 deaths have occurred.

**Damage by Fire.**—In a fire at Houston September 18 the residence of Dr. Jacob H. Sampson was burned to the ground, the loss being \$10,000, on which an insurance of \$8,000 was carried.

**Hospital for Houston.**—George H. Hermann of Houston has given a block of land and \$20,000 in cash for the establishment of a charity hospital in the city. Mrs. E. N. Gray and Mrs. T. W. House are soliciting the donation of an additional \$20,000, which, with the amount already received, will be sufficient to erect and equip the institution. Three thousand dollars have already been secured toward the \$20,000 required.

**College News.**—The building committee of the Fort Worth Medical University is preparing plans for the new college building to be erected at a cost of about \$50,000. The sessions for the fall term, which opens this week, will be held in the old building.—The medical department of the University of Texas opened for its annual session October 2.—The new building for the Southwestern University Medical College, Dallas, was formally dedicated at the opening of the college year, October 3.

**To Inspect School Children.**—The president of the Dallas school board has appointed the following physicians as medical inspectors of schools to serve for one year: Drs. Scurry L. Terrell, W. E. Howard, Robert S. Yancey, Edward H. Cary, Theo. L. E. Arnold and Martin E. Taber. He has also appointed an advisory board consisting of Drs. John B. Smoot, J. Wilbur Bourland and T. M. Hackler. The inauguration of the work will be under the supervision of Dr. Frank J. Hall of the school board.

**Personal.**—Dr. Thomas W. Crowder, Sherman, was painfully burned in the right hand and arm while extinguishing a fire in his house September 4.—Dr. Edwin B. Smyth, Mart, was

fined \$100 in the county court September 15 for false imprisonment, the prosecution growing out of an arrest made on Dr. Smyth's order while he was serving as a judge at the election of high school trustees.—Dr. Benjamin M. Worsham, Austin, superintendent of the State Lunatic Asylum, is ill with appendicitis and an operation will probably be necessary.

#### VERMONT.

**State Society Meeting.**—The annual meeting of the Vermont Medical Society was held at the new college building, Burlington, October 12 and 13.

**Gives State a Sanatorium.**—Senator Redfield Proctor of Vermont, in a letter to Dr. William N. Bryant, Ludlow, secretary of the Vermont State Tuberculosis Commission, states that he will purchase a site for a state sanatorium for the treatment of incipient tuberculosis, erect a building to the cost of about \$50,000, and endow it with \$10,000, and as soon as the site is obtained will formally transfer it to the state board and will pay over the endowment fund as soon as the organization is ready to receive and invest it.

**Personal.**—Dr. W. T. Slayton has been appointed health officer for the town of Morristown and the village of Morrisville, vice Dr. C. C. Rublee, deceased.—Drs. F. S. Arnold and Marshall C. Twitchell have been appointed to the staff of the Fannie Allen Hospital, Burlington, in the eye, ear and throat department.—Dr. Clayton G. Andrews, Waterbury, for six years first assistant physician of the State Hospital for the Insane, has resigned, to take effect September 30.—Dr. Don D. Grout, Waterbury, has been elected superintendent of the State Hospital for the Insane, vice Dr. Marcello Hutchinson, resigned.—Dr. G. Carlton Berkley has been elected president, and Dr. John Gibson, secretary, of the St. Albans Hospital medical board.—Dr. Waldo J. Upton, Waterbury, has been appointed assistant superintendent of the State Hospital for the Insane.

#### VIRGINIA.

**State Society Meets.**—The twenty-sixth annual session of the Medical Society of Virginia will be held in the Y. M. C. A. building, Norfolk, October 24-27, under the presidency of Dr. William S. Christian, Urbana.

**Personal.**—Dr. John F. Winn has been appointed professor of obstetrics in University College of Medicine, Richmond.—Dr. John P. Davidson, Richmond, has returned from England.—Dr. McM. Monroe Moran, Pinner's Point, has been appointed surgeon to the Atlantic Coast Line Railway.

**Colleges Opened.**—The Medical College of Virginia, Richmond, opened for its annual session September 26. Dr. Christopher Tompkins delivered the opening address.—The University College of Medicine, Richmond, formally opened for the year September 26. Dr. G. Paul La Roque, the new instructor in practical surgery at the college, has moved from Kingston, N. C., to Richmond.

#### WISCONSIN.

**Pleads Guilty.**—"Dr." Anna Regha, Kenosha, was arraigned in the circuit court, Racine, September 18, on the charge of committing a criminal operation and of conspiring to have a patient leave the state. She pleaded guilty to both charges and was fined \$600 and costs.

**College Opened.**—The Wisconsin College of Physicians and Surgeons opened its thirteenth year September 19. The introductory lecture was given by Dr. Albert W. Myers. Dr. V. H. Bassett has been appointed professor of histology and pathology, with Dr. Newton Wason as his assistant. Drs. G. Frederick Shimmonek and Arthur Ritman have also been added to the faculty.

**Personal.**—Dr. Otto H. Forster has been appointed dermatologist to the Milwaukee Children's Free Hospital, vice Dr. Louis F. Frank, placed on the consulting staff. Dr. F. E. Walbridge has also been transferred to the consulting staff.—Dr. Hugo Philer, Waukesha, has been elected surgeon-general of the Grand Army of the Republic.—Dr. Friend C. Suiter, La Crosse, was robbed of a wallet containing \$600 and valuable papers at the County Fair grounds, West Salem, September 7.—Dr. James T. Reeve, Appleton, completed the semi-centennial of his professional life September 3.—Dr. Moses J. White, Milwaukee, superintendent of the County Hospital for the Insane, has returned from Portland, Ore.—Capt. Edgar C. Barnes, M.D., Ripon, has been appointed major-surgeon of the Second Infantry, W. N. G., vice Major F. C. Moulding, Watertown, resigned.—Dr. Thomas R. Hastings, Lime Ridge, has returned from a visit to Utah.—Dr. August F. Schoen, Mayville, has returned from Europe.



## GENERAL.

**American Academy of Medicine.**—The thirtieth annual meeting will be held in Chicago Nov. 9-10, 1905. Committees will report on medical practice acts, teaching of hygiene in the public schools, and the collegiate degrees. The program includes the following papers: "Altruism in the Medical Profession," being the annual president's address, by Dr. Winfield S. Hall, Chicago; "Maturation and Senility," by Dr. A. L. Benedict, Buffalo; "The Medical Features of the Papyrus Ebers," by Dr. Carl von Klein, Chicago, and a symposium on "The Influence of Recreation on the Individual and the Community from Medical and Sociologic Standpoints," in which series the following papers are promised: "The Physiology of Recreation," by Dr. G. W. McCaskey, Fort Wayne, Ind.; "Recreation in Its Influence on the Nervous System," by Dr. W. J. Herdman, Ann Arbor, Mich.; "The Ceremonial and Festa in the Organized Recreation of Larger Groups of Individuals," by Dr. Bayard Holmes, Chicago; "The Relation of Recreation to Education," by Prof. Robert K. Row, Berwyn, Ill. Not only physicians but others interested will be welcome at the open sessions, which are to be held November 9 at 11 a. m., committee reports and discussion; at 8 p. m., president's address; and November 10 at 10:30 a. m., the other papers above mentioned and discussion thereon.

**Cholera in Manila.**—Several cases of cholera have been reported in Manila from various parts of the city and Bilibid prison. The source of the infection is being investigated, and the board of health is doing everything possible to control the situation. Outgoing quarantine has been imposed on all vessels leaving Manila for other ports in the islands or in the United States.

**Health of Cuba.**—Acting Assistant Surgeon Delgado of the Public Health and Marine-Hospital Service reports that there are still many cases of dengue in Havana and a few cases of typhoid, but no pernicious anemia. There are no yellow fever cases or suspects in the city. The epidemic of dengue which prevailed in Havana has spread to Matanzas and is spreading to every section of that town.

**Harvey Society Lectures.**—The Harvey Society of New York, described by its constitution as "a society for the diffusion of the knowledge of the medical sciences," offers the following course of lectures, to be given under the patronage of the New York Academy of Medicine:

- Oct. 14. Prof. Carl von Noorden, "Modern Problems of Metabolism."
- Nov. 4. Prof. F. G. Novy, "Trypanosomes."
- Nov. 18. Dr. P. A. Levene, "Autolysis."
- Jan. 20. Prof. W. H. Park, "A Critical Study of Serum Therapy."
- Jan. 27. Prof. Lewellys F. Barker, "The Neurones."
- Feb. 2. Prof. F. S. Lee, "Fatigue."
- Feb. 9. Prof. L. B. Mendel, "The Formation of Uric Acid."
- Feb. 16. Prof. T. H. Morgan, "The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates."
- Feb. 23. Prof. Charles S. Minot, "The Nature and Cause of Old Age."
- March 2. Prof. J. C. Webster, "Modern Views Regarding Placentation."
- March 9. Prof. Theobald Smith, "Some phases of Tuberculosis."
- March 16. Prof. W. H. Howell, "The Cause of the Heart Beat."

The lectures will be given in the Academy of Medicine at half-past 8 on the above Saturday evenings.

**Less Yellow Fever.**—The general improvement continues. In the week ending October 7 there were in New Orleans 176 new cases and 22 deaths, as against 183 cases and 23 deaths in the previous week. The New Orleans hotels begin to fill with visitors. It is expected by the end of this week many quarantines will be modified and that all will be raised by November 1. There has been a slight spread of the epidemic in Mississippi, but on the whole there is good control, and not so many new cases at Natchez and Vicksburg. At Hamburg the situation has been bad. Alabama quarantined against the whole state of Mississippi. There has been a sharp war of words concerning quarantine on the Mississippi-Arkansas boundary between Dr. Hunter of the former state and Dr. Runyan of the new Arkansas Board of Health.—Dr. D. C. Anderson, who had been sent to Tallulah, La., by the State Board of Health, died of yellow fever.—The new Arkansas Board of Health, through its president, Dr. Runyan, has issued an order that no Florida oranges or other fruit shall be unloaded in Arkansas. As a result the Florida papers are hurling jibes at Dr. Runyan, because the yellow fever in Florida, at Pensacola, is as far from the orange groves—500 to 700 miles—as is Arkansas itself, and also because no one has yet suggested that oranges carry mosquitoes.—The United States Public Health and Marine-Hospital Service has circulated a note on the history and habits of the mosquito, by Prof. L. O. Howard, chief entomologist of the Department of Agriculture. In this it is noted that late in the summer the

stegomyia may be carried well to the North by train and boat.—Mexico is nearly free from yellow fever.—The official reports of the United States Public Health and Marine-Hospital Service show that many refugees came North from the infected Mississippi towns about October 1, the larger portion coming to Chicago and numbering nearly or quite 200 persons.—It has developed clearly that most of the towns along the line of the Yazoo & Mississippi Valley Railway are infected and that the infection dates from a cheap excursion into New Orleans which was run by that railroad in July, just before yellow fever was admitted to be present in New Orleans. Of course, it follows that the early cases for several successive crops either were unrecognized or concealed. For instance, at Port Gibson two cases were admitted September 29, but investigation showed that probably 50 prior cases had not been reported. Even yet not all the physicians at Vicksburg will report their cases, and a portion of the populace fumigates in only a perfunctory way. In consequence it is difficult to make real progress there.—The little town of New Iberia, La., boasts of its rational methods and of their complete success. With \$3,000 from the city treasury and \$2,000 from citizens, the town from the beginning of the epidemic has been thoroughly guarded without shotguns and has been repeatedly inspected by districts. It had its detention camps and its screened hospital. The Southern Pacific Railroad was permitted to make a sort of headquarters in the town, and not a case of yellow fever has occurred.—Dr. C. M. Shanley, who did such yeoman volunteer service along Bayou Barataria, died of a relapse of yellow fever. In every sense of the word he died a martyr, giving his life that others might live and that he might do his duty. Well-to-do and serving without remuneration under most exhausting conditions, he was truly a hero and died a hero's death.—Dr. Szabary of New Orleans is under two charges of failing to report cases of yellow fever.—For the week of October 2 to 9 inclusive there were reported in New Orleans only 170 new cases of yellow fever, with 17 deaths. These figures clearly demonstrate the steady and progressive diminution of the epidemic.—There has been one death from yellow fever in Chicago—a refugee, of course.

## CANADA.

**Sanatorium for Tuberculosis in Hamilton.**—Twenty thousand dollars have been subscribed at Hamilton, Ont., for the establishment of a consumption sanitarium.

**Protestant Hospital for the Insane.**—In the Protestant Hospital for the Insane at Verdun, near Montreal, during the week ending October 3 there were seven admissions; four patients were discharged cured, and two discharged on trial. There were four deaths.

**Provincial Jubilee Hospital, Victoria, B. C.**—The number of patients admitted into the wards of the Provincial Jubilee Hospital, Victoria, B. C., during the month of August was 103 and the total treated was 143. The free patients treated were 62, the daily average being 56.29.

**The New Suburban Hospital.**—In Caughnawaga, a historical Indian village adjacent to Montreal, last week Archbishop Bruchesi formally opened a new hospital, which contains two public wards for men and women and several private and semi-private rooms and in all has accommodation for 40 persons.

**Vital Statistics in Toronto.**—The regular monthly report of the medical health officer shows that during September there were 42 cases of typhoid fever reported, as against 2 cases in August and 19 in September, 1904. The number of births were 497; deaths, 309, and marriages, 294. During the first nine months of 1905 the city supported 181 patients in the hospitals, as compared with 151 for the same period during 1904.

**Montreal General Hospital.**—At the regular quarterly meeting of the board of governors of the Montreal General Hospital Dr. Craik gave an interesting account of the growth of this institution. In 1854 he said there were eight nurses, while the number of patients was between 80 and 90. During the quarter ending June 30 there had been treated 803 patients, and there were 55 deaths, 26 occurring within three days of admission. Dr. R. P. Campbell was appointed medical superintendent for another year.

**Munificent Donations to Toronto General Hospital.**—Over \$250,000 was subscribed in Toronto during the week ending October 7, by eminent citizens for the new Toronto General Hospital. Senator Cox gave \$100,000; Mr. E. R. Wood, \$25,000; Mr. Timothy Eaton, \$50,000; Mr. E. B. Osler, M.P. (a brother of Dr. William Osler), \$25,000; Mr. J. W. Flavelle, the chairman of the Hospital Trust, \$25,000; Mr. H. D. Warren, \$10,000; Mr. P. C. Larkin, a member of the Hospital Trust, \$10,000, and Mr. B. E. Walker, \$10,000.



**Winnipeg and the West.**—The medical practitioners in Saskatchewan are organizing into an association and will seek affiliation with the Canadian Medical Association. Dr. G. A. Charlton, Regina, is the secretary-treasurer.—There were 229 deaths in Winnipeg during the month of September, the largest number for one month in the history of that city. Thirty-seven persons died from typhoid fever.—Three hundred and fifty-five patients were in the Winnipeg General Hospital during the week ending September 30, of whom 246 were men, 75 women and 35 children; 85 outpatients were also treated.

**Ontario Vital Statistics.**—During August, 1905, there were 2,200 deaths in the province of Ontario. For the same month last year there were 2,024. The increase in 1905 is thought to be due to a greater accuracy in making returns. There is a marked decrease in deaths from scarlet fever, diphtheria and typhoid, while the total reported outbreaks fell from 823 to 741. There were only 2 deaths out of 30 reported cases of scarlet fever, as against 9 out of 132 for the same month last year. There were fewer cases of tuberculosis reported, the number being 153, with 147 deaths. There were 256 cases of typhoid, as against 293 in August, 1904. The cases of whooping cough numbered 141, with 16 deaths.

**Personal.**—Dr. J. A. Hutchison, Montreal, chief surgeon of the Grand Trunk Railway, has been appointed chief surgeon of the Grand Trunk Pacific Railway, with headquarters at Montreal.—Dr. A. Laphorn Smith, Montreal, has returned from a trip to Europe.—Dr. Victor C. Vaughan, dean of the medical department of the University of Michigan, delivered the opening lecture at Toronto University on October 3.—Dr. W. H. F. Addison, house surgeon of Toronto General Hospital, has been appointed lecturer on histology in the University of Pennsylvania.—On leaving Kingston for Toronto, Dr. C. K. Clarke, the new superintendent of the Toronto Provincial Hospital, was presented with an address and a cabinet of silver.

**Toronto Western Hospital.**—In 1896 the Toronto Western Hospital began work in a small house on a residential street in that city. To-day it has a splendid set of buildings, fine grounds and accommodation for 60 patients, while in tents on the grounds there is accommodation for 55 more. An addition has recently been completed for a maternity department, and another annex has just been erected at a cost of \$10,000. It is intended shortly to erect a nurses' residence to cost \$25,000. A feature of this hospital has been its wide application of the open-air treatment of disease which for the past three or four years has been carried out very successfully. Bequests have recently been made to the amount of \$50,000. Another feature of this hospital is that any practitioner in good standing may attend all public ward patients sent in under his care.

**The Montreal Maternity Hospital.**—Dr. J. Chalmers Cameron, physician at the Maternity Hospital, Montreal, entertained over 400 friends of the institution on October 6. The occasion was a goodbye to the old building, a new one having been completed and made ready for occupation. The Montreal Maternity Hospital was founded in 1848 for the purpose of giving instruction in obstetrics to the students of McGill University. The total number of cases attended to in this institution during the past official year was 400, of which number 110 were out-of-town cases, the entire number being an advance of 78 over the preceding year. The training school for nurses was established in 1896 and since that time 80 nurses have been graduated therefrom. The earliest by-laws of the institution provided that the professor of obstetrics at McGill should always be the physician in attendance at this hospital.

**Montreal Statistics for 1904.**—Dr. Laberge, medical health officer for the city of Montreal, has completed his report for the year 1904. Heretofore Montreal has been credited with an exceedingly high death rate, owing to the fact that illegitimate and prematurely born infants were always included in the list. Including the mortality among the prematurely born and the illegitimate the death rate is 23.39 per 1,000 of the population. Excluding only the deaths among the viable prematurely born infants the rate is 22.48; excluding only the illegitimate (494), and taking in the viable prematurely born, the rate is 27.71. Excluding both the prematurely born and the illegitimate the rate was 20.08. At this rate the death rate in Montreal was lower in 1904 than in Liverpool, Dublin, Belfast, St. Petersburg, Moscow, Breslau, Prague, New York, Venice, and higher than in Birmingham, Munich, Baltimore, Glasgow and Milan. The total number of births in 1904 gave a rate of 35.96 per 1,000 of population, which was 0.23 less than in 1903. This was higher than in Toronto (24.2), and in New York (28.9). The marriage rate for 1904 was 10.21 per 1,000, or 0.5 higher than in 1903.

## FOREIGN.

**British Commission to Study American Insane.**—It is reported that a royal commission has been appointed to visit America to study American methods of caring for the insane.

**Diphtheria in Mexico.**—It is reported that many cases of diphtheria have occurred in Santa Isabel, in the state of Chihuahua. The board of health of the city of Chihuahua has sent Dr. Terreros to aid in combating the disease, which is becoming epidemic in character.

**Politzer's Retirement.**—There is scarcely a branch of otology to which Prof. Adam Politzer of Vienna has not contributed in some way, and his works have been translated into all civilized tongues. He celebrated his seventieth birthday October 1, and this is the signal, according to Austrian regulations, for his retirement from his chair in the university, as he has reached the age limit.

**Conditions of Bequest to Medical Charity.**—A cable dispatch states that a money lender at Naples recently committed suicide, bequeathing his large fortune to the local home for incurables under condition that a memorial tablet be placed in each ward with an inscription to the effect that the money which he made from the rich and which the rich had wrested from the poor, now returns to the poor.

**Nothnagel's Last Notes.**—After the death last summer of Prof. H. Nothnagel of Vienna, a paper was found on his desk on which he had written out notes taken during the fatal attacks of angina pectoris. The last *Deutsche med. Wochft.* gives a photographic reproduction of the twenty-three lines. They are in German, but the characters are those we use—not the cramped German script. It commences: "Stenocardiac attacks with extremely violent pains. Pulse during attack very different, sometimes slow, 56-60, regular with high tension, then accelerating, 80-90, even and regular, finally completely arrhythmic, irregular, now fast, now slow, with varying tension. The first consciousness of these attacks dates from three or four years back, at first very faint, but gradually becoming more and more pronounced. The true paroxysms with violent pains first appeared five or six days ago. Written July 6, 1905, late in the evening, after I have just had three severe attacks." The next paroxysm proved fatal.

**Extravagant Tribute to Zoege von Manteuffel.**—The commander-in-chief of the Russian forces, General Linewitsch, wrote a very complimentary letter to Prof. Zoege von Manteuffel on his leaving the seat of war to resume his duties at St. Petersburg. The general stated that God alone knew how many men the other had saved from death, and how many fathers and bread-winners had been returned to their families as the results of his efforts. Both in the hospitals at the rear of the army and in the front after the battles he had always been a model of devoted and blessed service. Heedless of shot and shell, he had been indefatigable in giving first aid to the wounded and aiding to remove them out of range of danger. Then, after the battles, instead of seeking a well-earned rest, he went to the hospitals to devote his energies again to the relief of the suffering. As a model for the younger physicians, and for all, his influence was far reaching. Linewitsch concluded by expressing his gratitude personally and in the name of the Russian soldiery. Manteuffel passed through the campaign without a scratch, but was hit by a flying missile after his return to his home city. He has now recovered from the injury.

**Plague and Smallpox in India.**—According to *Public Health Reports*, the report on the sanitary administration of the Punjab shows that cholera did not prevail in any severe epidemic form in the province during the year, the total mortality amounting to only 716—that is, 0.04 per mille of population. There are about 33,000 towns and villages in the province, and of these there were only 107 in which deaths from cholera were reported. In 10 whole districts not a single death was registered, in 12 others the total of deaths did not exceed 70, and in the remaining 6 districts the affected area was extremely limited. The report, however, throws no light on the causes of this distribution. Smallpox, unlike cholera, appears to have kept its ground instead of retreating. The deaths attributed to that epidemic during the year under review numbered 9,624, which shows a rate of 0.48 per mille—that is, a little over the mean ratio of the previous five years, though 0.3 lower than that of 1903. The highest mortality, as is very often the case, was registered in the month of May and the lowest in October. In a few districts, however, the epidemic declined after reaching its maximum in the month of January, notably in the case of Attock. As regards seasonable prevalence, plague and smallpox follow a similar course. Plague, like smallpox, breaks out on the approach of the cold season,



increases steadily in the winter, attains its maximum intensity by about the same time as or some weeks earlier than smallpox, and declines with the commencement of the hot weather. In plague the decadence is rapid, while in the case of smallpox it is gradual, but on the whole the two epidemics exhibit a curious inclination to march hand in hand.

**First International Surgical Congress.**—The success of this gathering of surgeons from around the world surpassed all expectations. Nearly 500 members assembled, and all were enthusiastic over the opportunity thus afforded for discussion of a few of the most vital questions in surgery. The communications were restricted to those bearing on the six questions that had been selected by the committee of arrangements as mentioned in these columns on page 1046 of the last volume. The program there outlined was carried out in every particular. Summaries of the main addresses had been mailed to all the members of the association in time for the discussions following the addresses to be intelligent and fruitful. Brief daily reports of the proceedings were also issued every morning. The congress was not an open one, but merely the first meeting of the newly organized International Surgical Association, which now numbers 700 members. The congress was held at Brussels, September 18 to 23. Kocher of Berne presided, and American surgeons were remarkably well represented, not only in numbers but in scientific prominence. Every day brought new and stimulating discussions, the fruits of which will undoubtedly be in evidence at the next congress, to be held three years from now. The president's address was devoted to the progress realized in the campaign against cancer and appeal for general co-operation in the campaign of prevention which the Germans have so successfully commenced, especially Winter's energetic propaganda. (Winter's work was described in *THE JOURNAL*, xliii, p. 230.) W. W. Keen of Philadelphia, ex-president of the American Medical Association, delivered one of the four addresses on the first subject on the program, "Value of the Blood Count in Surgery." The other subjects were: "Hypertrophied Prostate," "Diagnosis of Surgical Kidney Affections," and "Surgical Intervention in Non-malignant Stomach Affections," "Tuberculosis of the Joints" and "Peritonitis." Gastric affections elicited the liveliest discussion, Kocher declaring in summarizing that gastric ulcer belongs to the surgeon, and that he could not understand why it is always the physician who decides what belongs to medicine and what to surgery. Monprofit of Angers goes so far as to claim that surgical intervention should be the rule at the first signs of slight ulceration. The *Semaine Médicale*, *Presse Médicale* and the *Berliner klin. Wochft.* have already published installments of the proceedings, the first with running editorial comment. Membership in the association is limited to a certain number.

#### LONDON LETTER.

##### The Standardization and Storage of Drugs.

At the annual meeting of the British Pharmaceutical Conference the president, Mr. W. Naylor, delivered an important address on this subject. He said that the present tendency to standardize preparations on the basis of one principle, regardless of other constituents which may be of therapeutic value, should be overcome. He referred to a number of potent drugs for which there is at present no satisfactory mode of standardization, including Calabar bean, hemlock, henbane, jaborandi, stramonium and strophanthus. The most recent investigations of Calabar bean point to the presence of three bases, of which eserine is supposed to represent the therapeutic properties on which the physician depends when he prescribes the official extract. The medicinal properties of hemlock may be due to one or more of the following constituents—coniin, ethyl piperidin, methyl coniin, conhydrin and pseudo-conhydrin. The experiments of Findlay show that the fluid extract of hemlock and the mixed alkaloids obtained from the drug act physiologically in a manner analogous to pure coniin. Hence the determination of the total alkaloids in a preparation of hemlock would probably serve the purpose of standardization. Speaking of storage, Mr. Naylor drew attention to the liability to loss of active principle by chemical change or precipitation on keeping. Different drugs are unequally affected. Preparations of belladonna and nux vomica appear to be the most stable, those of cinchona less so, and the liquid extract of ippecacuanha the least of all, the loss of strength in each case being due to precipitation.

##### "Return Cases" of Fever.

The Metropolitan Asylum's board has issued an important memorandum with reference to "return cases" of scarlet fever and diphtheria. During twelve months there have been 688 alleged infecting cases of scarlet fever, amounting to 4.1 per

cent. of the total number of patients discharged. Of this number 46.5 per cent. appeared to cause "return cases." There is no laxity in the discharge of patients, but "return cases" seem to be due to premature discharge. It is thought that more extended means of isolation than at present exists might result in a considerable reduction in the number of "return cases."

##### Precautionary Measures Against Cerebrospinal Fever.

The local government board has issued a circular concerning cerebrospinal fever to the local sanitary authorities. It appears that cerebrospinal fever is not more prevalent in this country than it has been from time to time in the last quarter of a century, but in consequence of the prevalence of the disease in central Europe and in America the board thinks that the health authorities should be on the alert to detect it. To this end the board has issued a memorandum prepared by its medical officer, describing the characteristic symptoms of the disease and especially its minor manifestations. In the event of the discovery in any district of groups of cases of illness which might possibly be of the nature of cerebrospinal fever, a special report is to be made to the local sanitary authority by the health officer of the district and a copy of the report is to be forwarded to the local government board. The board will be prepared to render the sanitary authority any advice or assistance which may be necessary. If, in view of any special circumstances, the sanitary authority desires that cases of cerebrospinal fever should be made compulsorily notifiable in their district the board will be prepared to consider an application for extending the provisions of the infectious diseases notification act to that district for a limited period. A memorandum has been prepared by Dr. W. H. Power, health officer of the board, who states that a case of cerebrospinal fever has recently been identified in the neighborhood of London and that of several cases which have been observed in Northamptonshire four were fatal. In the course of the last forty years cerebrospinal fever has been prevalent in a considerable number of localities in England and Wales. Whether the disease is spread from person to person Dr. Power declares to be uncertain and adds that no definite knowledge as to manner of its transmission exists. Since personal infection can not be excluded, however, he recommends that the patients be isolated and measures of disinfection adopted.

##### The Army Medical Corps and the Boer War.

After the so-called "hospital scandals" of the Boer war a royal commission was appointed to report on the care and treatment of the sick and wounded, and to recommend measures calculated to prevent in the future such loss of life as marked that campaign, whether caused by lack of medical aid or want of sanitary organization. As a result of the report of the commission the establishment of medical officers since the war has been increased by 125, and the establishment of quartermasters, warrant officers, non-commissioned officers and men by 1,216. The question of further increase is still under consideration. As previously reported in *THE JOURNAL*, the pay of medical officers has been greatly improved. A college for their instruction has been opened in London and permanent buildings are in course of construction. All officers of over five years' service are required to attend a six months' course of instruction, which includes clinical teaching in the various civil hospitals in London by civilian professors. Officers passing certain standards at the examination after the course are eligible for accelerated promotion up to a period of eighteen months, and officers who distinguish themselves in selected subjects are eligible for employment as specialists with extra pay. Promotion to the higher ranks is now based on a system of strict selection based on positive merit. As the result of these regulations the supply of candidates has been of the most satisfactory nature. In March, 1902, Queen Alexandra's Imperial Military Nursing Service was established, greatly improving the conditions of service. Two hundred and fifty-nine nurses were added to the peace establishment. The scale of nurses for fixed hospitals in war has been largely augmented. Properly qualified sanitary officers have been appointed to all commands at home and abroad. It may be remembered that the ambulance wagons used in the Boer war were much too heavy and were severely condemned. To insure a satisfactory wagon a prize was offered, for which many firms competed. After exhaustive trials of many patterns a thoroughly satisfactory wagon has been selected. A special tent (a modification of the Indian E. P. tent) has been designed and has undergone successful trials. A scheme has been drawn up for the establishment of a reserve of civilian surgeons, who will receive military training. A scheme of special enlistment to provide a sufficient reserve of trained orderlies is also under consideration.



## Pharmacology

### Fake Pharmaceuticals.

An exchange relates the following experience of a pharmacist with a proprietary formula: A firm which makes a proprietary tablet for years had published a certain formula; recently they changed this by adding 8 grains of another drug. The pharmacist in question made inquiries of several chemists about this drug and they all assured him that they had never heard of it. He then wrote to the manufacturers of the tablet, asking them if they had changed the ingredients in their preparation, and our exchange states that they made the following reply: "We have not changed the tablet—we only changed the published formula." We wonder how often the opposite is true, that the published formula remains as it was while the ingredients are changed.

### Compulsory Use of Secret Proprietaries.

One of the "arguments" used by those who think it right to use secret proprietary medicines is that physicians who have not confidence in, or for any reason do not care to use, secret nostrums are not compelled to use them. Those who use this argument are correct, for we must admit that apart from the influence exerted by his misleading statements and extravagant therapeutic claims the manufacturer does not compel us to prescribe his nostrum. In championing the position of the manufacturer, however, it is not appreciated that this argument implies that the nostrum maker is conducting his business along higher ethical lines than does the physician who prescribes his product, for the physician virtually compels his patients to use these medicines of unknown therapeutic action and composition. A physician, when prescribing a secret or semi-secret proprietary remedy, ought to say to his patient: "I have directed that you buy a remedy that I know nothing about except what the manufacturer has told me." If the nostrum prescriber were thus honest with his patients how long would he have their confidence? If we consider this secret proprietary question from the patients' point of view, it would certainly appear that unless we make an honest, straightforward explanation every time we prescribe a secret or semi-secret proprietary remedy—in other words, a nostrum—we are not dealing honestly with our patients or with ourselves. Should it not appeal to us that when we compel our patients to use medicines about which, of our own knowledge, we know little or nothing, we are debasing ourselves and our profession below the rules of conduct that are followed by the admittedly commercial manufacturers of nostrums

### The Great American Fraud.

SAMUEL HOPKINS ADAMS.

Gullible America will spend this year some seventy-five millions of dollars in the purchase of patent medicines. In consideration of this sum it will swallow huge quantities of alcohol, an appalling amount of opiates and narcotics, a wide assortment of varied drugs ranging from powerful and dangerous heart depressants to insidious liver stimulants; and, far in excess of all other ingredients, undiluted fraud. For fraud, exploited by the skillfullest of advertising bunco men, is the basis of the trade. Should the newspapers, the magazines and the medical journals refuse their pages to this class of advertisements, the patent medicine business in five years would be as scandalously historic as the South Sea Bubble, and the nation would be the richer not only in lives and money, but in drunkards and drug-fiends saved.

"Don't make the mistake of lumping all proprietary medicines in one indiscriminate denunciation," came warning from all sides when this series was announced. But the honest attempt to separate the sheep from the goats develops a lamentable lack of qualified candidates for the sheepfold. External remedies there may be which are at once honest in their claims and effective for their purposes; they are not to be found among the much advertised ointments or applications which fill the public prints. Cuticura may be a useful preparation, but in extravagance of advertising it rivals the most clamorous cure-all. Pond's extract, one would naturally suppose, could afford to restrict itself to decent methods, but in the recent epidemic scare in New York it traded on the pub-

lic alarm by putting forth "display" advertisements headed, in heavy black type, "Meningitis," a disease in which witch hazel is about as effective as molasses. This is fairly comparable to peruna's ghoulish exploitation, for profit, of the yellow-fever scourge in New Orleans, aided by various southern papers of standing, which published as *news* an "interview" with Dr. Hartman, president of the Peruna Company. . . . Acetanilid will undoubtedly relieve headache of certain kinds; but acetanilid, as the basis of headache powders, is prone to remove the cause of the symptoms permanently by putting a complete stop to the heart action. Invariably, when taken steadily it produces constitutional disturbances of insidious development which result fatally if the drug be not discontinued, and often it enslaves the devotee to its use. Cocain and opium stop pain; but the narcotics are not the safest drugs to put into the hands of the ignorant, particularly when their presence is concealed in the "cough remedies," "soothing syrups," and "catarrhal powders" of which they are the basis. Few outside the rabid temperance advocates will deny a place in medical practice to alcohol. But alcohol, fed daily and in increasing doses to women and children, makes not for health, but for drunkenness. Far better whisky or gin unequivocally labeled than the alcohol-laden "bitters," "sarsaparillas," and "tonics" which exhilarate fatuous temperance advocates to the point of enthusiastic testimonials.

None of these "cures" really does cure any serious affection, although a majority of their users recover. But a majority, and a very large majority, of the sick recover, anyway. Were it not so—were one illness out of fifty fatal—this earth would soon be depopulated. . . .

### AS TO TESTIMONIALS.

The ignorant drug-taker, returning to health from some disease which he has overcome by the natural resistant powers of his body, dips his pen in gratitude and writes his testimonial. The man who dies in spite of the patent medicine—or perhaps because of it—doesn't bear witness to what it did for him. We see recorded only the favorable results: the unfavorable lie silent. How could it be otherwise when the only avenues of publicity are controlled by the heavy advertisers? So, while many of the printed testimonials are genuine enough, they represent not the average evidence, but the most glowing opinions which the nostrum vender can obtain, and generally they are the expression of a low order of intelligence. . . . There it is in a nutshell; the faith cure. Not the stimulant, but the faith inspired by the advertisement and encouraged by the stimulant does the work—or seems to do it. If the public druggist can convince his patron that she is well, she is well—for his purposes. In the case of such diseases as naturally tend to cure themselves, no greater harm is done than the parting of a fool and his money. With rheumatism, sciatica, and that ilk, it means added pangs; with consumption, Bright's disease and other serious disorders, perhaps needless death. No onus of homicide is borne by the nostrum seller; probably the patient would have died anyway; there is no proof that the patent bottle was in any way responsible. Even if there were—and rare cases do occur where the responsibility can be brought home—there is no warning to others, because the newspapers are too considerate of their advertisers to publish such injurious items. . . .

### THE MAGIC "RED CLAUSE."

With a few honorable exceptions the press of the United States is at the beck and call of the patent medicines. Not only do the newspapers modify news possibly affecting these interests, but they sometimes become their active agents. F. J. Cheney, proprietor of Hall's catarrh cure, devised some years ago a method of making the press do his fighting against legislation compelling makers of remedies to publish their formulæ, or to print on the labels the dangerous drugs contained in the medicine—a constantly recurring bugaboo of the nostrum-dealer. This scheme he unfolded at a meeting of the Proprietary Association of America, of which he is now president. He explained that he printed in red letters on every advertising contract a clause providing that the contract should become void in the event of hostile legislation, and he boasted how he had used this as a club in a case where an Illinois legislator had, as he put it, attempted to hold him up for three hundred dollars on a strike bill.

"I thought I had a plan better than this," said Mr. Cheney to his associates, "so I wrote to about forty papers and merely said: 'Please look at your contract with me and take note that if this law passes you and I must stop doing business.' The next week every one of them had an article, and Mr. Man had to go."

So emphatically did this device recommend itself to the



assemblage that many of the large firms took up the plan, and now the "red clause" is a familiar device in the trade.<sup>1</sup>

. . . To what length daily journalism will go at the instance of the business office was shown in the great advertising campaign of Paine's celery compound some years ago. The nostrum's agent called at the office of a prominent Chicago newspaper and spread before its advertising manager a full-page advertisement, with blank spaces in the center.

"We want some good, strong testimonials to fill out with," he said.

"You can get all of those you want, can't you?" asked the newspaper manager.

"Can you?" returned the other. "Show me four or five strong ones from local politicians and you get the ad."

#### FAKE TESTIMONIALS.

That day reporters were assigned to secure testimonials with photographs which subsequently appeared in the full-page advertisement as promised. As for the men who permitted the use of their names for this purpose, several of them afterward admitted that they had never tasted the "compound," but that they were willing to sign the testimonials for the joy of appearing in print as "prominent citizens." . . .

#### MEDICAL JOURNALS ALSO.

One might expect from the medical press freedom from such influences. The control is as complete, though exercised by a class of nostrums somewhat differently exploited, but essentially the same. Only "ethical" preparations are permitted in the representative medical press, that is, articles not advertised in the lay press. Yet this distinction is not strictly adhered to. "Syrup of figs," for instance, which makes widespread pretense in the dailies to be an extract of the fig, advertises in the medical journals for what it is, a preparation of senna. Antikamnia, an "ethical" proprietary compound, for a long time exploited itself to the profession by a campaign of ridiculous extravagance, and is to-day by the extent of its reckless use on the part of ignorant laymen a public menace. Recently an article announcing a startling new drug discovery and signed by a physician was offered to a standard medical journal, which declined it on learning that the drug was a proprietary preparation. The contribution returned to the editor with an offer of payment at advertising rates if it were printed as editorial reading matter, only to be rejected on the new basis. Subsequently it appeared simultaneously in more than twenty medical publications as reading matter. There are to-day very few medical publications which do not carry advertisements conceived in the same spirit and making much the same exhaustive claims as the ordinary quack "ads" of the daily press, and still fewer that are free from promises to "cure" diseases which are incurable by any medicine. Thus the medical press is as strongly enmeshed by the "ethical" druggers as the lay press is by Paine, "Dr." Kilmer, Lydia Pinkham, Dr. Hartman, "Hall" of the "red clause" and the rest of the edifying band of life-savers, leaving no agency to refute the megaphone exploitation of the frauds. What opposition there is would naturally arise in the medical profession, but this is discounted by the proprietary interests. . . .

#### THE DOCTORS ARE INVESTIGATING.

The physicians seem to have awakened, somewhat tardily, indeed, to counter-attack. The American Medical Association has organized a Council of Pharmacy and Chemistry to investigate and pass on the "ethical" preparations advertised to physicians, with a view to listing those which are found to be reputable and useful. That this is regarded as a direct assault on the proprietary interests is suggested by the protests, eloquent to the verge of frenzy in some cases, emanating from those organs which the manufacturers control. Already the council has issued some painfully frank reports on products of imposingly scientific nomenclature; and more are to follow.

. . . Legislation is the most obvious remedy, pending the enlightenment of the general public or the awakening of the journalistic conscience. But legislation proceeds slowly and always against opposition, which may be measured in practical terms as \$250,000,000 at stake on the other side. I note in the last report of the Proprietary Association's annual meeting the significant statement that "the heaviest expenses were incurred in legislative work." Most of the legislation must be done by states, and we have seen in the case of the Hall catarrh contract how readily this may be controlled. . . .

1. The following is the exact wording of the clause referred to: "It is mutually agreed that this contract is void, if any law is enacted by your state restricting or prohibiting the manufacture or sale of proprietary medicines."

#### A POSTOFFICE REPORT.

That the advertising and circular statements circulated through the mails were materially and substantially false, with the result of cheating and defrauding those into whose hands the statements came;

That, while the remedies did possess medicinal properties, these were not such as to carry out the cures promised;

That the advertiser knew he was deceiving;

That in the sale and distribution of his medicines the complainant made no inquiry into the specific character of the disease in any individual case, but supplied the same remedies and prescribed the same mode of treatment to all alike.

Should the department apply these principles to the patent medicine field generally, a number of conspicuous nostrums would cease to be patrons of Uncle Sam's mail service.

Some states have made a good start in the matter of legislation, among them Michigan, which does not, however, enforce its recent strong law. Massachusetts, which has done more, through the admirable work of its State Board of Health, than any other agency to educate the public on the patent medicine question, is unable to get a law restricting this trade. In New Hampshire, too, the proprietary interests have proven too strong, and the Mallonee Bill was destroyed by the almost united opposition of a "red-clause" press. North Dakota proved more independent. After Jan. 1, 1906, all medicines sold in that state, except on physicians' prescriptions, which contain chloral, ergot, morphin, opium, cocain, bromin, iodine, or any of their compounds or derivatives, or more than 5 per cent. of alcohol, must so state on the label. When this bill became a law the Proprietary Association of America proceeded to blight the state by resolving that its members should offer no goods for sale there. . . .

Many dangerous and health-destroying compounds will escape through sheer inconspicuousness. I can touch on only a few of those which may be regarded as typical: the alcohol stimulants, as represented by peruna, Paine's celery compound, and Duffy's pure malt whisky (advertised as an exclusively medical preparation); the catarrh powders, which breed cocain slaves, and the opium-containing soothing syrups, which stunt or kill helpless infants; the consumption cures, perhaps the most devilish of all, in that they destroy hope where hope is struggling against bitter odds for existence; the headache powders, which enslave so insidiously that the victim is ignorant of his own fate; the comparatively harmless fake as typified by that marvelous product of advertising and effrontery, liquozone; and, finally, the system of exploitation and testimonials on which the whole vast system of bunco rests, as on a flimsy but cunningly constructed foundation.—Excerpts from *Collier's Weekly*, Oct. 7, 1905.

## Correspondence

### Spirochaeta Pallida in the Lesions of Syphilis.

SAN FRANCISCO, Oct. 2, 1905.

To the Editor:—Since Schaudinn and Hoffmann described a fine corkscrew-like organism in the lesions of syphilis in May of this year various confirmatory reports have been published on the continent of Europe and in England, but as yet I have seen no reports of the demonstration of the organism in this country. It, therefore, seems proper to report the finding of the *Spirochaeta pallida* in two cases of untreated secondary syphilis which have lately been under observation in this hospital.

The *S. pallida* was demonstrated in a smear made from a papule located on the patient's back, that is, as far away from the mouth, anus and genitals as it was possible to get, in order to avoid the spirobacteria which normally occur in those regions. In the second case the smear was made from a mucous patch in the mouth. Both preparations showed many organisms, there being frequently two or even three in a field.

Schaudinn and Hoffmann used the Giemsa modification of the Romanowsky stain in their work; but, as that was not obtainable in this market, I used the Romanowsky stain as modified by Wright, and used it in exactly the same way as it is used for malarial blood, except that it remained on the slide for twenty-four hours at room temperature. This gave very clear and satisfactory pictures.

In one case of ulcerating epithelioma and in nine cases of syphilis which had been actively treated the organism was not to be found.

This fact, that in treated cases the organism can not be



shown, is, to my mind, a strong argument for its etiologic importance. The conditions are, therefore, just the same as in another protozoan disease, namely, malaria, where the first dose of quinin causes the parasites to disappear.

The *S. pallida* can not very well be mistaken for anything else when we remember that it is an extremely fine corkscrew spiral, which is only seen with high magnification; I have used a four Lietz ocular and twelfth objective and the very brightest possible illumination and wide open diaphragm. It shows no structure whatever, and nothing but its form can be made out.

The Post Hospital, Presidio.

F. F. RUSSELL.

### Behring's Alleged Cure for Tuberculosis.

FORT DODGE, IOWA, Oct. 8, 1905.

To the Editor:—Another tuberculosis congress has just adjourned. Like the one which was held in London in 1900, it has been noted principally for a sensation which comes from Berlin. Koch very prematurely laid down his views that bovine tuberculosis was practically free from danger to man. In all probability he was wrong, but it has taken six years, and perhaps ten, to prove him wrong, while the tuberculous cow quietly nips the grass and distributes her bacillus-laden milk to the homes throughout the world.

And now comes Behring with a view which may or may not be right, because it is wholly untried. And if Koch was right at London, then Behring is necessarily wrong now, for his very first premise is based on the assumption that human and bovine tuberculosis are identical. Behring says that his method is still untried on man. Hence, his announcement is premature and can be productive only of harm, for all things will now wait until the truthfulness or error of his theory is made known. The wide movement of associations similar to the Iowa Association for the Study and Prevention of Tuberculosis will be checked necessarily, for the reason that the people will have reason to hope that such an effort may be unnecessary. Philanthropists will hesitate, legislatures that would have taken decisive action this winter will be deterred, and everything will wait while Behring proves that he is either right or wrong, what should have been done before his sensational announcement at Paris was made.

That he withholds his secret for a year, and according to the press interviews, for the purpose of making money out of his discovery, is not altogether commendable on his part. Were it anyone but Behring, the commercial feature of the announcement would force itself on us.

J. W. KIME.

## Association News

### NEW MEMBERS.

List of new members of the American Medical Association for the month of September, 1905:

#### ALABAMA.

Borden, J. P., Greensboro.  
Harkness, R. B., Birmingham.

#### ARKANSAS.

Niehuss, H. H., Wesson.

#### ARIZONA.

Gustetter, A. L., Nogales.  
Wylle, Win, Phoenix.

#### CALIFORNIA.

Clark, Thos. J., Berkeley.  
Fowler, C. W. J., Santa Clara.  
Jackson, F. F., Oakland.  
Ladd, I. B., Stockton.  
Mackay, J. G., Towle.  
Shorb, J. B., Los Angeles.  
Taylor, R. G., Los Angeles.

#### COLORADO.

Johnson, B. L., Denver.

#### IDAHO.

Ormsby, O. C., Rexburg.

#### ILLINOIS.

Allen, L. R., Forrest.  
Albrecht, C. A., Chicago.  
Bowe, F. O., Chicago.  
Buechner, Fred E., Chicago.  
Baumgarth, H. R., Chicago.  
Banker, E. W., Aurora.

Clinch, J. H. M., Danville.  
Chamberlin, B. H., Chicago.  
Eikenbary, C. F., Chicago.  
Egan, Dan, Chicago.  
Gorr, C. W., Chicago.  
Hartman, F. S., Chicago.  
Hancock, J. L., Chicago.  
Hayes, H. M., Peoria.  
Krumholz, S., Chicago.  
Layton, E. N., Chicago.  
Lamb, O. C., Chicago.  
Meling, N. C., Chicago.  
Menclewski, S. W., Chicago.  
Swift, B. F., Chicago.  
Seufert, E. C., Chicago.  
Scouller, J. D., Pontiac.  
Simons, C. J., Chicago.

#### INDIANA.

Bramkamp, A. L., Richmond.  
Charlton, F. R., Indianapolis.

#### INDIAN TERRITORY.

Leeds, A. P., Chickasha.  
Plumlee, R. S., Broken Arrow.

#### IOWA.

Benson, H. W., Glenwood.  
Pfannebecker, Wm., Sigourney.

#### KANSAS.

Adams, C. S., St. John.  
Candler, Fred, Bonner Springs.  
Schenberger, S. W., Industry.

#### KENTUCKY.

Beard, E. F., Lexington.  
Bristow, P. M., Kettle.  
Bowling, W. W., Canmer.  
Gardner, A. E., Morgantown.  
Holloway, T. C., Lexington.  
James, P. E., Morgantown.  
Kash, O. S., Moorefield.  
Williams, J. D., Catlettsburg.  
Wright, J. R., Louisville.

#### MARYLAND.

Roth, C. E., Edgewood.  
Warner, R. A., Baltimore.

#### MASSACHUSETTS.

Achorn, J. W., Boston.  
Bigelow, C. E., Leominster.  
Bonney, R., E. Boston.  
Brennan, J. J., Worcester.  
Colt, H., Pittsfield.  
Derby, G. S., Boston.  
Franz, Adolph, Holyoke.  
Fallon, M. F., Worcester.  
Fitzgerald, C. P., Worcester.  
Gibson, R. F., Somerville.  
Harriman, D. E., S. Hadley Falls.  
Hastings, J. W., Feeding Hills.  
Hubbard, J. C., Holyoke.  
Kimpton, A. R., Somerville.  
Kenyon, H. J., Worcester.  
McFee, W. D., Haverhill.  
Mayberry, F. E., Boston.  
Pomeroy, W. H., Springfield.  
Rice, C. H., Fitchburg.  
Souther, W. T., Worcester.  
Thompson, J. J., Webster.  
Whittle, J. A., Wakefield.  
Ward, R. J., Worcester.

#### MICHIGAN.

Blgg, A. H., Detroit.  
Struve, C. P., Hudsonville.  
Tallman, C. A., Weston.  
Tower, L. H., Centerville.

#### MINNESOTA.

Aylmer, A. L., Minneapolis.  
Belsheim, A. G., Altkin.  
Binder, G. A., St. Paul.  
Chapman, T. L., Duluth.  
O'Connor, J. V., St. Paul.  
Schultz, F. W., Waltham.

#### MISSISSIPPI.

Bullitt, J. B., Oxford.  
Watkins, McD., Natchez.

#### MISSOURI.

DeLamater, H., Kidder.  
Burkhardt, E. A., Kansas City.  
Gayler, W. C., St. Louis.  
Green, John, St. Louis.  
McDonald, C., Kansas City.  
Todd, T. B., Richards.  
Winter, J. H., Parkville.

#### MONTANA.

Polndexter, F. M., Dillon.

#### NEBRASKA.

Foote, E. C., Pauline.  
Scott, M. J., Omaha.

#### NEVADA.

Pope, G. F., Battle Mountain.

#### NEW HAMPSHIRE.

Parker, D. W., Manchester.

#### NEW YORK.

Barabnl, G., New York.

#### OHIO.

Ayers, F. E., Celina.  
Axline, J. H., Lancaster.  
Brown, E. D., Cleveland.  
Boone, A., Englewood.  
Biskind, I. J., Cleveland.  
Bunn, R. A., Dayton.  
Collins, Chas., Lima.  
Collier, E. M., Pemberville.  
Cowgill, W. W., Cleveland.  
Doolittle, W. F., Cleveland.  
Francis, John, Hamilton.  
Haning, H. C., Dayton.  
Hegner, C. F., Cincinnati.

Hoskins, J. M., Marion.  
Harding, C. L., Bellevue.  
Igo, C. W., Payne.  
Kopfstein, F. T., Cleveland.  
Khoun, Edwin, Cincinnati.  
Kendell, H. W., Covington.  
Kimbell, O. W., Toledo.  
Kennedy, N. B., Findlay.  
Keator, W. B., Findlay.  
Linaweaver, —, Findlay.  
Morgenstern, A. F., Cincinnati.  
Maetke, Hugo, Dayton.  
McCarty, I. F., Galena.  
MacLachlan, N. L., Findlay.  
Norris, O. L., Deshler.  
Pollock, Robt., Cleveland.  
Pugh, F. H., Bryan.  
Price, W. H., Stony Ridge.  
Patton, W. V., Springfield.  
Ryall, G. W., Wooster.  
Relly, D. G., Dayton.  
Rudy, A. S., Lima.  
Saunders, O. H., Findlay.  
Stove, F. A., Bowling Green.  
Sackett, S. C., Fremont.  
Stukey, J. M., Lancaster.  
Tupper, E. L., Ottawa.  
Trece, I. H., Findlay.  
Walker, R. S., Toledo.  
Warner, O. N., Conneaut.  
Wilson, J. G., Colerain.  
Zbinden, Theo., Toledo.

#### OKLAHOMA.

Lee, C. E., Ripley.  
Ney, L. A., Keokuk Falls.

#### PENNSYLVANIA.

Buringer, C. I., Pittsburg.  
Brush, H. L., Conneaut Lake.  
Burdick, W. P., Mt. Jewett.  
Goeltz, F. A., Erle.  
Kalb, G. B., Erie.  
Katherman, F. C., Safe Harbor.  
Lowry, W. J., Carbondale.  
Myers, E. R., Ursina.  
Moore, W. M., Garrett.  
Wills, T. E., Pottstown.

#### PORTO RICO.

Frost, Carrle A., San Juan.  
Porto Rico.

#### RHODE ISLAND.

Burnett, H. W., Providence.

#### SOUTH CAROLINA.

Sheldon, W. A., Liberty.

#### TENNESSEE.

Padget, W. D., Ooltewah.

#### TEXAS.

Burleson, S. J., Fredonia.  
Beckman, P. W., Beaumont.  
Brookes, R. C., Waelder.  
Ellis, W. M., Blooming Grove.  
Kinsell, B., Dallas.  
Lee, L. L., Thorndale.

#### WASHINGTON.

Adams, E. M., Arlington.  
Harvey, F. C., Spokane.  
Power, I. N., Cle Elum.  
Redon, L. H., Seattle.  
Tetreau, Thomas, No. Yakima.  
Wells, H. R., No. Yakima.

#### WEST VIRGINIA.

Edgell, A. M., Smithville.  
McConihay, J. M., Charleston.  
Woodville, J. B., Fayette.

#### WISCONSIN.

Beebe, L. W., Superior.  
Blumer, Edw., Monticello.  
Bechtol, C. O., Madison.  
Cook, E. H., Dale.  
Johnson, Fred, No. Freedom.  
Peairs, R. P., Milwaukee.  
Peck, W. W., Darlington.  
Stevens, J. V., Jefferson.  
Webb, E. O., Beaver Dam.  
Winchester, W. H., Sheboygan.

#### WYOMING.

Harrison, F. H., Evanston.  
Swigart, I. R., Laramie.

For Dandruff.—Barie directs to rub the hairy scalp every night with a 1 to 30 solution of mercuric chlorid in alcohol. Bronson prescribes an ointment of ammoniated mercury 20 grains, calomel 40 grains, and petroleum one ounce. Apply once or twice daily. This, he says, is excellent in simple dandruff, and should be combined with an occasional shampoo.—*Denver Medical Times.*



## Marriages

MERRITT B. HOOK, M.D., to Miss Hattie De May, at Cheyenne, Wyo.

J. A. GIBBS, M.D., to Miss Grace L. Hastings, both of Suffield, Conn., October 4.

HAROLD HARGRAVES, M.D., Maywood, Ill., to Miss Leila Lines of Chicago, October 4.

WILLIAM H. PAULEY, M.D., to Miss Emma Wagner, both of St. Louis, September 27.

JOHN DUNN, M.D., Delphos, Iowa, to Miss Mary Secrest of Downey, Iowa, September 26.

WILLIAM O. LUBKEN, M.D., to Miss Mamie Speedy, both of Johnstown, Pa., September 28.

EDWIN D. PERKINS, M.D., to Miss Emma N. Sheed, both of Washington, D. C., September 26.

MICHAEL W. HARRINGTON, M.D., Indian Orchard, Mass., to Miss Catherine Pero, September 27.

WATSON LOVELL WASSON, M.D., to Miss Pearl Belle Randall, both of Waterbury, Vt., October 11.

BENJAMIN HOUSTON BROWN, M.D., to Miss Ethel Emily Corrigan, at New York City, October 4.

HAROLD G. GARWOOD, M.D., Madrid, N. M., to Miss Annie Johnson, at Evansville, Wis., recently.

HUGH SCOTT, M.D., Pawnee, Okla., to Miss Willie Wallace of Dustin, I. T., at Guthrie, Okla., October 1.

EUGENE CLYDE UNDERWOOD, JR., M.D., Louisville, Ky., to Miss Juanita Robinson of New Orleans, July 6.

SAMUEL D. FLAGG, M.D., St. Paul, Minn., to Miss Jennie E. Cotton of Fort Worth, Texas, September 27.

JOHN BLAKESLY HENRY, M.D., Scandia, Kan., to Miss Annette Sullivan of Kansas City, Mo., October 4.

ELISHA I. HOOK, M.D., to Miss Nellie Montgomery, both of Chicago, at Los Angeles, Cal., September 20.

EVERETT HUMPHREYS MORGAN, M.D., Eagle, W. Va., to Miss Elizabeth Bovie of Gallipolis, Ohio, October 11.

WILLIAM R. SMITH, M.D., Grand Ridge, Ill., to Miss Katherine R. Burgett of Keithsburg, Ill., October 3.

THOMAS H. MACKIN, M.D., Wilkes-Barre, Pa., to Miss Helen Roselle Salmon of Reading, Pa., September 27.

JOHN DEVINNE SINGLEY, M.D., to Miss Mara Margarette Johnston, both of Pittsburg, Pa., September 26.

J. NEWTON HATHAWAY, M.D., Chicago, to Miss Natalie L. Yonkers, at Grand Rapids, Mich., September 30.

FRANKLYN EVANS MCCLURE, M.D., Neenah, Wis., to Miss Marjorie Agnes Barkley of Detroit, September 26.

TODD POPE WARD, M.D., Mount Vernon, Ill., to Miss Virginia Griffith Watkins of Owensboro, Ky., September 26.

HORACE P. WILSON, M.D., Mediapolis, Iowa, to Mrs. Josephine McClay Gardner of Delavan, Ill., September 28.

FORREST T. ESTILL, M.D., Colorado Springs, Colo., to Mrs. Emma Harselle Cockrell, at Denver, Colo., September 30.

HARRY F. TAYLOR, M.D., Mount Clemens, Mich., to Mrs. Maude Embrey Riviere of Columbus, Ohio, September 24.

ALBERT L. MCGOUGH, M.D., Detroit, to Miss Mary Cabray Wortley of Ypsilanti, Mich., at Dalton, Ga., September 25.

HARRY H. HEWETT, M.D., Sioux Falls, S. D., to Miss Jeanette B. Leshner of Philadelphia, at Chicago, September 20.

FRED F. SOVEREIGN, M.D., Three Oaks, Mich., to Miss Ellen Horn of New Buffalo, Mich., at La Porte, Ind., September 27.

WALLER STEPHENS HERNDON, M.D., Lexington, Ky., to Miss Emily Shields Cunningham of Mount Sterling, Ky., October 11.

PAUL B. DUNN, M.D., Mahanoy City, Pa., to Miss Theresa Meary, formerly of Mahanoy Plane, at Philadelphia, September 29.

WASHINGTON BERRY GROVE, M.D., U. S. Navy, to Miss Elizabeth Pascoe Thomson, at Summit Point, Jefferson County, W. Va., October 11.

## Deaths

John Arvid Ouchterlony, M.D. University of the City of New York, 1861, of Louisville, Ky., died October 9, aged 67. He was born in Sweden, June 24, 1838, his father being an officer in the Swedish army. During the Civil War he entered the service of the United States as surgeon and served throughout the war. Prior to 1863 he was in the hospitals in and about

Louisville, where he afterward made his home. In 1864 he was appointed lecturer on clinical medicine in the University of Louisville. In 1865 he resigned from the Army. He was one of the founders of the Louisville Medical College, assuming the chair of materia medica, therapeutics and clinical medicine, which position he held until the autumn of 1876. He later was professor of practice of medicine in the Kentucky School of Medicine, of therapeutics and clinical medicine in the University of Louisville, and later of medicine and clinical medicine in the same institution, which position he held up to the time of his death. He was president of the Kentucky State Medical Association in 1890. In 1892 the University of Notre Dame conferred on him the degree of doctor of laws. In 1890 he was elected a member of the Swedish Antiquarian Society, and in 1891 he received from the Swedish Royal Academy the Linnæan gold medal. He was knighted by King Oscar of Sweden, and Pope Leo XIII conferred the knighthood of the Order of St. Gregory the Great on him. Dr. Ouchterlony was a close student and has contributed much of value to medical literature. His library was one of the largest in the state, embracing books on high-class literature, medicine and the sciences. At the time of his death Dr. Ouchterlony was a member of the board of trustees of the Public Library of Louisville.

Henry Darwin Didama, M.D. Albany (N. Y.) Medical College, 1846, dean of the Syracuse University College of Medicine, died at his home in Syracuse, N. Y., October 4, aged 82. He was born at Perryville, N. Y., June 17, 1823, the son of Dr. John Didama. He received his early education at the Cazenovia Seminary and studied medicine at Geneva Medical College and at Albany Medical College. He first settled for practice in Romulus, N. Y., and in 1851 moved to Syracuse, where he has since resided. He was a member and president of the city, Onondaga county and district medical societies, was a member of the Boston Gynecological Society, of the New York State Medical Association and of the International Medical Congress, held in Philadelphia in 1876. Since 1873 he has been professor of principles and practice of medicine and dean of the faculty of the Syracuse University College of Medicine. He served for eight years as surgeon of the Fifty-first Infantry, and later as surgeon of the Sixth Division N. G. S. N. Y. He was coroner of Syracuse and Onondaga County for twelve years. Dr. Didama was for many years a member of the American Medical Association and was one of its wheel-horses. He was vice-president in 1875 and chairman of the Section on Practice of Medicine in 1884. He always stood for that which was best, whether in science or in conduct, and few men had wider influence for good.

Thomas Milton Todd, M.D. Miami Medical College, Cincinnati, 1869; a member of the American Medical Association, and of the Medical Society of the State of California, for forty years a practitioner of East Auburn, Cal.; for thirty years physician and surgeon to the Placer County Hospital; local surgeon of the Southern Pacific System; county physician of Placer County; several times president of the Placer County Medical Society, died at his home in East Auburn, September 15, from pneumonia, after an illness of six days, aged 66.

Edwin D. Steel, M.D. The College of Medicine and Surgery of the University of Minnesota, Minneapolis, 1889, a member of the American Medical Association; for many years secretary of the Minnesota Valley Medical Society; president of the Blue Earth County Medical Society; one of the most prominent and popular practitioners of southern Minnesota, died at his home in Mankato, September 21, from uremia, after a long illness, aged 43. Members of the local medical society acted as pall-bearers at his funeral.

Norman Bruce Scott, M.D. New York University, New York City, 1844, great grand nephew of Dr. Upton Scott, Annapolis, first president of the Medical and Chirurgical Faculty of Maryland, 1799-1801; a member of the Medical and Chirurgical Faculty of Maryland, and the first president of the Washington County Medical Society; a practitioner of Hagerstown, Md., for half a century, died at his home in that city, September 21, from senile debility, after an illness of three weeks, aged 86.

Joseph Maurice Sheahan, M.D. University of Paris, France, 1879, a member of the American Medical Association, Massachusetts Medical Society and the Norfolk South District Medical Society; one of the most prominent and best beloved practitioners of southeastern Massachusetts; a member of the Quincy school board from 1886 to 1896, and chairman of the local board of health in 1888, died at his home in Quincy, September 21, after an illness of a year, aged 52.

George Gregory Carroll, M.D. University of Buffalo (N. Y.) Medical Department, 1870, a member of the New York State



Medical Association, Monroe County Medical Society, Rochester Pathological Society and the Hospital Medical Society; one of the managers of the State Industrial School in 1891; twice a member of the board of education, died at his home in Rochester, September 25, from cerebral hemorrhage, after a short illness, aged 62.

**Robert Ormiston, M.D.** University of Pennsylvania, 1858, of Brooklyn, member of Kings County Medical Society and Brooklyn Pathological Society; consulting physician to Brooklyn Hospital, and surgeon of the Thirteenth New York Volunteer Infantry in the Civil War, died suddenly from heart disease at Stamford, N. Y., September 19, aged 71.

**Charles I. Roseberry, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1860, for several years a member of the Easton (Pa.) board of health; surgeon in the Army during the Civil War, died at his home in Easton from injuries sustained by a fall several months before, aged 74.

**Little C. Osmun, M.D.** Medical Department of Columbian College, Washington, D. C., 1860, surgeon in the Army during the Civil War, and in charge of the Alexandria (Va.) General Hospital, died at the residence of his daughter in Washington, D. C., September 15, from senile debility, aged 73.

**Edgar Worthington, M.D.** University College of Medicine, Richmond, Va., 1898, a member of the American Medical Association and a prominent and successful young practitioner of Wilmington, Del., died at his home in Wilmington, from nephritis, after a long illness, September 21, aged 35.

**Charles Sumner Boynton, M.D.** University of Buffalo (N. Y.) Medical Department, 1857, surgeon of the Sixty-seventh Indiana Volunteer Infantry in the Civil War, died at his home in Indianapolis, September 23, from uremia, after an illness of three years, with nephritis, aged 72.

**Albert E. Powell, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1892, for six years health officer of Grant County, Ind., died at his home in Marion, September 21, from tuberculosis, after an illness of three years, aged 36.

**Julius J. Vaughan, M.D.** College of Physicians and Surgeons in the City of New York, 1860, for forty-five years a practitioner of Springville, Mich., died at his home in that place, September 17, after an illness of several weeks, from hepatic abscess, aged 72.

**Jeremiah B. Spiers, M.D.** Cincinnati College of Medicine and Surgery, 1877, formerly of Port Royal, Ky., but for two years a resident of Texarkana, Texas, died suddenly from cerebral hemorrhage in the office of the health officer of that city, September 12.

**Edward E. Rhoads, M.D.** Jefferson Medical College, Philadelphia, 1905, secretary of the Hare Medical Society of that institution, died at his home in Reading, Pa., after an illness of two weeks, aged 31.

**Dennis Buell Wiggins, M.D.** Cincinnati, Ohio, 1846, for more than fifty years a practitioner of Buffalo, N. Y., died at his home in West Seneca, N. Y., September 23, after an illness of ten days, aged 83.

**William L. Philips, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1874, of Mount Washington, Pa., died in Uniontown, Pa., September 9, from brain disease, aged 60.

**John Briscoe, M.D.** The College of Physicians and Surgeons, Baltimore, 1894, of Baltimore, died at St. Agnes' Hospital in that city, September 16, from tuberculosis, after a short illness, aged 43.

**Adolph J. Vidal, M.D.** Medical College of the State of South Carolina, Charleston, 1869, died at his home in Gainesville, Fla., September 21, from consumption, after a lingering illness.

**James O. H. Burnham, M.D.** Medical School of Maine at Bowdoin College, Brunswick, 1880, died suddenly at his home in Bar Mills, Maine, September 21, from heart disease, aged 63.

**George H. Somerville, M.D.** Cleveland (Ohio) Medical College, 1879, was found dead in his office in Cleveland, September 16, it is supposed from an overdose of chloroform, aged 48.

**A. C. D. Bradshaw, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1867, died at his home in Fairfield, Iowa, September 25, after a long illness, aged 59.

**George Edwin Ricker, M.D.** Pennsylvania, 1878, city physician of Minneapolis, Minn., in 1903, died suddenly at his office in that city, September 23, from heart disease, aged 51.

**Henry Batdorf, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1876, died after an illness of eight months, at his home in Bethel, Pa., aged 56.

**Samuel A. Whitehorn, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1852, died at his home in Los Angeles, Cal., September 6, aged 78.

**John H. Switzer, M.D.** Detroit College of Medicine, 1903, was shot and fatally wounded by his wife at Leaton, Mich., September 20, and died a few hours later, aged 42.

**Edwin R. Armistead, M.D.** University of Louisville (Ky.) Medical Department, 1853, an old citizen of Prescott, Ark., died at his home in that place, September 23.

**Millard B. Sheldon, M.D.** Northwestern University Medical School, Chicago, 1895, died at his home in Lake Geneva, Wis., September 9, from valvular heart disease.

**George W. Neiberger, M.D.** College of Physicians and Surgeons of Kansas City, Kan., 1897, died at his rooms in Kansas City, Mo., September 15, aged 36.

**James H. Teasley, M.D.** Louisville (Ky.) Medical College, 1890, died recently at his home in Eastman, Ga., and was buried at Hartwell, September 2.

**Joseph M. Turney, M.D.** University of Nashville (Tenn.) Medical Department, 1871, died at his home in Statesville, Tenn., September 11, aged 63.

**John S. Berry, M.D.** Medical College of Ohio, Cincinnati, 1881, died suddenly at his home in Spartanburg, Ind., and was buried September 23.

**Benjamin Bowman, M.D.** New York, 1865, died at his home in Chambersburg, Pa., September 20, after an illness of several months, aged 68.

**O. A. Risley, M.D.** Cleveland (Ohio) Medical College, 1854, died recently at his home in Cameron, Mo., and was buried September 10.

**Eduardo Perugini, M.D.** University of Naples, Italy, 1885, died suddenly at his home in New York City, September 22.

**John C. Russ, M.D.** Cincinnati, 1882, died at his home in Circleville, Ohio, from rheumatism, September 18, aged 53.

**T. Edward Perkins, M.D.** Pennsylvania, 1895, died at his home in Philadelphia, September 16, aged 38.

**Gladys Colt Puckett, M.D.** Missouri, 1903, died at her home in Kansas City, Mo., September 16, aged 26.

## Book Notices

**HUMAN PHYSIOLOGY.** Prepared with Special Reference to Students of Medicine. By J. H. Raymond, A.M., M.D., Third Edition. Thoroughly Revised. 444 Illustrations, Some in Colors, and 4 Full-page Lithographic Plates. Cloth. Pp. 687. Price, \$3.50 net. Philadelphia: W. B. Saunders & Co. 1905.

The author has evidently gone over every page of the book for the purpose of revision and to bring every subject treated up to date. Hence, while the original book was issued some thirteen or fourteen years ago, since which time immense strides have been made in certain departments of physiology, the volume before us represents the physiology of to-day.

**THERAPEUTICS, Its Principles and Practice.** H. C. Wood, M.D., LL.D. Twelfth edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the United States Pharmacopeia. H. C. Wood and H. C. Wood, Jr., M.D. Cloth. Pp. 907. Price \$5.00 net. Philadelphia: J. B. Lippincott Co., 1905.

The twelfth edition of this work on therapeutics has been thoroughly revised and conforms to the new Pharmacopeia which became official September 1. Nearly a hundred new drugs have been added to those included in previous editions and many chapters have been entirely rewritten. In the preface the authors call attention to the fact that hyoscin is classed with the delirifacients, camphor with the cardiac stimulants, and earbolic acid with the disinfectants. While considerable attention is given to anesthesia, general, local and spinal, the only reference to the scopolamin—morphin method—which is receiving so much attention at present, is in a footnote.

**PHYSICAL DIAGNOSIS.** R. C. Cabot, M.D. Third Edition, revised and enlarged: 245 illustrations. Cloth. Pp. 577. Price, \$3.00. New York: Wm. Wood & Co.

The striking feature of Cabot's work is its individuality. The personality of the author is felt on every page. One is impressed with the fact that what is stated are the views of the author gained by personal experience, and not those of some one else. That this is his aim he makes clear by his statement in the preface: "All that I have described I know by prolonged use." The book "makes no attempt to describe technic processes with which the writer has no personal familiarity, and gives no space to the description of tests which he believes to be useless."



Herein lies, we believe, its strength and weakness. It is weak in that it is too incomplete to be put into the hands of the undergraduate to be used as a book of reference. In other words, the work is too incomplete as a guide, since all consideration of laryngoscopy, cystoscopy, ophthalmoscopy, several chemical tests of the gastric contents and of the urine, etc., are omitted. There is no misrepresentation, however, no sailing under false colors; the preface distinctly states these limitations.

The strength of the book is in its honesty and courage of the writer and his shrewdness as a clinical observer and student. While not fanatically iconoclastic, he is healthfully skeptical. Weight of authority does not prove to him the truth of a statement. He must prove it by his own experience; and if this is at variance with the authority, well and good; the result goes down in print just the same. Now, it is this critical spirit, this frank discussion of facts, this honest admission of his personal limitations, that livens the pages and makes one feel that one is having a heart-to-heart talk with the author; and we nod mental approval many a time as some fact is stated in a clear way, and we realize that we have inwardly believed the same, though we had never dared to say it aloud before. For the practitioner, then, the book is highly entertaining and instructive, as well as for the student, if rightly used. It is full of valuable hints.

While from the artistic point of view some of the illustrations might be improved, and while one or two are hardly intelligible, the great majority have a distinct value. The chapters on the physical diagnosis of diseases of the heart, lungs, pleura and blood are especially strong.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

### DETERIORATION OF APOMORPHIN HYDROCHLORATE.

CHICAGO, Oct. 6, 1905.

*To the Editor:*—In the *Alkaloidal Clinic*, July, 1905, Dr. M. G. Price, Mosheim, Tenn., reports a case in which he gave a sample of apomorphin *eleven years old* to a child of four who was choking to death with croup. About 1/25 of a grain was injected into the thigh and caused prompt vomiting "without depression or any untoward symptoms." Dr. Price says: "The apomorphin was very much changed in color, being of a very dark green; it had been in my hypodermic case for more than eleven years, having been purchased and placed there in 1893. Its age had no deteriorating effect on it either by way of strength or poisonous effect." I also have a letter from Dr. T. H. Williams, Germantown, Tenn., who was called on to treat a case of strychnin poisoning, the patient having taken 30 grains of this drug in mistake for quinin, and presenting the symptoms characteristic of strychnin poisoning. His life was saved by the injection, hypodermically, of 1/10 grain of apomorphin, taken from a bottle of this drug which he had had in his case for five years. The drug caused prompt emesis. The doctor says: "The apomorphin had long since run the color scale and had gotten out of the greens." The claim that apomorphin, in turning greenish to green, loses material efficiency or becomes to any practical extent poisonous, is an absurd fallacy.

W. C. ABBOTT, M.D.

ANSWER.—When so delicately organized a substance as apomorphin, already a decomposition product, changes color it is safe to assume that it has undergone some marked change, chemical as well as physical. That it is well to be on the safe side in the administration of all medicines is even stronger than assumption, since it is in fact the only safe rule. The apparent fact that there is evidence that apomorphin was prompt and effective as an emetic does not in the least prove that it is either safe or wise to use any drug when in the least decomposed.

### MENDEL'S INTRAVENOUS THIOSINAMIN INJECTIONS.

SCRANTON, PA., Oct. 6, 1905.

*To the Editor:*—Please let me know the formula for the intravenous injection of thiosinamin as practiced by Dr. Mendel.

R. B. MCKEAGE.

ANSWER.—Mendel does not give his formula, but uses a Merck preparation of thiosinamin, which contains 0.13 gm. of sodium salicylate with 0.2 gm. of thiosinamin "fibrolysin," in each bulb. As a rule, he makes an intramuscular injection in the buttocks, and states that not a trace of infiltration was visible on patients who had received thirty or more of these injections in the same

spot. His communications have been published in the *Therapie der Gegenwart*, No. 8, and in the *Münch. med. Wochft.*, No. 4. He is known as the "apostle of intravenous medication," and his assertions have been criticised by other writers, so that his last articles have been mostly polemic. He declares that others have applied the thiosinamin in cases not at all adapted for this drug, hence their failures to obtain results as good as his.

## State Boards of Registration

### COMING EXAMINATIONS.

Board of Medical Examiners of State of Texas, San Antonio, October 17. Secretary, T. T. Jackson, San Antonio.

State Board of Medical Examiners of New Jersey, Trenton, October 17-18. Secretary, E. L. B. Godfrey, Camden.

State Board of Health of Illinois, The Great Northern Hotel, Chicago, October 18. Secretary, J. A. Egan, Springfield.

Louisiana State Board, New Orleans, October 20-21. Secretary, F. A. Larue, New Orleans.

State Board of Health of Kentucky, Louisville, October 24. Secretary, J. N. McCormack, Bowling Green.

**Wyoming September Report.**—Dr. S. B. Miller, secretary of the Wyoming Board of Medical Examiners, reports the written examination, held Sept. 6-8, 1905. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per
		Grad.	Cent.
University of Minnesota	.....	(1904)	82.3
University of Oregon	.....	(1905)	81.4
Ohio Medical University	.....	(1905)	81.8

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending October 7:

Glennan, James D., surgeon, leave of absence extended ten days. Marrow, Charles E., asst.-surgeon, ordered from Fort Sheridan, Ill., to Chicago, Ill., for temporary duty as attending surgeon and examiner of recruits.

Truby, Albert E., asst.-surgeon, granted leave of absence for one month.

Gapen, Nelson, asst.-surgeon, granted leave of absence for one month, with permission to visit the United States.

Juenemann, George F., asst.-surgeon, granted leave of absence for fifteen days.

Cowper, Harold W., asst.-surgeon, granted leave of absence for one month on surgeon's certificate of disability to take effect on his discharge from treatment at the Army General Hospital, Presidio of San Francisco, Cal.

Williamson, Llewellyn P., asst.-surgeon, resignation of commission accepted to take effect December 15.

Lyster, Theodore C., Wadhams, Sanford H., Robbins, Chandler P., Rhoads, Thomas L., Gilchrist, Harry L., Lyster, William J. L., Persons, Elbert E., Bispham, William N., asst.-surgeons, advanced to rank of captain October 3.

Newlove, George, contract surgeon, left Fort Oglethorpe, Ga., on leave of absence for two months.

Davis, Oscar F., contract surgeon, left Fort DeSoto, Fla., for duty at Jefferson Barracks, Mo.

Ashburn, James K., contract surgeon, returned to Fort Lincoln, N. D., from duty with troops in the field.

Adair, George F., contract surgeon, left Fort Wadsworth, N. Y., and arrived at Sea Girt, N. J., for temporary duty.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending October 7:

Moore, J. M., P. A. surgeon, orders of September 27 modified; ordered to the Navy recruiting rendezvous, New York, N. Y.

Blackburn, T. C., acting asst.-surgeon, detached from duty with naval recruiting party No. 2, and ordered to the naval recruiting rendezvous, St. Louis.

Bradley, G. P., medical director, detached from the Naval Hospital, Washington, D. C., October 15, and ordered to the Navy Yard, Portsmouth, N. H., and to additional duty in command of the Naval Hospital at that place.

Dickinson, D., medical director, detached from the Navy Yard, Portsmouth, N. H., and ordered to command the Naval Hospital, Washington, D. C.

Law, H. L., surgeon, retired, detached from the naval recruiting rendezvous, Boston, and ordered home.

McCullough, F. E., surgeon, detached from the *Pensacola* and ordered to the *Albatross*.

Huntington, E. O., surgeon, detached from the *Albatross* and ordered to Washington, D. C., and report at the Navy Department.

Stuart, A., P. A. surgeon, detached from the Naval Hospital, Chelsea, Mass., and ordered to the *Pensacola* and to additional duty at the Naval Training Station, San Francisco.

Michels, R. H., asst.-surgeon, ordered to the Naval recruiting rendezvous, Kansas City, Mo.



Elmore, B., asst.-surgeon, detached from the Naval Hospital, Washington D. C., December 1, and resignation accepted, to take effect same day.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 4:

Gassaway, J. M., surgeon, to rejoin station at St. Louis.  
Greene, J. B., P. A. surgeon, to proceed to Port Gibson, Miss., and report to Surgeon Guiteras for special temporary duty.  
McMullen, John, P. A. surgeon, to proceed to Gulfport, Miss., for instructions relative to special temporary duty at or near Scranton, Miss.  
Amesse, J. W., P. A. surgeon, relieved from temporary duty at Cairo, Ill., and directed to proceed to New Orleans, and report to Surgeon J. H. White for special temporary duty.  
Berry, T. D., P. A. surgeon, to proceed to Gulfport, Miss., for instructions relative to special temporary duty at or near Scranton, Miss.  
McLaughlin, A. J., P. A. surgeon, relieved from duty at Hamburg, Germany. Proceed to Berlin, Germany, for duty.  
Collins, G. L., asst.-surgeon, granted leave of absence for one day under paragraph 191 of the regulations.  
Stewart, W. J. S., acting asst.-surgeon, leave of absence granted for thirty days from October 1, revoked.  
Scott, E. B., pharmacist, granted leave of absence for seven days under paragraph 210 of the regulations.  
Hall, L. P., pharmacist, granted leave of absence for two days from September 9, under paragraph 210 of the regulations.

#### BOARD CONVENED.

Board to meet at Tampa Bay Quarantine Station, October 3, for physical examination of Chief Engineer H. L. Boyd, R. C. S. Detail for the board: Asst.-Surgeon R. E. Ebersole, chairman. Acting Asst.-Surgeon G. H. Atree, recorder.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from September 30 to October 9:

#### SMALLPOX—UNITED STATES.

California: Los Angeles, Sept. 16-23, 1 case; San Francisco, 1 case.  
Illinois: Chicago, Sept. 23-30, 1 death; Galesburg, Sept. 23-30, 3 cases.  
Ohio: Cincinnati, Sept. 22-29, 1 case.  
Pennsylvania: Altoona, Sept. 23-30, 1 case.  
Washington, Tacoma, Sept. 16-23, 1 case.

#### SMALLPOX—FOREIGN.

Africa: Cape Town, Aug. 19-26, 1 case.  
Brazil: Pernambuco, Aug. 1-15, 215 deaths.  
China: Hongkong, Aug. 19-26, 1 case, 1 death; Neuchwang, Aug. 5-12, 3 cases.  
Ecuador: Guayaquil, Sept. 5-12, 4 cases.  
France: Marseilles, Aug. 1-31, 1 death; Paris, Sept. 8-16, 22 cases, 5 deaths.  
Gibraltar: Sept. 3-10, 2 cases.  
India: Madras, Aug. 19-25, 8 cases.  
Mexico: Dona Cecilia, Sept. 25, 1 case.  
Russia: Odessa, Sept. 9-16, 4 cases, 1 death.  
Spain: Barcelona, Sept. 1-10, 1 death; Cadiz, Aug. 1-31, 1 death.

#### YELLOW FEVER—UNITED STATES.

Florida: Brent, Sept. 26, 1 case, 1 death; Pensacola, Aug. 29-Oct. 1, 158 cases, 26 deaths.  
Louisiana: Ascension Parish, to Sept. 28, 77 cases, 4 deaths; Assumption Parish, to Oct. 2, 38 cases; Avoyelles Parish, to Sept. 29, 11 cases, 2 deaths; East Baton Rouge Parish, to Sept. 30, 7 cases, 1 death; East Carroll Parish, to Oct. 2, 278 cases, 33 deaths; Iberville Parish, to Oct. 3, 30 cases, 8 deaths; Jefferson Parish, to Oct. 2, 428 cases, 46 deaths; Lafourche Parish, 381 cases, 47 deaths; Madison Parish, 307 cases, 18 deaths; Natchitoches Parish, to Sept. 27, 80 cases, 5 deaths; Orleans Parish, New Orleans, July 21-Oct. 4, 3,083 cases, 398 deaths; Plaquemines Parish, to Oct. 2, 54 cases, 8 deaths; Rapides Parish, to Oct. 3, 24 cases; St. Bernard Parish, 24 cases, 3 deaths; St. Charles Parish, to Sept. 29, 117 cases, 16 deaths; St. John the Baptist Parish, to Sept. 27, 151 cases, 14 deaths; St. Mary Parish, to Oct. 3, 756 cases, 29 deaths; St. Tammany Parish, to Oct. 2, 7 cases, 1 death; Tensas Parish, to Sept. 30, 6 cases; Terrebonne Parish, to Oct. 1, 271 cases, 13 deaths.

Mississippi: Gulfport, Aug. 15-Oct. 1, 90 cases, 2 deaths; Gulf Quarantine, July 22-Sept. 16, 65 cases, 1 death; Hamburg, Sept. 15-Oct. 1, 39 cases, 5 deaths; Mississippi City, Aug. 22-Oct. 1, 65 cases; Moss Point, to Oct. 1, 3 cases; Natchez, 62 cases, 3 deaths; Port Gibson, Sept. 27-Oct. 1, 4 cases; Rosetta, Oct. 1, 2 cases; Scranton, Sept. 29-Oct. 1, 17 cases; Vicksburg, Aug. 30-Oct. 1, 81 cases, 7 deaths.

#### YELLOW FEVER—FOREIGN.

Guatemala: Zacapa, Sept. 21, 18 to 20 deaths.  
Honduras: Chamelicon, Sept. 8, 6 cases; Choloma, 1 case; San Pedro, Sept. 8, 2 cases, 2 deaths.  
Mexico: Coatzacoalcas, Aug. 19-26, 2 cases; Vera Cruz, Sept. 9-23, 4 cases, 2 deaths.

#### CHOLERA—INSULAR.

Philippine Islands: Manila, Aug. 23-25, 21 cases, 17 deaths.

#### CHOLERA—FOREIGN.

China: Shanghai, Aug. 19-26, present.  
India: Bombay, Aug. 31-Sept. 5, 1 death.  
Japan: Yokohama, Aug. 13-20, 1 case, 1 death.

#### PLAGUE—INSULAR.

Philippine Islands: Manila, Aug. 12-19, 1 death.

#### PLAGUE—FOREIGN.

India: Bombay, Aug. 31-Sept. 5, 43 deaths; Karachi, Aug. 27-Sept. 3, 22 cases, 17 deaths.  
Japan: Formosa, Aug. 1-31, 2 cases; 2 deaths.

## Society Proceedings

### COMING MEETINGS.

New York State Medical Association, New York City, October 16-19.  
Medical Society of Virginia, Norfolk, October 24-27.  
Hawaiian Territorial Medical Society, Honolulu, November 4.  
American Academy of Medicine, Chicago, November 9-10.  
Kentucky State Medical Association, Louisville, Oct. 18-20.

### AMERICAN ASSOCIATION OF RAILWAY SURGEONS.

*Second Annual Meeting, held in Chicago, Oct. 4-6, 1905.*

The President, DR. JOHN E. OWENS, Chicago, in the Chair.

The association has three kinds of membership—permanent members, delegates and associate members. The association is cosmopolitan and has members from Canada and Mexico.

Forty papers were read, most of them being freely discussed. One session was taken up in discussing the care of fractures; conservative treatment of compound fractures; wiring as a means of securing the best results in compound fractures of the long bones; direct fixation in fractures; fractures of the vertebral column involving the cord and its treatment; fractures of the spine; Colles' fractures; fractures of the patella and fractures of the leg. An interesting feature of the meeting was a lantern-slide exhibit of anopheles and stegomyia mosquitoes, with remarks on how freight and passengers are handled from the quarantined city, New Orleans, Dr. L. Sexton, New Orleans. The papers presented were of a higher order and more scientific than usual; the various subjects were treated by men with extensive and varied experience.

#### Officers Elected.

The following officers were elected for the ensuing year: President, Dr. Richard W. Corwin, Pueblo, Colo.; vice-presidents, Dr. J. H. W. Meyer, La Porte, Ind.; Dr. S. L. McCurdy, Pittsburg, Pa.; Dr. Bacon Saunders, Fort Worth, Texas; secretary, Dr. H. B. Jennings, Council Bluffs, Iowa; treasurer, Dr. T. B. Lacey, Council Bluffs, Iowa; editor, Dr. Louis J. Mitchell, Chicago; members of the executive board, Dr. W. S. Hoy, Wellston, Ohio, and Dr. J. R. Hollowbush, Rock Island, Ill.

The time and place of the next meeting are to be decided by the executive board.

### MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

*Annual Meeting, held in Scranton, Sept. 26-28, 1905.*

*(Continued from page 1110.)*

President, DR. ADOLPH KOENIG, Pittsburg, in the Chair.

#### Welcome Addresses.

An address of welcome was delivered by the Hon. Alex. T. Connell, mayor of Scranton, in which he stated that, in his opinion, if the laity would observe the established rules of preventive sanitation and hygiene, epidemics and pestilences would be markedly decreased, and that, while the science of medicine was advancing every year, there was more need for the application of the knowledge already laid down.

DR. DANIEL A. CAPWELL delivered the address of welcome on behalf of the Lackawanna County Medical Society. He urged on the general practitioner, practicing in a limited field in the country districts, that his work was an important one, and that the Pasteurs and the Listers must have their underworkers. He gave in some detail the evolution of medicine and the work in that direction by Harvey, Jenner, Pasteur, Lister, Roix and others, and urged the necessity of medical organization as a factor for social, professional and financial advancement.

The following delegates from other states were introduced and each made a few remarks: Dr. W. Blair Stewart, Atlantic City, N. J., delegate from the New Jersey State Medical Society; Dr. Richard H. Gibbons, New York, delegate from the New York State Medical Society, and Drs. Everett J. McKnight and Herman G. Howe, Hartford, Conn., delegates from the Connecticut State Medical Society.



### Election of Officers.

The following officers were elected: President, Dr. William H. Hartzell, Allentown; vice-presidents, Drs. Morgan J. Williams, Scranton; J. W. Bruner, Bloomsburg; Israel Cleaver, Reading, and George G. Harman, Huntingdon; secretary, Dr. C. L. Stevens, Athens; assistant secretary, Dr. Theodore B. Appel, Lancaster; treasurer, Dr. George W. Wagoner, Johnstown; trustees for three years, Drs. Thomas D. Davis, Pittsburg; George W. Guthrie, Wilkesbarre; George D. Nutt, Williamsport; for two years, Dr. T. M. Livingston, Columbia.

The next annual meeting will be held at Bedford Springs, Sept. 13-15, 1906.

### Spinal Analgesia in Shock.

At the meeting of the surgical section Dr. ERASMUS V. SWING, Coatesville, the second vice-president, presided. The address in surgery was delivered by Dr. JONATHAN M. WAINWRIGHT, Scranton, who detailed the results of operations on dogs. The results invariably were that the blood pressure decreased in cases in which spinal analgesia had not been employed, but either increased or remained stationary in cases in which it had been employed. He also referred to clinical cases in which he had been able to demonstrate these same points, which, he felt, showed the value of this remedy in those cases where the danger from shock was great.

### The Results of Surgical Treatment of Exophthalmic Goiter.

Dr. B. FARQUHAR CURTIS, New York, prefers thyroidectomy to sympathectomy, having performed 11 operations by the latter method, with two deaths from acute thyroidism, one relapse after nine months, and only one complete cure five years after the operation. He reported three thyroidectomies with good results, and cited among the advantages of this method the fact that the scars are not so high up in the neck, and local anesthesia can be used, and a preliminary ligation should be made.

### Focal Diagnosis of Operable Tumors of the Cerebrum.

Dr. CHARLES K. MILLS, Philadelphia, called attention to the advancement made during the last decade, and cited as among the causes of failure in the past difficulty and imperfection in localization, smallness of openings, and the relative imperfections of surgical technic. He divided the cerebrum into the following areas: prefrontal, motor, auditory, midfrontal, parietal and occipital, and stated that the tumor was more apt to develop in the region in control of the upper extremities than of the lower.

### Surgery of Operable Lesions of the Cerebrum.

Dr. CHARLES H. FRAZIER, Philadelphia, stated that failure is often due to delay. Particularly is this true of Jacksonian epilepsy. Trephining of any kind is liable to produce adhesions. He did not favor silver foil between the dura and the skull, citing a case in which it had produced convulsions, which ceased after the removal of the silver foil. Indiscriminate exploratory craniectomies were not advised, but in cases of infantile encephalitis, if the lesion could not be localized, he felt it to be justifiable. Early diagnosis is now more frequent, the percentage of cases in which the tumor is found is larger, and the mortality is not so high as formerly. These things he attributed largely to better methods of diagnosis and larger openings. In many instances palliative operations are justifiable.

### Treatment of Trifacial Neuralgia by Complete Avulsion of the Peripheral Branches of the Trigeminal Nerve.

Dr. ERNEST LAPLACE, Philadelphia, stated that he believed the recurrence in many of these cases after excision of the inferior dental nerve was due to regeneration, illustrating this by the regeneration of nerve growths in other parts of the body. He called attention to the fact that whenever the nerve was twisted or squeezed tightly it would break, and stated that in order that the nerve might be extracted as far as possible he had used a specially curved hemostatic forceps, and by twisting the nerve very slowly, taking as much as a minute or two minutes for a single twist, he was able to extract it almost entire; the whole operation requiring from 12 to 20 minutes.

The first session of the medical section was called to order September 26 by the second vice president, Dr. Walter S. Stewart, Wilkesbarre.

### The Nostrum Evil and the Council on Pharmacy.

Dr. SOLOMON SOLIS COHEN, Philadelphia, delivered the address in medicine. Therapeutics, he said, must depend on diagnosis, as a matter of course, and diagnosis on pathology. The physician must be thoroughly grounded in the fundamental branches back of pathology, but, after all, it is the question of treatment which occupies the principal portion of attention in connection with the physician's relations with the patient. He deplored the position of the profession toward therapeutics which permits the growth of the nostrum evil. The pages of advertising medical journals offer sure cures for various affections which it should be the physician's duty to know how to manage. All are familiar with the visits of the polite gentleman of comprehensive ability, able to instruct the physician how to treat the sick and to enable him to do so with the samples of the particular firm he represents. This credulity on the part of the profession, Dr. Cohen thought, was based on two elements in medical teaching: the one in the teaching of therapeutics in the medical college; the other in the preliminary education of medical students. He called attention to the valuable work being done by the Council on Pharmacy and Chemistry of the American Medical Association in weeding out a number of fraudulent preparations offered to physicians—and employed by them—and asked that the profession encourage the good work. Regarding medical education, he declared that back of the collegiate degree the man entering on the study of medicine should have a thorough training in the laboratory in physics, in chemistry and in biology. The highly complex organism called man, he stated, was made up of many elements, variously constructed, having complex relations with each other, each one exerting certain influences on all the surrounding elements, the whole bound together in connection with the nervous system. To start at the bedside to study the derangements of this complex organism, and the means by which such derangements could be remedied, Dr. Cohen declared, was as ridiculous as the attempt of the astronomer to study an eclipse of the sun without the basic principles of ordinary arithmetic.

### Present and Former Methods of Treating Children.

Dr. L. EMMETT HOLT, New York, said that the treatment of sick children exhibited two subjects of importance: dietetics and general hygiene. The nutrition of the child should be the first step in treatment. In intestinal disorders he regarded as essential factors evacuation, diet and rest. In the chronic disturbances in children beyond infancy, a careful dietary was, in his opinion, the only treatment giving permanent results. Unless severe lesions were present, the majority of the other measures he considered useless. The neuroses he attributed to impaired nutrition. In pneumonia the greatest effort should be made to put the body into a condition of resistance. The question of fresh air, he believed, was too much ignored. In bronchopneumonia fresh air that is not cold should be received and he has found valuable in treatment the alternate use of two rooms with the air first warmed. His emphasis was on the fact that a better understanding of disease and a broader knowledge of children show that the greatest need is a more scientific and intelligent knowledge of practical dietetics and a better understanding of the condition of health and growth. Of greatest importance in acute and chronic disease, he believed, was the knowledge of how best to preserve the nutrition of the body and thus take advantage of Nature's wonderful power of recuperation in early life.

### The Diagnosis of Pneumonia and Empyema in Children, with an Analysis of 200 Cases.

Dr. ALFRED HAND, of Philadelphia, referred to certain differences in the chest of a child compared with that of an adult, calling attention especially to the harsh character of the normal breath-sounds, the so-called "puerile" and to the soft character of the bronchial breathing in the child, the latter resembling in intensity the normal broncho-vesicular breathing in adults. He urged frequent examinations of plain, as well as of the doubtful, cases. A small or even large area of consolidation, he stated, might give bronchial breathing and increased vocal resonance, while palpation and percussion showed nothing. Sometimes all of the physical signs might be negative, the diagnosis then resting on fever, increased respiration rate



above forty per minute, and leucocytes, the latter serving to differentiate the sickness from typhoid fever. Lumbar puncture might be necessary to exclude meningitis.

The possibility of the development of empyema, he said, should always be borne in mind, as well as the possibility of the presence of pus in the chest without causing fever, displacement of the apex-beat of the heart, absence of vocal fremitus and resonance and bronchial breathing. In an analysis of 200 cases an interesting feature was the greater tendency of the pneumonia to affect the right lung.

#### DISCUSSION.

DR. J. P. CROZER GRIFFITH, Philadelphia, opened the discussion of these two papers and was in thorough accord with Dr. Holt. He believed that even a slight modification of milk given the baby to be a very important matter. He advocated the starvation treatment of acute indigestion, and in returning to the milk diet he would err rather on the side of returning too slowly than too promptly. In the management of choreic cases his plan is to put them to bed for rest and quieting of the nervous system. In the treatment of pneumonia he agreed entirely with Dr. Holt, believing the object not to be to cure the pneumonia, but to take care of the baby.

Referring to the paper of Dr. Hand, he believed that the more experience one had with the diagnosis of pneumonia and empyema in children the easier many things become, and, on the other hand, the more difficult. Auscultation and percussion, in his opinion, play a minor part compared with the general symptomatology presented by the baby.

DR. J. H. MCKEE, Philadelphia, said that in the diagnosis of empyema he thought the first essential was to be on the lookout for it, and that the nature of the empyema, as well as its presence, should be determined. In the differential diagnosis of pneumonia and empyema he considered that the resistance offered to the pleximeter in percussion of great importance. Experimental puncture he considers of value both diagnostically and prognostically.

(To be continued.)

#### AMERICAN PUBLIC HEALTH ASSOCIATION.

*Proceedings of the Twenty-third Annual Meeting, held in Boston, Sept. 25-29, 1905.*

(Continued from page 1111.)

#### Experiments on Purification of Boston Sewage.

MR. C. E. A. WINSLOW and MR. EARL B. PHELPS, Boston, read a paper concerning this work carried on for the past three years. Under the conditions of their experiments, crude Boston sewage has been successfully filtered through a 2-foot bed of sand, having an effective size of 0.12 mm., at a rate of 0.4 million gallons per acre per day, divided into four doses in the 24 hours. Their sand effluents were bright, clear and well purified. The depth of the beds can not safely be reduced below two feet. Preliminary septic treatment for 12 and 24 hours does not improve the effluents obtained by sand filtration, although it makes the care of the surface of the beds somewhat easier.

Crude Boston sewage may be treated on single contact beds of fine stone (one-half inch diameter) at a rate of about 1.2 million gallons per acre per day. The effluent, though only partially purified, is generally stable and could be discharged into water without any tendency to create a nuisance. The beds clog rapidly, and the surface needs much attention. A more practical process is the treatment by the double contract system, in primary beds of two-inch material and secondary beds of half-inch material. Such a combination yields a fairly well purified and stable effluent at a rate, on the combined double system, of about 0.7 million gallons per acre per day with beds six feet deep. Such a system does not clog seriously. Primary beds slowly decrease in capacity, but a portion of the loss may be made good by resting for a period. Preliminary septic treatment enables the beds to maintain a higher capacity, but produces an effluent so difficult to purify that their efficiency is interfered with.

The most practical method of those which they have studied

appears to be the treatment of crude sewage in double contact beds.

#### Industrial Wastes and Their Sanitary Significance.

MR. MARSHALL O. LEIGHTON, Washington, D. C., said that though trades wastes have been studied for many years the efforts have been directed toward the recovery of valuable ingredients rather than the treatment of objectionable polluting materials. So successfully has this work been conducted that in some industries the by-products have become more valuable than the original product. Not infrequently the by-product wastes are as objectionable as the original wastes.

The disposal of trades wastes has occupied in this country, a sanitary position secondary to that of sewage disposal. There have been only a few investigations, such as the classic of Kinnicutt and Eddy on acid iron wastes, the investigations of the Massachusetts State Board of Health and the U. S. Geological Survey. The problems afforded by trades wastes are often extremely complex and the study thereof should not be ignored. He classified such wastes as those which are putrescible, those which inhibit the reduction or oxidation of putrescible substances; those which silt up streams and produce obstructions. It is not sufficient to say that probably no industrial waste contains the germs of any disease, and therefore, from a purely pathogenic standpoint, that the relation to sanitation is remote. Unstable organic wastes, such as distillery slops, sulphite pulp liquors, soap liquors and creamery effluents, all produce a condition of putrescibility in streams. While this may not be a menace to health, it is certainly included among those reprehensible features common to modern civilization, which have been turned over to the sanitarian for treatment. As a large proportion of this organic matter is nitrogenous, it provides food for the specific germs of water-borne diseases introduced by sewerage systems during longer periods, and it thereby extends their baneful influence. Such wastes, when discharged in large quantities increase the burden of water filtration systems and in some cases render them inefficient. If sanitarians would be truly successful in their efforts to purify streams they must give their attention to the subject of industrial wastes, and study them with the object of recovering valuable by-products. In so doing they will enlist the co-operation of the commercial and industrial world, which finally and inevitably controls the situation.

#### The Pollution of Shellfish.

MR. GEORGE A. SOPER, PH.D., New York, stated that it should be more generally known that typhoid fever may be caused by eating oysters and other shellfish which have been grown or immersed in sewage-polluted water. The shellfish industries on the American coast are enormous in extent and value. In some places grave sanitary evils occur. With little exception there is no sanitary supervision over any part of the business of collecting, handling and selling the shellfish. Extensive reforms should be initiated if the public is to be protected against the transmission of typhoid and other enteric diseases which are now disseminated in this way, and the interests of the fishermen and others engaged in the shellfish industry are not to be unnecessarily jeopardized. The nature of these reforms is not a matter of question so much as the method of bringing them about. The remedy proposed is a careful study of the conditions and a wide publication of the principles on which the corrective measures must be based and applied.

#### Sanitary Analysis Versus Sanitary Inspection.

MR. R. B. DOLE, U. S. Geological Survey, Washington, D. C., drew attention to the value of sanitary survey in regions where the potability of water is in question. Detailed local information generally determines the potability of water better than the data afforded by present analytical methods; therefore boards of health should discontinue the examination of samples of water except those collected in their own study of specific water problems. Funds for water investigation may profitably be expended in the collection of data regarding the natural conditions and industrial and municipal developments which aid in the consideration of water-supply problems. Analytical results and other illustrative material are quoted from a recent investigation of surface waters in Minnesota, conducted



jointly by the U. S. Geological Survey and the Minnesota State Board of Health.

#### Copper Sulphate in Public Water Supplies.

MR. H. W. CLARK, Boston, dealt with some aspects of the use of copper sulphate in public water supplies. Experiments to test the bactericidal action of copper were made at the Lawrence Experiment Station. Comparing the action of other metals with copper, he finds that the bacteria increase more and decrease slower when in contact with copper than when in contact with tin, lead, zinc, iron or aluminum. The effectiveness of the metals in destroying *Bacillus coli* appears to be zinc, iron, copper, tin, aluminum and lead, in the order named.

#### Experiments on the Storage of Typhoid Infected Water in Canteens.

MR. EARL B. PHELPS, Boston, reported that in practically all his experiments a number of typhoid organisms lived through the 24 hours. The progressive killing of the organisms was rapid at first, decreasing rapidly toward the end of the period. The indications are that the surviving organisms are hardy, and would not be entirely killed by a much longer exposure. The efficiency of the canteen falls off rapidly when in continuous use, even with a comparatively soft water. The value of the canteen in actual practice would, therefore, be conditioned on its being frequently cleaned, preferably with oxalic acid, a practice which would doubtless be neglected in actual field or camp service. The value of the canteen as a disinfecting agent is seriously affected by clay in the water, and is practically destroyed by the use of waters high in alkaline carbonates.

#### Pathology and Pathogenesis of Smallpox.

DR. W. T. COUNCILMAN, Boston, presented a general consideration of the pathology and pathogenesis of this disease. He discussed the cause, mode of infection, mode of production of exanthema, immunity, secondary infection and concluded with an experimental study of smallpox in monkeys.

#### The Pathology and Etiology of Human Vaccinia.

DR. WILLIAM T. HOWARD, JR., Cleveland Ohio, discussed this subject under three heads:

##### 1. MATERIAL AND METHODS.

The material on which this study is based consisted of twenty-three pieces of skin excised from successful vaccinations on twelve men, each of whom was vaccinated in three places at the same time. The vaccinated areas were excised at various periods, from 48 to 168 hours after vaccination. As controls, skin was also excised from three unsuccessful vaccinations. The skin was fixed in Zinker's fluid, cut in paraffin, and sections were stained by various methods, eosin and methylene blue and Borrell's stain giving the best results.

##### 2. PATHOLOGY.

The skin lesions of vaccinia closely resemble those of variola, but are in general rapider and surer. Contrary to the current belief, destruction of the epidermis and the formation of the vesicle are well nigh complete in 48 hours after vaccination. The vesicle at this stage is composed of a reticular meshwork of coarser and finer strands of a hyalin fibrinoid material, formed from degenerated epithelial cells. The meshes of the reticulum contain fluid and fine, granular material, and but few cells. Swelling and reticular regeneration comprise the earliest cytoplasmic changes. Later, larger and smaller hyalin droplets appear and the cells are transformed into hyaline fibrinoid material. Invasion of one epithelial cell by another, a conspicuous occurrence in vaccinia of the rabbit's cornea, is also seen here.

Nuclear degeneration is marked and takes several forms, the earliest being (1) swelling with increased prominence of the reticulum, (2) massing of the chromatin in the center and along the nuclear rim, and (3) wrinkling and retraction of the nuclear rim. Later, the nuclei become condensed and shriveled, and often fragment, with the dispersion of chromatin dust in the cytoplasm and inter-cellular spaces.

Comparatively few blood corpuscles are found in the epidermis at this stage. The internal changes in the corium con-

sist of edema, leucocytic infiltration and swelling and proliferation of endothelium of the blood and lymph vessels. These changes are much more marked than in the corresponding stage of variola.

In the seventy-two-hour lesion all the epithelial cells below the horny layer are necrotic or have disappeared. The spaces of the reticulum are smaller and the strands coarser. In the middle and deeper parts of the lesion fibrin and leucocytes are prominent. The leucocytes are of the large and smaller mononuclear and eosinophilic types. On each side of the original vesicle, early secondary vesicles (analogous to those occurring at the margins of the variola vesicle) are conspicuous. Here the earliest changes in the epithelium may be traced; they are identical with those seen at the margins of the forty-eight-hour lesion. The changes in the corium are still more intense.

From seventy-two hours on, the chief additional changes are (1) condensation of the reticulum into a dense hyaline material, containing broken-down leucocytes, (2) further necrosis of epithelial cells at the margins of the primary vesicle, and (3) persistence of the inflammatory changes in the corium.

The scab or crust is formed by the condensation of the reticulum and exudate of the vesicle. It is thrown off on the renewal of the epidermis, the cells of which proliferate at the margins of the lesion and push their way under the scab.

##### 3. ETIOLOGY OF VACCINIA.

No bacteria were found in any of the lesions. There were found in the early lesions structures corresponding to the primary cytoplasmic stage of *Cytoryctes variolæ*, as described by Councilman and his co-workers and by Howard and Perkins in the early stages of variola and by Tyzzer in vaccinia of the calf and rabbit. There was entire absence of the secondary cytoplasmic and the intranuclear stages of *Cytoryctes variolæ*, which is in accord with Tyzzer's experience in vaccinia of the calf and rabbit. Therefore, we believe that vaccinia of man, the calf and rabbit is caused by the primary cytoplasmic stage of *Cytoryctes variolæ*, which is to be regarded as the asexual cycle of this organism.

(To be continued.)

#### ASSOCIATION OF HOSPITAL SUPERINTENDENTS.

*Seventh Annual Conference, held in Boston, Sept. 26-29, 1905.*

The President, DR. GEORGE H. M. ROWE, in the Chair.

##### The Addresses.

At the first meeting, greetings were extended by DR. DAVID W. CHEEVER, the Nestor of Boston physicians, and by REV. EDWARD EVERETT HALE, D.D., to which DR. HENRY M. HURD, Baltimore responded.

DR. CHEEVER briefly reviewed the changes in hospital construction and management as observed by him during the past forty years. He advocated the open-air treatment of tents or piazzas wherever possible and that the superintendent be a physician. The growth of hospitals may be explained by the increase in the apartment houses, destroying real home life in its best sense, and in the constant stream of poor immigrants.

DR. HALE paid high compliments to the Civil War hospitals, in whose activities he was much associated. The hospital is always a better place for the average person who is ill than the home.

PRESIDENT ROWE, in his annual address, said that Nevada is the only state which has no public, private or ecclesiastical hospital. Income from paying patients is about 43 per cent. of the cost of maintenance. Enlargement of city hospitals should be by branch establishments, simple and inexpensive, to be seen in conjunction with the more perfectly equipped central hospital. Co-operation between the various neighboring hospitals is the demand of the times. A step in this direction is the Massachusetts Round Table of men superintendents and the Association of Nurses.

SIR HENRY C. BURDETT, K.C.B., London, England, spoke of the influence of Boston in introducing, by its trustees and physicians, the spirit of home life into hospitals. Proper keeping of accounts is very important; \$20,000 is the small-



est amount which will adequately support a hospital bed, and less sums for this purpose should be discouraged. The great expense incurred in building many hospitals, when not necessary, is deplorable.

The afternoon session included papers by leading architects on hospital construction.

#### Hospital Expenditures.

Wednesday morning the topic of the session, presided over by DR. GEORGE P. LUDLAM, was hospital expenditures. The chairman pointed out how rapidly these had increased and agreed that many patients, whose prospects were formerly hopeless, are now cured. But he raised the question whether all of this great increase was justifiable.

DR. MOSES COLLINS urged the need of courses in hospital construction, economics, etc., in medical schools.

DR. S. S. GOLDWATER explained the reasons for much of this increased cost as due to building materials, fire proofing, air space, heating and ventilating. All are necessary nowadays and expensive. Concluding, he urged the value and economy of branch convalescent hospitals.

DR. THOMAS HOWELL believes in the small hospital. Better physicians and nurses graduate from them. Decorative features should be eliminated from hospital construction.

The afternoon was spent in visiting the hospitals of Boston.

The evening session was held in the Boston Medical Library. The first paper was by DR. JOHN M. HURD on "John Howard's Observations on Hospitals, 1773-1790," and his emphasis and that of DR. HENRY C. BURDETT, who followed him, was placed on the need of more sympathetic treatment of consumptives. Ordinary precautions and intelligent co-operation render the domestic treatment of the disease reasonably safe.

#### Medical Libraries in Hospitals Unnecessary.

"Medical Libraries in Hospitals" were described, using that at the Massachusetts General Hospital as a basis, by MRS. GRACE WHITING MEYERS and strongly approved by DR. GEORGE P. LUDLAM. The space can be better used. In the New York Hospital the space once used for a library is now used for a reception room for nurses.

Thursday morning's session was presided over by DR. RENWICK R. ROSS. The topics discussed were "Multiple-storied Buildings for Hospitals in Cities," by DR. A. J. OCHSNER; "Refuse Destroyers and Disinfectants," by DR. JOHN H. MCCOLLOM; "Cold Storage and Refrigeration in Hospitals," by DR. ROSS; "The Utilization of Hospital Waste," by DR. S. A. WASHBURN, and "Engine-room Economics," by JEREMIAH C. LONG, chief engineer of the Boston City Hospital.

#### Hospital Accounts.

The afternoon session, presided over by DR. C. IRVING FISHER, was devoted to a discussion of hospital accounts.

DR. FISHER suggested that there should be some common system of schedules and statistics and that all reports should be arranged on business principles.

DR. JAMES R. CODDINGTON favored such an arrangement as will permit of comparison of per capita cost in different institutions.

MISS MAUD BANFIELD read a paper on "Hospital Statistical Tables as to Classification of Patients."

#### American Nurses' Pension Fund Proposed.

The final session was held on Friday morning. A question-box, conducted by DR. JOHN M. PETERS, chairman of the session, occupied much of the time.

The only long speech was by SIR HENRY C. BURDETT, K.C.B., who gave an account of the "British National Nurses' Pension Fund," founded by his efforts in 1888 with \$300,000 as a start. It now amounts to fully \$5,000,000 and, together with annual gifts, makes available a revenue of \$450,000 annually. Dr. Burdett stands ready to act in the organization of a similar fund here in America if business men will combine and back him. All English trained nurses contribute in their active days to the fund and all are entitled to care or a pension when incapacitated by illness, accident or disease.

#### New Officers.

The following officers were elected: President, Dr. George

P. Ludlam, of the New York City Hospital; vice-presidents, Dr. Renwick R. Ross, Buffalo; Rev. George C. Hunting, St. Mark's Hospital, Salt Lake City, and Miss Mary L. Keith, Rochester City Hospital; secretary, George R. Bailey, Jr., Jefferson Medical Hospital, Philadelphia; treasurer, Reuben O'Brien, General Hospital, Patterson, N. J.

Buffalo is the place for the next meeting, the date being left with the executive committee.

### AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

*Eighteenth Annual Meeting, held at New York, Sept. 19-21, 1905.*

*(Continued from Page 1108.)*

#### Personal Experiences in Myofibroma of the Uterus.

DR. MILES F. PORTER, Fort Wayne, Ind., presented some of the more important facts gained from the treatment and observation of over 125 cases of myofibroma of the uterus. The earlier cases having been seen during a rather exacting general practice, and many of them operated away from home, in private houses, without adequate assistance, accounted for the fact that the records of this part of his work were imperfect. Of the 125 cases, more than 100 were subjected to supravaginal hysterectomy. Two vaginal hysterectomies were done, and in a few cases the tumors were removed by the vagina without opening the peritoneal cavity. No vaginal myomectomies were done in which the abdomen was entered. Myomectomy through the abdomen was done six or eight times only, except cases in which small fibroids were removed during celiotomy for other causes, and these were not considered. Hemorrhage was not so prominent a symptom as was generally thought. In two cases this was the immediate cause of operation, and in one it manifested itself first after establishment of the menopause. Pain, especially during the menstrual period, was the most common symptom. Only one case of pyosalpinx as a complication was seen. In one an eight and one-quarter pound tumor was removed from a four and one-half months' pregnant uterus. Normal labor at term followed, and one child has been born to the mother since without accident. In one case the pregnant uterus was removed for pain, on the theory, which the specimen proved correct, that the woman could neither miscarry nor carry the child to term. The third was operated on because of mild sepsis due to retained fetus. Both recovered.

Women with fibroids are peculiarly liable to infection following labor, miscarriage or menstrual flow. In several cases this danger was the chief indication for operation. Three cases were reported to support this opinion. Rapid growth of fibroids during pregnancy was believed to be more apparent than real. Partial or complete sterility is common in fibroid patients. But one case of malignant degeneration was seen, and only one case died. This was due to the breaking down of a large vaginal tumor, coexisting with a large abdominal tumor. Both were removed through the abdomen. Removal of the vaginal tumor by the vagina by morcellation, and an abdominal hysterectomy later, would probably have saved the patient, who died from the effect of the sepsis from which she was suffering at the time of the operation, combined with the effect of the shock and loss of blood. One case of dermoid of the ovary with multiple fibroids was met with, one practically a pure myoma, and one fibroid of the ovary complicating fibroid of the uterus.

Oöphorectomy for fibroids is not a justifiable operation, as it neither stops the hemorrhage nor the growth of the tumor. The ideal operation for myofibroma will leave the genital tract intact, or as nearly so as possible within reason. The tubes should always be removed when operation renders pregnancy impossible. Healthy ovaries should be left, as should healthy cervixes. Whether to operate through the vagina or through the abdomen may be determined before the operation begins, but the details of the technic should be developed as the operation proceeds. In rare cases the elastic ligature is of service. Twice the bladder was cut, but was immediately repaired, and



no harm resulted. One case had a hemorrhage from a split of the broad ligament, which occurred the night following the operation, as a result of the patient starting violently during a dream. No trouble from silk as ligatures was experienced, but, because of the evidence against it, catgut was substituted as soon as he learned to sterilize the latter by heat.

The death rate of abdominal operations need not be over 2 per cent., and vaginal operations involving the peritoneal cavity should not be above 1 per cent.

#### Unusual Dilatation of Cornual Blood Vessels with Rupture Into Uterus.

DR. FRANK F. SIMPSON, Pittsburg, Pa., reported this interesting case, and stated that apart from their association with neoplasms, vascular changes are not infrequently found when persistent bleeding occurs near the menopause. Arteriosclerosis is rather common; but aneurism, aneurismal varix and varicose veins occurring within the myometrium are rare.

In this instance there was an excessive vascularity of the uterus, with sclerotic arteries and varicose veins. The sclerosis is found in its several forms, varying from a slight nodular infiltration of the intima to complete obliteration. In addition, we have the unusual spectacle of greatly dilated varicose veins, which were the subject of repeated spontaneous rupture with repeated spontaneous closure. In the author's case there was a clinical picture which portrays the perils of this disease in its most serious form. In the well-marked cases that have come under his observation, arteriosclerosis of the uterine vessels has been accompanied by menorrhagia and metrorrhagia, which began between the ages of 38 and 45. They grew more and more pronounced, have resisted medicinal and minor surgical measures, finally endangered life, and have yielded only to hysterectomy. In this case, however, the first symptom was a furious hemorrhage, due to the rupture of a large varicose vein into the uterine cavity. Within two months three other hemorrhages burst on her without warning, and each imperiled her life.

The gross pathologic findings make it clear that without surgical intervention hemorrhage or infection would inevitably have closed the scene within a short while.

#### Primary Bowel Resection Versus Artificial Anus in Strangulated Hernia.

DR. JOHN YOUNG BROWN, St. Louis, limited himself to a discussion of the surgery of those neglected cases in which, at the time of operation, the intestine found in the hernial sac is so damaged that the operator is forced to resort to one of two procedures—the establishment of an artificial anus or a primary bowel resection.

During the last eighteen months he has operated on seven cases of strangulated hernia; four males, three females. In four the hernia was of the inguinal variety and in three of the femoral type. In all, primary resection was done, followed by a radical operation at the hernial site. Of the seven cases, six recovered, and one died. The oldest patient was 70 years, the youngest 20. The duration of strangulation, longest 57 hours, shortest 9 hours. Amount of gut removed, largest four feet; smallest eight inches. Portion of gut involved small bowel. In each case the condition of the bowel was such as to leave no question concerning the advisability of its removal. In all the resection was done through a supplemental abdominal incision, and the anastomosis was made with the Murphy button. The results obtained he attributes to the careful attention to certain points in the operative technique, a neglect of which he believes has been responsible for the high mortality invariably accompanying the surgical treatment of this condition. He described at length the technique which he employs.

#### Etiology of Floating Kidney and Nephropexy Therefor.

The president, DR. HOWARD W. LONGYEAR, Detroit, discussed this in his presidential address. Dec. 17, 1903, while operating on a young girl 16 years of age for appendiceal disease, he accidentally discovered that the right kidney, which was normally placed, could be easily pulled down and held in a firm position of complete prolapse by making traction on the ce-

cum. This led to further observation on the etiology of displaced, loose or floating kidney, both on the cadaver and on the living subject, and afterward, as a result of those observations, to efforts to devise an operation that should have for its object the retention of the kidney in its normal position, as well as the anchoring of the ascending colon in such a manner as to remedy the prolapse of the cecum, which usually obtains in these cases, so that it should not exert further traction on the kidney and through it on the duodenum and renal vessels. The object of the address is to record the results, though unfinished, of these observations. The fact that the kidney in question could be pulled down and held firmly in this position by traction on the cecum and ascending colon was an indication that there exists a more firm and positive attachment of this viscus to the kidney than is generally believed.

After considering the literature of the subject, Dr. Longyear assumed that the kidney of his patient was pulled down by the adhesion of the peritoneal attachment or mesentery of the colon to the fatty capsule of the kidney, and yet the firmness of the attachment was an apparent contraindication. With the object of testing this point, three cases of floating kidney were operated on. The peritoneal cavity was entered through the usual incision in the loin, the redundant mesentery gathered up and attached to the incision of the fascia close to the twelfth rib at the upper angle of the wound. In the first case of extreme ptosis, having had Dietel's crisis for several years, the case with which the operation was performed, the amount of slack mesenteric tissue brought out and attached, and the immediate result which it had of entirely replacing the kidney so it could not be pushed down into the abdomen, were very encouraging.

In the second and third cases, however, in both of which the displacement was less pronounced, there was practically no mesentery, such as was present in the first case, so that the peritoneal fixation seemed to promise less. However, while drawing out the peritoneal attachment of the bowel and making efforts to push the bowel down, away from the kidney, it was noticed in both cases that there was a cord-like structure passing downward from the lower pole of the kidney, which prevented the separation of the kidney and the bowel. This was included with the peritoneal tissue and attached with it. Further investigation of the literature failed to enlighten the author as to the presence of any tendinous prolongation from the lower pole of the kidney, so further investigation was made on the cadaver. The dissection on the cadaver was described at length. The whole upper half of the abdominal parietes being incised and turned downward, the cecum, ascending colon, with hepatic flexure and kidney on the right side, and part of the descending colon, with splenic flexure and kidney on the left side, were removed, the dissection being made from below upward and the organs removed together in such a manner as not to interfere with their normal attachments to each other. On turning the specimens over, the posterior surface of bowel and kidney on each side showed a similar formation of tendinous attachment to each other. This was found to be formed by the gathering together of fine longitudinal fibers from the fibrous network which forms the framework of the fatty capsule. The tendinous ridge, formed by its attachment to the posterior surface of the ascending colon, could be followed easily between the peritoneal reflections down to the margin of the lower peritoneal attachment of the bowel and close to the junction of the ileum—in fact, near the point of the so-called origin in the female subject of the suspensory ligament of the ovary. A specimen illustrating the presence of this phrenocolic ligament was exhibited.

How much of an etiologic factor is this embryologic remnant in the production of displaced kidney? This ligamentous union of the kidney and bowel the author claims is the most important factor in the etiology of nephroptosis.

An operation which he has found the most easy of accomplishment is the fixation of this nephrocolic ligament into the upper angle of the wound without severing it from the colon, and also fastening the redundant mesentery, if it be present, in the lower angle of the wound. The convergence of the framework of the fatty capsule into this ligament makes a structure



of sufficient strength to be depended on to hold the displaced organs, if securely attached to the aponeurotic tissue, preferably where it is thick near the twelfth rib.

#### Intestinal Obstruction.

DR. LEWIS C. MORRIS, Birmingham, Ala., said that delay in operating for the relief of ileus is due to one of two things: (1) Assuming that the diagnosis has been made, the adoption of expectant treatment with the hope that it will relieve the condition or that it will recover spontaneously; or (2) the delay resulting from a failure to make a positive diagnosis.

He reported six cases of intestinal obstruction, and believes that if all such cases could be given the benefit of operation the mortality in this condition would be completely revolutionized. The fact that some cases exist for days and are relieved by operation, leads, in cases in which there is an element of doubt, sometimes to delay in surgical interference until the chances for recovery are materially lessened. Occasionally a positive differential diagnosis is very difficult, but the conditions from which a differentiation can not be positively made are almost invariably equally as imperative in their demand for surgical intervention as would be the existence of an ileus. These conditions were mentioned.

Sudden severe abdominal pain, associated with nausea and vomiting, plus constipation, which does not respond within a few hours to cathartics and stimulating enemata constitute a condition in which the indications for operation are positive. The ability to isolate a distended loop of intestine, the presence of shock and stercoraceous vomiting, go to confirm the diagnosis, but the nature of their presence causes undue delay in operating. The more sudden and violent the storm of symptoms initiating the condition, the more imperative the indications for an early operation. To reiterate, after the diagnosis of ileus has been made, that the adoption of treatment other than surgical, with the hope that it may effect a cure, is utterly unjustifiable, and that procrastination, based on the hope of spontaneous recovery, is absolutely criminal.

#### Diagnosis.

DR. JOHN B. DEEVER, Philadelphia, endeavored to place the matter of laboratory diagnosis in its proper light, showing that it is after all only one form of diagnosis by pathognomonic symptoms. He tried also to make a plea for the more thorough education of medical students in the principles of physical diagnosis and in the knowledge of the natural history of surgical diseases, while at the same time advocating a postponement of laboratory methods until the former have been completely mastered. He endeavored to show the real danger which, as it seems to him, exists of the modern surgeon degenerating into a mere mechanical appliance subject to the controlling mind and will of the laboratory diagnostician. Yet, while above all things discountenancing haste and carelessness in reaching conclusions, and the judicious resort to the therapeutic test of exploratory operations, he pointed out what seems to him the legitimate fields of exploratory incision.

#### Appendicitis Complicating Diagnosis and Treatment of Tumors and Pregnancy.

DR. RUFUS B. HALL, Cincinnati, believes that the diagnosis of appendicitis, when associated with pelvic and abdominal tumors, or in the pregnant woman, has not received the attention on the part of the general profession that the subject deserves. He wishes to call attention more forcibly to the early recognition of the cardinal signs of appendicitis in these cases. It is the common supposition on the part of the general profession that when a patient, known to have an abdominal or a pelvic tumor, is taken suddenly ill with pain in the abdomen, that there is something wrong with the tumor and the cardinal signs of appendicitis are ignored or overlooked.

Dr. Hall then discussed the differential diagnosis of appendicitis complicating fibroid tumors of the uterus and ovarian tumors; differential diagnosis of appendicitis complicating tubal disease; differential diagnosis of appendicitis associated with pregnancy; the treatment of appendicitis complicating fibroid tumors and ovarian tumors and tubal disease; also the treatment of appendicitis associated with pregnancy.

#### Prolonged Abdominal Pregnancy.

DR. C. A. L. REED, Cincinnati, reported cases as follows:

1. Extrauterine pregnancy with extraperitoneal development of gestation; operated on fifteen months after conception by marsupialization and terminating in recovery.

2. Extrauterine pregnancy with retroperitoneal development of gestation, operated on by marsupialization eleven months after conception and ending in recovery.

3. Extrauterine pregnancy with development of gestation within the anterior abdominal wall, complicated with uterine fibroids, operated on four years and nine months after conception, ending in recovery.

Dr. Reed's conclusion was that the placenta presents the chief factor of danger in operation on these cases. In instances in which the fetus is already dead, and in which there are not symptoms of sepsis demanding immediate operation, a delay for a few weeks is desirable, as thereby the vascularity of the placenta will be greatly reduced, if not entirely destroyed. One case indicated that it might persist to an embarrassing degree after six weeks. The operation by marsupialization is recommended, as it avoids hemorrhage, facilitates perfect drainage and places all conditions under control. The importance of the yeast ferment in eliminating attached fragments of placental detritus was emphasized.

#### Observations on the Treatment of Face Presentations.

DR. AUGUSTUS P. CLARKE, Cambridge, Mass., said that typical cases of face presentation are not common. Undoubtedly nearly all cases of such presentation are originally brow positions, but by some irregular uterine contraction and other incidental factors they change to the character of face presentation. If the occiput is anterior in face presentation, natural delivery becomes impracticable. Schatz's method for relief by external manipulation has its advantages as an initial measure. In dolicho-cephalic cases other methods will be demanded. Podalic version will sometimes be successful. In mento-posterior presentation rotation of the chin should be made toward the symphysis pubis. If the child is not dead, and the case is that of mento-anterior presentation, and impaction is taking place, and the maternal pelvis is not too narrow, forceps may be used with benefit. In a mento-posterior presentation, when the case is seen late and the position of the face can not conveniently be changed, and the child is still alive, symphyseotomy offers the best method of procedure for saving both the mother and the child.

#### TRI-STATE MEDICAL ASSOCIATION OF ALABAMA, GEORGIA AND TENNESSEE.

*Annual Meeting, held in Chattanooga, Tenn.,  
Sept. 26-28, 1905.*

DR. WILLIAM H. WILDER, Birmingham, Ala., presided on account of the resignation of the president, Dr. Hugh L. Appleton, Gadsden, Ala., by reason of ill health in his family.

The meeting was called to order by Dr. Young L. B. Abernathy, Hill City, Tenn. Hon. A. W. Chambliss, mayor of Chattanooga, welcomed the association on behalf of the city, and Dr. Edward B. Wise on behalf of the Medical Society of Hamilton County and the city of Chattanooga. The first vice-president, Dr. William H. Wilder, Birmingham, responded to the address of welcome.

#### Papers Presented.

Dr. Thomas G. Miller, Gaylesville, Ala., presented a paper on "Pneumonia and Its Treatment," which evoked spirited discussion. Dr. A. Bennett Cooke, Nashville, Tenn., presented a paper on "Sterile Water Anesthesia," which was very generally discussed, and Dr. William D. Haggard, Nashville, Tenn., reported cases of "Surgical Examples of Gastric Ulcer, Cystic Duct Obstruction, Typhoid Perforation and Enlarged Prostate." Dr. William H. Wilder, Birmingham, read a paper on "Emphysematous Gangrene." Dr. Frank P. Norbury, Jacksonville, Ill., read a paper on "The Use and Abuse of the Rest Treatment." Dr. Matthew C. McGannon, Nashville, Tenn., described "The Treatment of Operative Cases Before and After Operations as Practiced in the Woman's Hospital of the



State of Tennessee," and Dr. James T. Searcy, Tuscaloosa, Ala., read a paper on "Medicolegal Insanity."

#### Election of Officers.

The following officers were elected for the ensuing year: President, Dr. A. Bennett Cooke, Nashville, Tenn.; vice-presidents, Drs. William D. Haggard, Nashville, Tenn.; Albert A. Davidson, Augusta, Ga., and Wellington P. McAdory, Birmingham, Ala.; secretary, Dr. Raymond Wallace, Chattanooga, Tenn., and treasurer, Dr. George R. West, Chattanooga, Tenn.

The society will meet next year in Chattanooga.

### ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

*Fourteenth Annual Meeting, held in Detroit, Sept. 26-28, 1905.*

The first vice-president, Lieutenant-Colonel Albert H. Briggs, N. G. N. Y., occupied the Chair, in the absence of the president, Surgeon-General Walter Wyman, United States Public Health and Marine-Hospital Service.

#### Reports of Officers and Committees.

The annual reports of officers and committees were presented. The secretary reported an increase of nearly 200 in membership; the treasurer a balance of more than \$5,000 in the treasury; the chairman of the necrological committee the deaths of 16 members of the association during the year, and the committee on permanent international congress of military surgeons progress.

#### Entertainment.

The entertainments included an informal reception at the Hotel Cadillac, a tally-ho tour through the city parks and boulevards, a theater party, a trolley excursion to Orchard Lake, Pine Lake and Cass Lake and a trip on the revenue cutter *Tuscarora* to the St. Clair flats, with luncheon at the Marshland Club. September 26 a general reception was held at the Hotel Cadillac, followed by a public meeting at which Hon. George P. Codd, mayor of Detroit, delivered an address of welcome on behalf of the city. In the absence of Senator Russell A. Alger, Representative Denby addressed the meeting on "Michigan in War." Surgeon-General S. Suzuki, imperial Japanese navy, then delivered an address and exhibited lantern slides showing scenes among the sick and wounded in the Russo-Japanese war.

#### Prize Awarded.

The Enno Sander Prize Model Board of Award reported that no paper has been presented in competition; the Seaman Prize Board of Award reported that it had awarded the Seaman prize of \$500 to Major Jefferson R. Kean, U. S. Army, for his paper on "The Prevention of Disease in the Army and the Best Method of Accomplishing That Result."

Major Kean, in this paper, pleaded for the re-establishment of the canteen at Army posts, and sought to show by statistics that venereal disease and other diseases traceable to dissipation have markedly increased in the United States Army since Congress abolished the canteen. He considered the reason for this to be plain, viz., that on the abolition of the canteen at which beer and other comparatively mild liquors were sold under proper restrictions, the soldier who wanted to drink went to the low grogeries which were allowed to be established outside of each military post, and there he drank bad liquor, and, while under its influence, committed excesses and contracted disease.

Major Kean also made an attack on the cleanliness of Japanese camps, and stated that the only reason why the Japanese suffered less from typhoid fever than the American was because the Japanese used large quantities of tea in the preparation of which the water was necessarily boiled. He also said that there was a possibility of the Japanese being constitutionally immune from typhoid fever.

He commented unfavorably on the volunteer regiments in service during the Spanish-American War, and said that if regulations had been followed there would have been no more deaths in the Army than at an ordinary health resort, instead of the 2,000 fatalities from typhoid fever alone, which

he attributed, in a great measure, to the carelessness and thoughtlessness of the volunteer soldiers and to the lack of experience of their officers.

#### Experiences During the Russo-Japanese Naval War.

Surgeon-General S. Suzuki, surgeon-general Imperial Japanese Navy, read a most interesting and classical paper. He divided his experiences as surgeon-in-chief of the combined fleets serving on board the flag ship *Mikasa*, under Admiral Togo, in two parts: (1) The treatment and management of the wounded, and (2) the sanitary arrangement of the combined fleets.

#### TREATMENT AND MANAGEMENT OF WOUNDED.

Before the fleets left Sasebo, the naval base, he issued orders that aseptic treatment should be adopted in the treatment of the wounded in all battles and that necessary preparations for the adoption of this treatment should be made. He also ordered the employment of conservative surgery, that amputations on board war ships should be avoided so far as possible, and that every preparation should be made for transferring the wounded as soon as possible after the conclusion of engagements to the hospital ship for conveyance to home hospitals. During an engagement complete asepsis is very difficult of attainment. He, however, believed in the immense value of the aseptic treatment of recent wounds, constantly endeavored to combat all the difficulties that stood in the way of this treatment, and demonstrated that his perseverance in that regard had been abundantly rewarded. From February, 1904, to August, 1905, 3,682 casualties occurred in the navy; 1,891 were killed and 1,791 wounded, 117 of whom afterward died. Of the 1,891 deaths, 1,445 were due to shipwrecks caused by submarine mines, and only 563 to wounds received in actual conflict. Of the 1,791 wounded, 647 received wounds requiring hospital treatment, and of these only 32 died. The aseptic methods employed were the same as those in general use.

His experience during the recent war has led him to the conclusion that the proper treatment of the wounded during action must be divided into two stages. At first only the most urgent first-aid methods can be employed, such as the ligature or compression of arteries, the application of splints and the application of gauze pads and bandages. In the second stage, after the action has ceased, the wounded should be brought to the surgery from the places where they have been temporarily bestowed, and relief given. They should then be transferred as soon as possible to the hospital ship. He considers it impracticable to attempt complicated operations in the limited accommodations offered by war ships, except in case of the most urgent necessity.

#### LOCATION OF SURGERY.

General Suzuki considers that the proper place for the surgery on the battle ship is below the water-line. Care must be taken to provide good light, good ventilation, and, if possible, an elevator for the conveyance of wounded. It is not necessary that the berths for the sick should be near the surgery, for the wounded during the action may be temporarily removed to some place of greater safety, and the berths may be located in any suitable situation on the proper deck above the water-line. In unprotected cruisers the sides of the surgery should be covered with canvass screens, to obviate injury of the bursting of shells, etc., during action. In the temporary surgery steam sterilizers, buckets for the reception of soiled materials and ice boxes should be provided. An operating table may be improvised from the chests which are always to be found on board ship. As the wounded suffer much from thirst, pitchers with long narrow spouts should be furnished as tumblers or glass tubes are too inconvenient for use.

#### TRANSPORTATION OF WOUNDED.

The ship's complement in the Japanese navy is divided into two portions, for first-aid and ambulance work, the first division comprising clerks, riggers, servants and bandsmen, who receive instruction from the ship surgeon in the bandaging of wounds, the checking of hemorrhage and the carrying of wounded men. The second division, which includes the remainder of the crew, receives instruction as time and oppor-



tunity allow. It was found, however, that during the excitement of battle it was impossible to put in practice all the rules and devices in which the crew had been instructed. In about one-third of the cases, first-aid dressing was applied to the wounded, and the men were carried on stretchers to the surgery. In the remainder of the cases the men were picked up as they fell and carried to the surgery in the arms of their comrades. In many cases of slight injuries the dressing was at once applied, and the men went back to their proper stations without coming to the surgery.

#### DRESSING MATERIALS.

Thanks to the foresight of the authorities, each ship was provided with a stock of dressing material considerably larger than usually issued, and on this account none of the Japanese ships suffered from deficiency of dressings. The new first-aid package for the use of the navy, suggested by Dr. Suzuki, contained four pieces of supplement gauze, 24 inches long and folded in a package 4 inches square. This package is wrapped in Japanese paper, and is placed in a loose bag of stout Japanese paper steeped in the juice of the bitter persimmon. This bag also contains a regularly folded triangular bandage, and is tightly closed with sterilized paste. This package is much more easily opened than was the old package, and the larger size of the gauze pieces was found materially to facilitate the work of dressing. Each surgery should have a pair of large tailor's shears, which are useful in cutting off the clothing of wounded men, also a large number of dressed splints, fenestrated zinc splints, cotton roller bandages 6 or 7 inches wide, changes of operating clothes for the surgeons and attendants, rubber tubes for checking hemorrhage, and a transfusion apparatus for salt solution. Every soldier and sailor carries on his body a small wooden label marked with his name and rank. This is of the greatest value to the surgeon in identification of the living and of the dead.

#### EYE-SIGHT OF GUNNERS.

In the Japanese service the eyesight of gunners is always examined before action. If any trouble with the vision is found which would interfere with the usefulness of the individual as a gunner, it is treated at once, or if not easily curable, the man is transferred to another station and his position taken by another man with unimpaired eyesight. It was found that the gases and dust which always accompany the firing of great guns irritate the eyes of the gunners and impair their vision, and for this reason every battery is furnished with a supply of 1 per cent. solution of boric acid.

#### CHARACTER OF WOUNDS.

Wounds inflicted by shell fragments or splinters due to shell explosions present the characteristic of laceration, whether in soft tissues or bony substance. The wound of entrance is generally smaller than that of exit. Few cases of profuse hemorrhage from such wounds were observed. When bones are injured they are usually broken into small fragments. It was found that the wounds caused by small shell fragments generally healed by primary union, but if a fragment of cloth entered the wound there was always danger of suppuration. The number of wounds inflicted on a single individual varied from 1 to more than 100. Contused, lacerated and explosive wounds furnished the great majority of the injuries. Wounds of the head, face and neck were most frequent; wounds of the lower limbs came next, of the upper limbs next, and the burns and scalds followed. There were 716 drowned, and 25 deaths were due to asphyxia.

#### SANITARY ARRANGEMENTS, DIET AND WATER SUPPLY.

During the war, with the exception of a transient outbreak of dysentery and the prevalence of beri-beri, which was promptly checked by an increase in the nitrogenous element in the ration, the navy was singularly free from disease.

The daily diet consists of biscuit, 6 ounces, or bread, 8 ounces; rice, 12 ounces; crushed barley, 4 ounces; preserved meats, 5 ounces, or fresh meat, 7 ounces; preserved or fresh fish, 5 ounces; dried vegetables, 3 ounces, or fresh vegetables, 15 ounces; tea leaves,  $\frac{1}{2}$  dram; roast barley, 1 dram; sugar, 6 drams. The weekly allowance for cooking purposes consists of peas or beans,  $2\frac{1}{2}$  ounces; wheat and flour, 2 ounces; sugar,  $3\frac{1}{2}$  ounces; soy, 3 ounces; sesame oil, 1 dram; salt,

$1\frac{1}{2}$  ounces; fat, 1 ounce; and the supper ration, biscuit,  $3\frac{1}{2}$ , or bread, 5 ounces; tea,  $\frac{1}{2}$  dram; sugar, 4 drams.

The navy has two water-supply ships furnished with apparatus which will distil <sup>about</sup> 300 tons of water each daily, and has an addition of <sup>auxiliary</sup> water transports with a capacity of 5,000 tons, and auxil<sup>ary</sup> water carriers. Throughout the war the supply of dist<sup>illed</sup> water was found in all cases to be sufficient.

Personal cleanliness was enjoined by all members of the crew, and before going into action each individual was required to take a bath and to put on clean underclothing. To this, in Dr. Suzuki's opinion, was due in great measure the small proportion of infected wounds.

#### HOSPITAL SHIPS.

Japan has two specially fitted hospital ships, the *Kobe-Maru* and *Saikio-Maru*, of about 3,000 tons each, and each containing 186 beds, of which 18 are in an isolated ward and 12 reserved for officers. The transfer of patients was not made by bringing the hospital ship alongside of the man-of-war, but was made by steam launches or boats, and it was found that the hammocks of the patients were the most convenient vehicles for transferring them from the ships to the boats. The proper employment of hospital ships entails much thought and consideration from the surgeon-in-chief of the fleets. Excepting in the battle of the Yellow Sea, there was no need of sending the wounded directly from the war ships to the hospital ships, which were always stationed at the base during action. The Russians allowed their hospital ships to accompany their squadrons, but had little opportunity of availing themselves of the service.

On motion, the association voted Surgeon-General Suzuki a vote of thanks for his most interesting paper.

#### Election of Officers.

At the final session, September 28, the following officers were elected: President, Lieutenant-Colonel Albert H. Briggs, N. G. N. Y., Buffalo, N. Y.; vice-presidents, Brigadier-General Robert M. O'Reilly, surgeon general, U. S. Army, Washington, D. C., Admiral Presley M. Rixey, surgeon general, U. S. Navy, Washington, D. C., and Colonel George Tully Vaughan, assistant surgeon general, U. S. Public Health and Marine-Hospital Service; secretary (re-elected), Major James Evelyn Pilcher, U. S. Army, Carlisle, Pa.; and treasurer (re-elected), Major Herbert A. Arnold, N. G. Pa., Ardmore, Pa.

Buffalo, N. Y., was selected as the next place of meeting.

(To be continued.)

#### CALIFORNIA ACADEMY OF MEDICINE.

*Regular Meeting, held Aug. 22, 1905.*

The President, DR. DUDLEY TAIT, in the Chair.

#### Tendon Transplantations for Infantile Hemiplegia.

DR. S. J. HUNKIN showed a boy, 11 years old, who had infantile spastic hemiplegia, with the typical club hand and foot. The hand was strongly pronated and ulnar-flexed, and could only be approximated to the face with its posterior ulnar border. Eight weeks previously the tendon of the pronator radii teres was detached from its insertion, a silk tendon was sutured to it and then passed around the radius posteriorly and fastened under the periosteum at or just below its original insertion. This muscle now acts as a supinator instead of as a pronator, and the boy is able to feed himself with that hand and carry a glass of milk to his mouth. At a later operation the tibialis posticus was divided behind the ankle, the proximal end was passed behind the tibia and fibula to the outer side of the leg, and then subcutaneously to the outer border of the foot and planted with silk under the periosteum at the base of the fifth metatarsal bone. The boy can now dorsi-flex and pronate the foot. Dr. Hunkin called especial attention to the fact that the boy could make these new movements without training as soon as the splint was removed. He now proposes, as a final operation, to move the flexor carpi ulnaris to the position of an extensor; for when the wrist is well extended the hand flexors work to better mechanical advantage.



### Diffuse Dilatation of the Esophagus.

DR. H. C. MOFFITT showed a patient who had had difficulty in swallowing for about seven years off and on. The patient knew of no injury to his esophagus. He has the sensation that his food is stopped before it reaches his stomach. It may then return to his mouth or it may produce choking sensations, together with dyspnea and panting. More recently he has had cramps under the sternum. He can sometimes assist the passage of food through his esophagus by taking a long breath and throwing his head back. At present a stomach tube can not be passed into the stomach on account of an obstruction that is met about 47 cm. from the teeth. The esophagus will hold about 500 c.c. of liquid, and the material obtained from it recently shows pus and blood cells. After the patient had swallowed a suspension of bismuth a skiagraph was made, and this showed a diffuse spindle-shaped dilatation of the esophagus.

DR. C. M. COOPER stated that the esophagus normally holds about 100 c.c. of fluid. In the diagnosis of carcinoma of the esophagus it is important to remember that the bronchial glands are frequently the first to be involved, and that their enlargement may be demonstrated by the use of the x-ray.

DR. GEORGE BLUMER has seen a diffusely dilated esophagus at autopsy. Its walls were very much thickened, resembling those of a congenitally dilated colon.

### Leprosy Simulating Syringomyelia.

DR. H. C. MOFFITT presented a boy who had come from Cape Verde Islands about three years ago. No satisfactory history of his present illness could be obtained. The skin showed an irregular pigmentation with somewhat oval or circular whitish patches scattered over it. The latter are not anesthetic and they sweat after injections of pilocarpin. No stigmata of syphilis were found. The left small occipital, right great auricular, and right ulnar nerves are somewhat thickened. The left hand is claw-shaped, with atrophy and the reaction of degeneration in the smaller muscles. There was right equino-varus with atrophy of foot extensors and reaction of degeneration in the tibialis anticus and the peronei. Reflexes were normal, except for the absence of the right Achilles and both plantar reflexes. Irregular anesthetics, especially of the distal portions of the extremities, were present. The differential diagnosis lies mainly between leprosy and syringomyelia. Against the latter are (1) the absence of scoliosis, of ataxia, of involvement of the sphincters, of spasticity of the legs, and (2) the peculiar distribution of the palsies (left hand and right foot), the widespread loss of sensation in the lower extremities and the thickening of the peripheral nerves.

DR. D. W. MONTGOMERY stated that the skin lesions are such as might occur in leprosy, and that the enlargement of the nerves is very strong evidence in support of that diagnosis.

DR. H. MORROW said that it is unusual to see so much leucoderma in leprosy without a corresponding loss of sensation.

DR. C. M. COOPER called attention to the fact that the ulnar nerves may be enlarged in other conditions than leprosy.

### Vincent's Angina.

DR. H. W. ALLEN demonstrated smears showing the organisms of Vincent's angina. They were obtained from a patient who had had a sore throat, a temperature of 102.6 F. (possibly due to a complicating malaria), and an ulceration on the left tonsil, which was the size of a ten-cent piece and was covered with a grayish-white membrane. The breath possessed a peculiar fetid odor, resembling that of moldy hay. The organisms obtained were a fusiform bacillus and a spirillum. These organisms obtained are believed by Vincent to be the causes of a number of other infections, such as ulcerative stomatitis, noma, gangrene of the lungs, and putrid pleurisy. Clinically the angina must be distinguished from diphtheria and syphilis.

DR. WILLIAM OPHÜLS believes that it is not altogether certain that these organisms cause the angina, for similar ones may be found in the mouths and especially about the teeth, of healthy individuals. It is possible that they are merely secondary invaders, and that the cocci that are almost invariably found in these throats are the primary cause of the lesions.

We must differentiate this disease from that recently described by Oliver, which is due to an organism of the oïdium group.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

### Summer Diarrhea in Infants.

Southworth, in the *Medical Record*, offers suggestions for reducing the prevalence of this disease. Only a small and almost insignificant proportion of the deaths from summer diarrhea occurs in children who have been rightly fed and who enter on the hot months with properly nourished bodies and good digestive powers which have not been overtaxed. The breastfed infant rarely suffers. The large majority of those under one year of age who succumb to these affections are puny, ill-nourished, anemic or rachitic infants, artificially fed, who seem marked for destruction during the first continuous heated term. The child which dies from diarrhea dies as a rule as much because of a previously lowered resistance as from the disease itself. The responsibility rests on the physician whose duty it is to look beyond a present minor ailment and to fortify the infant against this disease. The methods of prevention, fresh air, daily bathing and pasteurization of the food are reasonably familiar to most practitioners, but the truly effective prophylaxis of such mortality should date from the birth of the child. This protection is found in normal breast feeding. The mother should be instructed in the great importance of nursing her own child, and she should likewise be instructed as to how she may best nourish and care for herself in order that she may be able to satisfactorily nourish her babe. In those children not subsisting on breast milk the author recommends beginning early in the spring to protect children against the summer; rachitic children receive proper attention, anemia is treated energetically, diets are regulated, recurrent auto-intoxication is guarded against, even the slightest subacute or persistent gastrointestinal irregularities are corrected. He lays great stress on the necessity of putting these children on "certified milk." It should be explained to the parent that this milk is not possessed of any sort of charm against summer ills. Certified milk is simply a clean milk instead of a germ and toxin laden one.

It renders no less necessary the careful modification, clean handling, rapid and immediate cooling of the milk, and its maintenance at a low temperature until the food is consumed. The physician should instruct his patient in the kinds of food which young children should have. The practice of early feeding a child stimulants and indigestible foods should be prohibited. Popular beliefs and superstitions, such as the belief that diarrhea is a normal accompaniment of the eruption of the teeth, and that a child is always hungry when it cries, should be overcome. Mothers should be taught that hot weather calls for less food and weaker food, given at longer intervals, with more abundant giving of water. Finally, the author directs attention to other frequent sources of infection. The sucking of the nipple should be absolutely prohibited, "that fraud on infants' credulity, that almost constant appurtenance of the fretful marasmic child, moistened in the bacteria-laden mouth of the attendant to render it more acceptable, dangling against dirty clothes from the dirty string, or reposing temporarily on dusty shelves and tables, carried in dirty pockets, rolling on filthy floors and sidewalks, and then wiped perfunctorily, if at all, before being reinserted in the mouth of the infant." The physician's work is to seek out and correct errors in nutrition, to combat popular misapprehensions, to further the use of clean milk, and to warn mothers that at the very beginning of loose movements in summer they should stop the use of cow's milk in any form, clear out the bowels with castor oil, give water or cereal gruels only, and send promptly for the physician, since delay is so often fatal.



**Enuresis.**

Barnes, in *American Medicine*, discusses the subject of incontinence of urine in children and states that the successful treatment depends on determining the cause. Enuresis is a symptom of one or more disorders varying from perverted disposition to genuine nervous diseases. The author gives a classification of the causes, both organic and functional, of this condition. Every organ and reflex must be carefully studied. The urine and feces must be repeatedly examined. These children must be kept under observation with diligence and without ceasing. The most important elements in the treatment of this condition are diet, hygiene, habit and training.

**DIET.**

A generous diet of easily digested food agrees with most children; they should never be overfed. Sometimes a polyuria is associated with an excessive starchy diet, and anti-diabetic treatment relieves the condition. In other cases heavy meats and fish have to be eliminated. Stimulating foods and drinks, and liquids of all kinds, should be omitted as much as possible before retiring. In some instances the urine is irritating because of its concentration; in these limiting the liquids would aggravate the enuresis. More frequently the urine is abundant, of low specific gravity, and of almost neutral reaction. Many of these children have chronic intestinal indigestion and must be treated accordingly. Emptying the bowel before retiring is a good practice.

**HYGIENE AND HABIT.**

Mental and physical irritation should be reduced to a minimum. A quiet, salubrious country place is desirable. Regular habits are imperative. This applies not only to diet, exercise and sleep, but to evacuation of the bowel and bladder. Children should be taught to hold the urine for a considerable time during the day, and should be awakened and made to urinate at a regular hour each night. Exercising in the open air and sunshine is always beneficial. Special exercises directed to strengthening the local muscles can be undertaken with older children. The bath is another hygienic measure often misused. Warm baths are relaxing and frequently followed by colds. The gradually cooling shower or tub bath followed by brisk rubbing, develops vim, vigor and virility. The cold spinal douche gives pleasant results in some instances. A hard bed and moderate covering should always be instituted. Elevation of the foot of the bed and appliances attached to the child to prevent lying on the back are rational measures.

**MEDICINAL TREATMENT.**

Medical treatment alone is usually negative, unless the enuresis is due to highly acid or irritating urine, or infection and inflammation of the urinary mucosa. Then lithium salicylates, potassium citrate and similar drugs give prompt relief. For the general atonic conditions and weakness of the sphincters, strychnin, quinin and ergot are of first value. Iron and arsenic should be added when needed. Atropin is the drug commonly prescribed. It influences the muscular and reflex activity by lessening the contractile power of the bladder and diminishing the hyperesthesia of the spinal centers. When depending on this drug it must be given, like quinin for malaria; to obtain effects gradually increasing doses should be continued until the enuresis is controlled or the full action of the drug is obtained. The atropin treatment must be pushed for weeks or months, and when a cure is established the dose may be gradually lessened and the drug slowly withdrawn. When masturbation is practiced gelsemium to full physiologic effects may be given alone or with sodium bromid.

**Premature Infants.**

Morse, in *Am. Jour. Obstet.*, states that two objects are to be attained: to keep the baby alive, and to develop its organism. The infant should be protected from noises, bright lights and unnecessary handling. For the maintenance of animal heat incubators and substitutes for incubators are used. Most incubators may be made to maintain a constant temperature, but none of them provide sufficient pure, fresh, warm air. The best substitute is a crib basket, padded with cotton. The top should be covered with a blanket which reaches just

below the baby's neck. The desirable temperature (90 to 95 F.), may be maintained by hot-water bags or bottles, the temperature being taken from the thermometer wrapped in the baby's clothing. The temperature of the room should be from 80 to 85 F. The baby should be oiled every three days, but not washed, and wrapped in a quilted gown with a hood. Absorbent cotton makes a satisfactory substitute for a diaper. The best food for premature babies is breast milk, diluted at first with from one to three parts water. Modified milk with low ingredient percentage is the best substitute for breast milk; 5 c.c. should be given at first at one and a half hour intervals, the amount of milk and the intervals being gradually increased. When the infant is too feeble to take food from a nipple it may be fed with a medicine dropper. When stimulation is indicated one or two drops of brandy, strychnin (1/1000 gr.), and oxygen may be useful. Babies under two pounds usually die. The prognosis is very fair when the weight is over four pounds. A slight elevation of temperature is to be expected; in a subnormal temperature there is danger to the infant. Sudden death may occur without apparent cause, hence it is never safe to consider premature infants out of danger until they are thriving under normal conditions.

**Anorexia.**

Dr. H. C. Wood recommends for failure of appetite, weak digestion and the general debility from warm weather the following stomachic:

R. Acidi nitrohydrochlorici (fresh).....	3ii	8
Aquæ dest.....	3iss	45
Strychniæ sulph.....	gr. i	106
Misse et adde		
Tincture cardamomi comp.		
Tincture gentian comp., āā, q. s.....	3vi	180
M. Sig.: Dessertspoonful after meals, in water.		

**Amenorrhea.**

Goodell placed great reliance in the "mixture of the four chlorids" for women suffering from amenorrhea due to deprivation and depressing hygienic surrounding.

R. Hydrargyri chloridi corrosiv.....	gr. i	106
Liquoris arsenici chloridi.....	m. xlviii	3
Tincturi ferri chloridi		
Acidi hydrochloridi diluti, āā.....	3iv	16
Syrupi zingiberis q. s. ad.....	3vi	180
M. Sig.: Dessertspoonful in water after meals.		

**Prickly Heat.**

The following is recommended for this condition:

R. Zinci carbonati precip.....	3iv	16
Zinci oxidi		
Glycerini, āā .....	3ii	8
Aquæ rosæ .....	3viii	240
M. Sig.: Apply locally.		

**Dermatitis Venenata from Poison Ivy.**

The following is recommended for this condition:

R. Sodii hyposulphitis .....	3i	30
Glycerini .....	3iv	15
Aquæ dest q. s. ad.....	3viii	240
M. Sig.: Keep constantly applied.		

**Medicolegal**

**To Have an Exhibition of Means of Treating Tuberculosis.**—Chapter 75 of the Resolves of Massachusetts of 1905 authorizes the state board of health, within two years, to cause a public exhibition to be made of the various means and methods used or recommended for treating and preventing tuberculosis, now recognized as a communicable and preventable disease. The said board may expend a sum not exceeding \$2,000 in carrying out the provisions of this resolve, and is directed to report to the general court (legislature) on or before the 15th day of January next following said exhibition, and shall accompany its report with any recommendations for legislation which it may deem advisable.

**Provides for a Hospital for Lepers.**—A resolution was passed by the legislature of Massachusetts in February, 1905, stating



that it favored such action by the congress of the United States as would provide for the establishment of a national hospital or colony for the care and treatment of persons afflicted with leprosy. Copies of this resolution were to be sent to the presiding officers of both branches of congress and also to the senators and representatives in congress from Massachusetts. But later the state legislature passed a law, which appears as Chapter 474 of the Acts of Massachusetts of 1905, providing that the state board of charity, subject to the approval of the governor, shall be authorized to take land by purchase or condemnation, in the name and for the use of the commonwealth, and to erect and maintain thereon a hospital for the custody, care and treatment of persons afflicted with leprosy, and for said purpose may expend a sum not exceeding \$50,000.

**An Act Relative to Wood Alcohol.**—Chapter 220 of the Acts of Massachusetts of 1905 provides that whoever, himself or by his servant or agent, or as the servant or agent of any other person, sells, exchanges or delivers any wood alcohol, otherwise known as methyl alcohol, shall affix to the vessel containing the same and shall deliver therewith a label bearing the words, "Wood Alcohol, Poison," in black letters of uncondensed Gothic type not less than one-fourth of an inch in height. Whoever violates the provisions of this section shall pay a fine of not less than \$50 nor more than \$200. Section 2. Whoever, himself or by his servant or agent, or as the servant or agent of any other person, sells, exchanges or delivers, or has in his possession with intent to sell, exchange or deliver, any article of food or drink, or any drug intended for internal use, containing any wood alcohol, otherwise known as methyl alcohol, shall be punished by a fine of not less than \$200 or by imprisonment for not more than thirty days, or by both such fine and imprisonment.

**Must Report Diseases of Eyes of Infants.**—Chapter 251 of the Acts of Massachusetts of 1905 amends Section 49 of Chapter 75 of the revised laws of that state requiring a householder to give notice of dangerous diseases by incorporating therein this provision: "Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing, within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented." Whoever violates the provisions of this section shall be punished by a fine of not more than \$100. Section 50, relative to physicians is made with new matter indicated by quotation marks to read: If a physician knows that a person whom he is called to visit is infected with smallpox, diphtheria, scarlet fever or any other disease dangerous to the public health, "or if one or both eyes of an infant whom or whose mother he is called to visit become inflamed, swollen and red, and show an unnatural discharge within two weeks after the birth of such infant," he shall immediately give notice thereof in writing over his own signature to the selectmen or board of health of the town; and if he refuses or neglects to give such notice, he shall forfeit not less than \$50 nor more than \$200 for each offence.

**Duty and Liability Under Contagious-Disease Statute.**—The Appellate Court of Indiana, division No. 1, says, in town of Knightstown vs. Homer, that by Section 6718 of Burns' Annotated Statutes of Indiana of 1901 the trustees of each town in that state shall constitute *ex-officio* a board of health for such town, and it is made the duty of such board to "elect a secretary who shall be the health officer of the appointing board," and it is the duty of such board "to protect the public health by the removal of causes of disease when known, and in all cases to take prompt action to arrest the spread of contagious and infectious diseases." Smallpox is an infectious and contagious disease, and, under the statute, it is the duty of the town board to take immediate and active measures to prevent

the spread of this disease among its people. The discovery of a contagious disease like smallpox in a thickly settled community, whether one or more cases, as it seems to the court, creates an immediate necessity for activity on the part of those charged with the duty of preventing its spread, and creates a liability on the part of the town to pay any necessary expense incurred by its health board, or, in the absence of an order of its health board, the expenses incurred by its "health officer," under such an emergency. This was an action against the town to recover, among other things, for damage to property destroyed to prevent smallpox contagion in the town. The property was shown to be of the value of \$75 at the time a patient was taken to the plaintiff's home, and worthless at the time destroyed. Thus was presented the question, Did the rule for fixing the amount of damages apply to the value of the property at the time it was discovered that the patient was afflicted with smallpox, or at the time the property was taken by the board of health and destroyed? The patient was in the plaintiff's home not by any act or command of the board of health or its secretary, but he was there at the direction of the plaintiff's husband, and with her consent, and there remained until his death, without request from the plaintiff to any one for his removal. Under these facts, as it seems to the court, the rule for assessing the plaintiff's damages for the property so taken, if the town was liable therefor, should be what the property was worth as there situate at the time it was destroyed. If the rule here announced for the assessment of damages be correct, and the property burned was worthless at the time it was so destroyed, as the plaintiff testified, then there could be no recovery for the item of property, as no damages were proven. Again, the court says that acts for the purpose of preventing the spread of disease are wholly within the jurisdiction of the board of health, and the town can only be made liable when the board acts within the scope of its authority, or for the acts of the secretary of the board when an emergency arises and he is acting within the scope of his authority. Nor does the court think that the plaintiff ought to be allowed for nursing and earing for her child, who was taken with varioloid shortly after the death of the smallpox patient above referred to. It says that there was nothing in the evidence which showed that she was in indigent circumstances, or was not clearly able financially to provide any and all means necessary for the care and attention of her son. She and her son were quarantined in her own home, and, in the absence of a statute making the town liable for such services so rendered by her to her son, the town was not liable.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia, Pa.

September 30.

- 1 \*Large Desmoid Tumor of the Abdominal Wall. E. E. Montgomery and P. B. Bland, Philadelphia.
- 2 \*Surgery of the Stomach. A. D. Bevan, Chicago.
- 3 \*Cryoscopy of the Blood and Urine in Nephritis and Uremia. T. Tieken, Chicago.
- 4 Action of Acid-Fast Bacilli when Inoculated Into the Peritoneal Cavity of White Rats. R. C. Rosenberger, Philadelphia.
- 5 \*Vagovisceral Reflexes with Special Reference to the Vagostomach Reflex. A. Abrams, San Francisco.
- 6 Manifestations of Lithemia in the Spine and Lower Extremities Simulating Orthopedic Conditions. P. Le Breton, Buffalo, N. Y.
- 7 A Second Chinese Case of Infection with the Asiatic Blood Fluke (*Schistosoma Japonicum*). H. G. Beyer, U. S. A.

1. Desmoid Tumor of the Abdominal Wall.—Montgomery and Bland report the case of a woman, aged 26, who was operated on for a large desmoid tumor of the abdominal wall. The patient had been married at the age of 19 and had two children. The tumor first appeared seven years before operation, and was observed in the lower portion of the abdomen and on the right side, about the middle and lower thirds of the rectus muscle. The growth increased in size gradually for the first six years of its life, but during the last year it grew very rapidly. The tumor after removal measured 76 cm. in its greater circumference, and 66 cm. in its lesser



circumference. It weighed 19 pounds, and had its origin in the sheath of the right rectus. It was of a pearlish pink color, of dense consistence. Microscopically, it was found to be composed of young connective tissue cells. The blood vessels were numerous, and in many areas the vessel walls seemed to be composed of tumor elements. The authors review briefly the history of desmoid tumors and claim that this is the largest thus far reported. They point out that the tumors usually occur in women, and especially in those who have borne children. The tumors appear frequently after childbirth, and therefore Montgomery and Bland believe that pregnancy and labor have some influence in the production of these growths.

2. See abstract in *THE JOURNAL*, June 3, 1905, page 1801.

3. **Cryoscopy of the Blood and Urine in Nephritis and Uremia.**—Tieken describes the apparatus and technic employed in this work, and reports in detail the result of his observations in over 300 cases of nephritis and allied conditions. He has devoted special attention to uremia, and brings out some interesting facts in relation to it. He concludes that cryoscopy of the urine as usually carried out is of little or no value as an aid to diagnosis in nephritis. Cryoscopy of the blood in nephritis does not show anything abnormal until uremia develops, then there is usually an increase in the molecular concentration, and a corresponding reduction of the freezing point. In several cases these changes in the blood were found before any clinical manifestations of uremia were present. This fall in the freezing point is less marked, or absent, if marked edema or anemia is present. The reduction in the freezing point of the blood seems to correspond with the severity of the disease; that is, in rapidly fatal cases the freezing point is reduced rapidly and to a greater degree than in the mild cases. This fact may aid the physician in making a prognosis as well as in determining the efficiency of treatment. In order to be of the greatest value, it must be done systematically in all cases of uremia, and all disturbing factors must be carefully weighed before drawing any conclusions.

5. **The Vagovisceral Reflexes.**—For clinical purposes, Abrams avails himself of the physiologic fact that the vagus nerve may be subjected to mechanical stimulation by directing the patient to draw the head slowly and forcibly backward. Hypertension of the cervical muscles thus elicited results in inhibiting cardiac action which proves of inestimable service in the differentiation of heart murmurs. The same maneuver enables the physician to recognize an asthmatic lung even in the interparoxysmal period. In the normal individual, when the head is thrown backward and maintained in this position, percussion over the manubrium yields a dull or flat sound, whereas in the asthmatic lung the percussion sound over this region remains unchanged. The latter sign the author refers to as the "tracheal traction test." He finds that by this identical maneuver the lower stomach border may be accurately defined by the dullness supplanting tympanicity by percussion. This taken in conjunction with his "stomach reflex," which causes a recession of the lower border of that organ, enables him to determine the motor power of the stomach as well as the actual lower border of that organ. In other words, after defining the lower border of the stomach by percussion during the time the head is extended, he directs the patient to relinquish extension of the head and proceeds to concuss the Traube area. The difference between the percussional areas obtained after both maneuvers is in direct ratio to the motor power of the organ, which varies in the normal person from 2 to 4 cm. The accuracy of his results has been controlled by the *x*-rays, gastrodiaPHONE and the conventional methods of determining the lower stomach border.

#### Medical News, New York.

September 23.

- 8 \*Appendicitis in Children, Study of 70 Cases Occurring Between the Ages of Two and Fifteen Years. C. N. Dowd, New York.
- 9 Ovarian Transplantation. J. P. Warbasse, New York.
- 10 \*What Means Does the Modern Obstetrician Employ to Prevent Ophthalmia of the Newly Born. J. C. Edgar, New York.
- 11 Rational Diet in Disease. E. C. Hill, Denver, Colo.

- 12 Appendectomy with an Uncommon Location of the Appendix and Involving a Modification of the Intermuscular Incision. A. S. Taylor, New York.
- 13 American Disease; An Interpretation. W. B. Pritchard, New York.

September 30.

- 14 \*The Student Life: A Farewell Address to Canadian and American Medical Students. W. Osler, Oxford, England.
- 15 Two Experiments in Artificial Immunity Against Tuberculosis. E. L. Trudeau, Saranac Lake, N. Y.
- 16 Studies on Immunity in Tuberculosis; Properties of the Serum of Immunized Rabbits. Part I. E. R. Baldwin, H. M. Kinghorn and A. H. Allen, Saranac Lake, N. Y.
- 17 Studies on Immunity in Tuberculosis, An Histologic Study of the Lesions of Immunized Rabbits. Part II. J. L. Nichols, Saranac Lake, N. Y.
- 18 Vitality of Tubercle Bacilli in Sputum. D. C. Twitchell, Saranac Lake.
- 19 Serum Diagnosis of Tuberculosis. H. M. Kinghorn, Saranac Lake.

8. **Appendicitis in Children.**—Dowd believes that the peculiarities of appendicitis in children are sufficient to call for special attention. He divides these cases in children into three groups: Early cases in which operations come within the first forty-eight hours; later active cases in which the operations come in the progressive or retrogressive stage; and the interval cases in which operations come after the inflammation has subsided. Dowd states that the percentage of more severe grades of appendicitis is greater in children than in adults, but that children are more likely to recover from severe peritonitis. He sums up the peculiarities of this disease in children as follows: (1) The rapidity and insidiousness of the disease are much greater; (2) the percentage of diffuse and general peritonitis is greater, probably because the omentum is less apt to close the inflamed appendix; (3) the pain is almost always present, but is more difficult to interpret; (4) the vomiting is nearly always present, and is frequently many times repeated; (5) the abdominal palpation, in the majority of cases, is as satisfactory or more satisfactory than in adults, but in a few cases it is absolutely misleading; (6) constipation is much less likely to be present; (7) they have a greater ability to deal with general peritonitis than adults do; (8) during the acute stage of the disease delay is more dangerous than in adults because of the insidious course of the disease and the greater tendency to peritonitis, and immediate operation is to be advised.

10. **Prevention of Ophthalmia in the Newborn.**—Edgar states that no measure should be neglected which can assist in preventing the occurrence of ophthalmia neonatorum. From the standpoint of the obstetrician, he says, there are two means at command for reducing the frequency, if not of practically preventing the occurrence of this condition. These are: First, the antepartum preparation of the maternal passages in cases in which infection is suspected; second, the dropping into each conjunctival sac immediately after delivery of some antiseptic, such as nitrate of silver. Edgar states that he has every faith in Crede's method for the prevention of ophthalmia neonatorum, and that he uses it in both hospital and private cases. He says that after repeated experiments he has found that neither argyrol nor protargol compare with a 2 per cent. solution of silver nitrate for this purpose. Solutions of less strength in his experience do not destroy bacteria, and although solutions of 3 per cent. are harmless they are apt to cause silver catarrh and are not necessary.

14. **The Student Life.**—Dr. Osler said that there are unmistakable signs whereby the genuine student may be distinguished—an absorbing desire to know the truth, an unswerving steadfastness in its pursuit, and an open heart free from suspicion, guile and jealousy. He said that truth is a very simple matter if each one starts with the desire to get as much as possible. No human being is constituted to know the whole truth and nothing but the truth; and even the best of men must be content with fragments, with partial glimpses, never the full fruition. Osler said that the student must remember that his education does not end when he receives a degree and leaves his school or college; to be successful he must remain a student all his life. He said that the *dilettante* is abroad in the land, the man who is always starting tasks and never finishing them, and while many things are studied, few are studied thoroughly. He emphasized the fact that concentration is the price that the modern student



pays for success, and that thoroughness is the most difficult habit to acquire, though it is the pearl of great price, worth all the worry and trouble of the search. He advised the student to divide his time between books and men, and to thank the stars if they had given him the proper sense to appreciate the inconceivably droll situations which will come to his notice at times. He advised the young graduate to take a good weekly and monthly journal and to read them carefully, and advised him to take postgraduate work every few years. He warned against the danger of prosperity and its inducement to idleness, and he advised keeping out of politics. He concluded by saying that to each one the practice of medicine will be very much as he makes it—to one a worry, a care, a perpetual annoyance; to another, a daily joy and a life of as much happiness and usefulness as can well fall to the lot of man. In the student spirit can best be fulfilled the high mission of our noble calling—in humility, conscious of weakness, while seeking strength; in confidence, knowing the power, while recognizing the limitations of art; in pride in the glorious heritage from which the greatest gifts to man have been derived; and in sure and certain hope that the future holds still richer blessings than the past.

#### Medical Record, New York.

September 30.

- 20 •Study of Failures in Ophthalmic Practice. G. M. Gould, Philadelphia.
- 21 •Technic of Abdominal Section. D. Lewis, Chicago.
- 22 Counterirritation. J. W. Wainwright, New York.
- 23 Notes on Typhoid Fever in the Philippines. W. D. Bell, Watertown, Conn.
- 24 Physicians in Fiction. C. D. Spivak, Denver, Colo.

20. **Failures in Ophthalmic Practice.**—Gould sets forth fifteen reasons for failures to relieve the common systemic results or reflexes of eyestrain: (1) The want of a single good refraction school in the world. Instead of ophthalmology, being as Helmholtz said, the most accurate and scientific of the departments of medicine, he thinks it the most inaccurate and unscientific; and this is due to the lack of systematic and adequate training in the difficult art of refraction. (2) Bad case recording, omitting the life history of the patient's ailments, or "the biographic clinic," leaves the cure or non-cure unknown or indefinite. (3) The inexperience, ignorance or impertinence of the optician, incapable of doing his proper work, and aspiring to be an oculist, also prevents good results. (4) Changes in the patient's refraction, not followed by retesting and changes in glasses are another source of failure. (5) Incorrect diagnosis of ametropia is the most frequent cause of failure. (6) The presence of head-tilting often causes an inexact placing of the axis of astigmatism. (7) The morbid writing posture, coupled with its result, lateral spinal curvature, continue the consequences of eyestrain. (8) Non-allowance for the patient's personal equations may frequently account for non-success. (9) Tenotomy for heterophoria does not cure the cause of the heterophoria, which is ametropia. (10) Ascription of the morbid symptoms to general disease will not end in cure if they are due to neglected eyestrain. (11) Subnormal accommodation is far more frequently present than is suspected, and distance correction of the ametropia alone will not give relief. (12) "Hysteria" often caused by eyestrain may persist, when chronic, although the eyestrain has been neutralized. (13) Patients living at a distance because they can not be watched closely are likely to prove "failures." (14) Despair of curing in an obstinate case may lead to too speedy renunciation of effort. (15) The secondary results of long-continued eyestrain may be too chronic or deep seated to cure at once or to cure at all. Despite all these reasons, however, it is contended that in no department of medicine are the cures so near 100 per cent., so speedy or so gratifying as in skilled refraction work.

21. **The Technic of Abdominal Section.**—Lewis advocates, in abdominal operations, the use of an incision large enough to enable the operator to see what he is doing; he secures perfect hemostasis throughout the operation; he turns in all surfaces so that only smooth peritoneum is left at the end of the operation; in pus cases removal of the source should be carried out at once, without unnecessarily prolonging the operation and endangering the patient's life. He uses sterile

catgut for sutures instead of silk. After operation, he says, no opium should be given and as little anodyne as possible. The bowels should be moved early by calomel and enemata, and thirst relieved by salt solution by rectum. Uterosuspension he disapproves of, since the symptoms are referable to metritis and other conditions, which should be relieved when the prolapsus or retroversion will be cured. In suppurations one should open and drain, but not make the operation any more severe than is necessary, as the patient's strength is easily exhausted. Through drainage may be established through the vagina. Suppuration in peritonitis requires drainage, and irrigation is of value. In cases of rupture of the bowel or traumatism the wound should be closed at once with a Lembert suture, the edges well turned in. When a part of the gut must be removed the author prefers closure of the ends and a lateral anastomosis. In ruptured ectopic gestation the sooner the abdomen is opened the better. The Cesarean section should be used more frequently for contracted pelvis, etc. Small fibroids should be enucleated and for large or multiple one supravaginal amputation is to be preferred.

#### St. Louis Medical Review.

September 23.

- 25 \*Some of the More Unusual Forms of Epilepsy. W. P. Spratling, Sonyea, N. Y.

25. **The More Unusual Forms of Epilepsy.**—Spratling states that the days of speaking of epilepsy are gone, now we speak of the epilepsies. He says that while the general conception of the disease is the grand mal form, there are enough of the milder varieties to deserve consideration, and it is important that they be understood. He states that some neurologists do not believe in the psychic epileptic equivalent, and that in all probability it never exists as a separate entity, but is always associated in some degree with an attack so mild as to be unrecognizable except under close observation. Nocturnal epilepsy may give rise the next day to mental confusion that may be mistaken for the epileptic equivalent, and the only way to satisfy ourselves that this is not the case is to have the patient watched carefully during the night. The epileptic equivalent state, Spratling declares, is in reality an acute insanity, during which the patient unconsciously may be guilty of any crime. He calls attention to the importance of this from a medicolegal standpoint, and says that the welfare of the patient demands that he receive the same watchful treatment demanded by the acutely insane.

#### New York Medical Journal.

September 30.

- 26 Tabes Dorsalis. L. H. Mettler, Chicago.
- 27 Operations for Ingrowing Toenail and Hallux Valgus. V. Kenerson, Buffalo.
- 28 Rheumatic Poison and Its Treatment. F. L. Satterlee, New York.
- 29 Sodium Glycocholate in Diseases of the Liver. H. Richardson, Baltimore.
- 30 Six Lectures on the Diseases of Blood. (Continued.) J. M. Swan, Philadelphia.
- 31 \*Relation of Pleurisy to Tuberculosis. v. S. Ruck, Asheville, S. C.
- 32 Currents of High Frequency from a Static Machine. F. De Kraft, New York.

31. **Pleurisy and Tuberculosis.**—Von Ruck reviews briefly the salient points which permit of practical deductions, and summarizes them as follows:

1. The pleural cavities are readily accessible to bacterial invasion.

2. The great majority of pleurisies with effusion which occur in otherwise healthy individuals are due to infection with tubercle bacillus. This is proved by autopsy findings, by methods of exact diagnosis and by the subsequent clinical histories of the majority of persons who have been the subjects of such attacks.

3. There is ample evidence to indicate that the so-called idiopathic, dry pleurisies are likewise usually tuberculous.

4. The subjective symptoms of inflammation of the pleural apices often simulate those of myalgia or rheumatism.

5. In every case of pleurisy, or of persistent pain in the chest or shoulder, which can not be satisfactorily ascribed to other causes, tuberculosis should be suspected and a careful physical examination should be instituted to determine, if possible, the existence of a tuberculous process in the lungs, or elsewhere.

6. Even if physical examination in such cases proves negative, the patient should be regarded as tuberculous until the contrary is proved, and should at least be kept under prolonged observation and re-examined from time to time.

7. The tuberculin test may be relied on to confirm or to exclude the tuberculous nature of pleurisy in case of doubt.

8. The application of these principles will often lead to an earlier recognition of tuberculous disease of the lungs especially, and to the institution of treatment at a period which will in many cases secure to the patient most important advantages in his prospects for recovery.



## Boston Medical and Surgical Journal.

September 28.

- 33 Mechanism of the Normal Spine and Its Relation to Scoliosis. R. W. Lovett, Boston.
- 34 The Appendix Vermiformis. W. A. Brooks, Jr., Boston.
- 35 Early Diagnosis of Malignant Disease of the Stomach and Intestines. W. H. Robey, Jr., Boston.

## Lancet-Clinic, Cincinnati, Ohio.

September 30.

- 36 Mortality of Appendicitis. C. W. Barrett, Chicago.
- 37 Relation of the Medical Department of the United States Army to the Profession. W. C. Borden, U. S. A.
- 38 Ectopic Gestation—Case with Complications. A. Watkins, Little Rock, Ark.

## Annals of Surgery, Philadelphia.

September.

- 39 \*Dry Iodin Catgut. A. V. Moschcowitz, New York.
- 40 \*Dentigerous Cyst of the Lower Jaw. G. Barrie, Washington, D. C.
- 41 \*Endothelioma and Perithelioma of Bone. W. T. Howard and G. W. Crile, Cleveland.
- 42 \*Malposition of the Appendix as a Cause of Functional Disturbances of the Intestine. J. A. Blake, New York.
- 43 \*Radical Treatment of Cancer of the Rectum. J. A. Hartwell, New York.
- 44 Contusion and Laceration of the Mucous and Alar Ligaments and Synovial Fringes of the Knee-joint. C. P. Flint, New York.

39. **Dry Iodin Catgut.**—Moschcowitz has devised a modification of the Claudius method of preparing catgut which does not diminish the tensile strength of the catgut. The catgut is removed from the iodine solution at the end of eight days, and thereafter is kept dry and ready for use in a sterile vessel. Clinical work and experiments with this suture material so prepared demonstrated that it is absolutely sterile; that it is impossible to infect it by ordinary means, and that it does not contain sufficient iodine to act as an irritant on the tissues. Its tensile strength is superior to raw catgut and to that prepared by the sublimate-alcohol method. It is easily and cheaply prepared, and it is absorbed only after it has served the purposes for which it is intended.

40. **Dentigerous Cyst of Lower Jaw.**—At the age of 16 years, Barrie's patient first noticed a lump, the size of a small marble, below the lower left canine tooth, which slowly and gradually increased in size until a year ago, since which time it has rapidly enlarged. The canine tooth gradually became displaced, and lay horizontally on the enlarged alveolar border. The swelling extended from the anterior border of the masseter muscle on the right side to the angle of the jaw on the left. The skin was not inflamed. The man was unable to open his mouth beyond the space of 3 cm., and could not masticate any food. A mesial incision was made from the mucocutaneous border of the lip to the hyoid bone. The separation of the tissues disclosed an ugly looking necrotic cavity. The periosteum and bone substance on the anterior aspect of the mandible above, from the alveolar margin to the protuberantia mentalis below, and laterally so far as the tissues of the wound could be extended on either side, showed complete destruction of periosteum and bone. Sufficient room not being obtainable by the mesial incision, the lip was cut through, and lateral incisions were made below the chin, to the anterior borders of the masseter muscles on either side from the median incision, and the flaps reflected. The mylohyoides, geniohyoides and genioglossus muscles, with the periosteum, were then detached posteriorly; mucous membrane incised anteroposteriorly; the necessary teeth extracted; the jaw sawn through at the second molar on the right, and at the last molar tooth on the left side. The mucous membrane was brought together by running suture, thus closing the wound within the mouth. The detached mylohyoid muscles were brought forward to the chin wound and sutured. Impressions were made by a dentist of the teeth remaining in the stumps on either side of the jaw—two on the right and one on the left. From the impressions he made gold crowns, which were snugly fitted over the teeth; soldered to these crowns were two heavy strands of platinum wire bent to the shape of the mouth. Before application, this prosthetic measured from crown to crown 1 cm. more than the space between the teeth; that is to say, a line drawn from the molar on the right, across the tongue to the molar on the left, was about 1 cm. shorter than the prosthetic appliance. This acted as a splint and spring, gave no discomfort

to the patient, and prevented any contraction toward the middle line by the stumps. It also prevented falling in of the lower lip and allowed perfect cleansing of the mouth and mucous membrane line. At the end of four weeks the wire frame was encased in a hard rubber plate, which the patient is still wearing. This plate is grooved below in its whole length. An upgrowth of tissue is now taking place within the grooved space, which will give a firmer base for the plate, and later it is the intention to make a new plate, with teeth attached, for cosmetic and serviceable purposes. At present the patient gets along very well with the appliance as it is. He has no difficulty in removing and replacing the plate at will, so that it can be thoroughly cleansed.

41. **Endothelioma and Perithelioma of Bone.**—Howard and Crile gives a short résumé of previously reported cases, and also report four new cases, one a primary perithelioma of the left humerus, ending in spontaneous fracture, with metastasis on the tip of the nose, necessitating amputation of the humerus and tip of the nose. Death ensued on the third day. In the second case the tumor was situated in the left humerus, with metastases in the left temporal bone, the pleura, lungs and liver. The patient died about 7 months after the first fracture of the humerus. The third case was one of primary endothelioma springing from the lymph spaces and channels of the lumbar vertebrae, clavicle and ribs, with extensive metastases and a complicating chronic cholecystitis, with gallstones and thickening of the gall bladder. The fourth case was a primary lymphendothelioma of the left femur, with metastases in the inguinal lymph glands. The pathology, histogenesis and clinical history of these tumors are discussed in detail.

42. **Malposition of the Appendix.**—A number of patients operated on by Blake for supposed appendicitis were entirely relieved of their symptoms, yet on examination of the appendix no evidences of inflammation were found. In most of the cases, traction was exerted on the cecum through the appendix by a short mesoappendix; in a few cases the cecum seemed to be suspended by the appendix, being adherent behind the colon. Evidences of inflammation of the appendix were either wholly absent or so trivial as hardly to be sufficient to explain the symptoms. Hence, Blake ascribes the symptoms exhibited by these patients to the relation of the appendix and its mesentery to the cecum rather than to an inflammation of the appendix itself, even if the latter condition were found. He suggests that this relation may also explain the appendiceal pain observed in some cases of movable kidney in which appendicectomy gives relief. In enteroptosis a short mesoappendix may readily cause tugging on the appendix and cecum. Blake also intimates that the constant tug on the appendix and cecum is undoubtedly a cause of true appendicitis.

43. **Cancer of Rectum.**—Hartwell discusses 46 cases, in all of which the patients were operated on for the radical cure of cancer of the rectum, and two cases of inguinal colostomy (1 for cancer and 1 for syphilis of the rectum). Of the 46 patients, 44 were traced to their death or to the present time. A study of these cases shows a probable cure of about 16 per cent., counting freedom of return for three years as a cure. The youngest patient was 23 years old, the oldest 70 years. Seven patients died from the results of the operation, seven died from infection, five patients died from recurrence in less than two years and more than one, four patients died from recurrence in less than three years and more than two. One patient is alive after nine years and eight months; one after four years and six months; two after three years and six months; one after three years and two months; eight patients are alive after less than one year; one after less than two years, and one after less than three years. Hartwell says that an earlier diagnosis and a complete eradication of the growth, done after the following method, promises the most satisfactory results both as regards permanency of cure and functional integrity. An inguinal colostomy is first performed by drawing the sigmoid through an intermuscular incision just external to the left rectus muscle and dividing it between two ligatures. The point of division should be as low in the bowel as possible, thus leaving a large sigmoid pouch



as a reservoir above the new anus. The distal end is closed and dropped into the pelvic cavity, or, if indicated, may be fastened in the lower angle of the wound for the purpose of through-and-through irrigation. In this case, the lower segment must be left sufficiently long not to interfere with the radical incision to be done later. An incision is then made in the linea alba at the same level as the intermuscular incision, or, better, slightly above it and the anterior sheath of the rectus between the two incisions is raised up from the muscle. The proximal end of the gut, with its mesentery, is then drawn under this strong sheath over the rectus muscle and fastened into the skin and fascia wound in the middle line. This opening must not be too small, because it shows a tendency to contract and to form a stricture. The gut is tacked to the peritoneum where it emerges from the peritoneal cavity, and the skin and fascia wound is here closed. A protective dressing can be so applied as to insure almost complete primary union. It is well to insert a small catheter into the proximal gut for a distance of six or eight inches to facilitate the passage of gas during the first days following operation. Three weeks later the radical amputation is done. The patient is put in the exaggerated knee-chest position, which controls to a remarkable degree the venous oozing, and an incision is made from the third sacral vertebra downward to and around the anus. The anus is then tied with a purse-string suture, and the eradication of the growth and all the glands begun. The coccyx and one or two sacral vertebrae are resected, and the presacral tissues as high up as the second vertebra are pushed away from the bone, saving only the sacral nerves. This includes all the lymphatic glands and vessels which are apt to be infected. Ligation of the superior hemorrhoidal artery is next done, and then the gut is free posteriorly. It is now freed laterally and the peritoneum is opened when reached. This permits the drawing down of the rectum even up to the blind end, or, if the end was fastened in the colostomy wound, well up toward that point. In the former case, the whole lower segment will be removed; in the latter the gut is divided between two purse-string sutures, with the actual cautery and the upper end closed. This technic obviates the leaving of a piece of bowel closed at both ends, a procedure which has been shown to be dangerous. Beginning at the upper division, the gut to be removed is separated from its anterior and remaining lateral attachment from above downward, and finally removed in one piece, with all lymphatics and glands attached to it. The peritoneum is sutured, the closed end of the gut, if present, being fastened in the opening, the wound closed, and a small drain put in it. This method can be carried out with no fecal contamination to the wound, and the starting above and working downward has the advantage of avoiding cutting through the infected lymphatic tissues. This advantage is analogous to the one of beginning the removal of breast cancer at the most distal lymphatic glands and working toward the growth in the mammary gland. The detailed histories of the cases are given and the percentage statistics are tabulated.

**Bulletin Johns Hopkins Hospital, Baltimore.**  
*September.*

- 45 Cotton Mather's Rules of Health. W. S. Thayer, Baltimore.
- 46 Movability of the Heart Pneumothorax. W. J. Calvert, Columbia, Mo.
- 47 Endocarditis in Tuberculosis. H. T. Marshall, Baltimore.
- 48 \*Acquired Cyst of the Conjunctiva Containing an Embryonic Toothlike Structure. E. Stieren, Pittsburg, Pa.
- 49 The Occurrence of Micrococcus Zymogenes. W. G. Birge, Baltimore.

48. **Acquired Cyst of Conjunctiva.**—Stieren relates the case of a young woman, aged 16, who had a tumor on the left eyeball. The growth was first noticed when the patient was 10 years of age, since when it gradually increased in size. There was no pain, simply a disagreeable feeling. Under local anesthesia the tumor was shaved off with a cataract knife. The cyst contained a small quantity of straw-colored fluid and a well-formed, beautifully white incisor tooth.

**Medicine, Detroit, Mich.**  
*September.*

- 50 Bubonic Plague in the Philippine Islands from Its First Outbreak in 1899 to 1905. M. Herzog, Manila, P. I.
- 51 \*Talma's Operation for Cirrhosis of the Liver; Report of an Unsuccessful Case. W. Hessert, Chicago.

- 52 Motor Education in Convalescence and Invalid States. J. M. Taylor, Philadelphia.
- 53 Case of Traumatic Dementia. J. Grinker, Chicago.
- 54 \*Experience with the Serum Treatment in Exophthalmic Goiter. S. Kuh, Chicago.

51. **Talma's Operation.**—Hessert operated on a patient aged 42, who had been a heavy drinker for years, for atrophic cirrhosis of the liver, according to the method outlined by Talma, with the exception, however, that no scarifying was done. The omentum was pulled out and the wound sutured in layers. Some of the stitches held the omentum in place, the latter being spread out between the fascia and the skin so as to favor the establishment of collateral anastomosis. The patient died three months after the omentopexy. The observations made on this case and a review of the literature led Hessert to the following conclusions: 1. The Talma operation does not cure cirrhosis of the liver in advanced stages, but in about 40 per cent. of selected cases may ameliorate some of the symptoms, viz., ascites and hemorrhage. 2. Cases in which the liver was enlarged gave a mortality and a higher percentage of improvement than cases of atrophic liver. 3. Biliary cirrhosis associated with enlarged liver, jaundice, fever, and some ascites is best treated by cholecystostomy and drainage of the bile tracts. 4. Many of the cases which were generally improved by the operation differed in no way from some of those not improved, thus giving no guide for future selection of suitable cases. 5. Suture of the omentum between the layers of the abdominal wall gives a lower mortality and a higher percentage of improvement than merely suture to the parietes. 6. Splenopexy may supplant omentopexy. 7. Cases for operation should be selected carefully with regard to the indications and contraindications. Do not operate in advanced cases as a last resort. 8. Drainage increases the danger of septic peritonitis. 9. The operation is not indicated for ascites due to other causes than cirrhosis, and is contraindicated in the presence of renal or cardiac disease and when evidence does not exist that sufficient functional liver substance remains to maintain life.

54. **Serum Treatment of Exophthalmic Goiter.**—An experience with 11 cases of exophthalmic goiter receiving the serum treatment demonstrated that while serum is not a specific it is an excellent palliative. The change in the subjective condition of the patient is very striking. Within a few days after taking the first dose of the serum, every one of Kuh's patients felt much better; they were less nervous; the appetite was improved; the patient gained in weight, and the pulse was influenced more than by any other remedy employed in the treatment of the tachycardia of exophthalmic goiter. Kuh does not consider it very probable that the results from the serum can be permanent, but believes that in all likelihood these patients will have to continue taking the serum, or the treatment will have to be repeated from time to time if permanent results are looked for. In one of the cases reported the patient did not receive any serum for two and one-half years and remained in good condition all that time.

**Annals of Gynecology and Pediatrics, Boston.**  
*September.*

- 55 \*Curative Operation for Procidentia Uteri. E. H. Tweedy, Dublin.

55. **Curative Operation for Procidentia Uteri.**—The first step in Tweedy's operation consists in the removal of a large oval flap of mucous membrane from the anterior vaginal wall, combined with a transverse incision across the cervix, just below the bladder; the latter organ is separated from the cervix and the abdomen opened between it and the uterus. Access to Douglas' cul-de-sac is obtained by a transverse incision made in the usual manner, behind the cervix. These transverse incisions are connected at their extremities by lateral incisions as in the operation for vaginal hysterectomy. An assistant now pulls the cervix forcibly to the left side, while the forefinger passed in front of and the thumb passed behind the broad ligament are made firmly to grasp the base of this structure. The mucous membrane of the lateral fornix is now completely detached from the base of the broad ligament by means of a scissors curved on the flat; during this step the fingers protect the uterine artery and the ureter from injury. A similar procedure is adopted on the opposite side. The



bases of the broad ligaments with their ruptured fibrous bands are now brought into clear view; these robust fibrous bands, known as the *ligamenta transversali colli* of Mackenrodt, are composed of dense connective tissue firmly united to the supravaginal portion of the cervix, contain unstriated muscle fiber, and constitute by far the most important elements in keeping the uterus from prolapsing. A curved needle carrying a fine silk suture (No. 4) is passed through the base of the broad ligament near its pelvic extremity, and the other broad ligament is treated in a similar manner. When these ligatures are brought together and loosely tied in front of the internal os, the cervix is seen to be raised upward and backward—slung, as it were, between these reunited fibers of Mackenrodt's ligaments. The loose knot is now united so as to enable the cervix again to be brought down and to permit of its easy amputation. When this is accomplished and all hemorrhage controlled, the cervix is again pushed up, and the threads attached to the broad ligaments at either side of it are tied and knotted in front of and on a level with the internal os. The broad ligaments are still further secured in front of the uterus by uniting them to that structure with several fine silk sutures. The fundus of the uterus, with its intervening layer of peritoneum, is next secured to the anterior vaginal wall above the urethra, and the further steps of the anterior colporrhaphy completed. All that now remains is to perform Hegar's colpoperineorrhaphy and to unite the vaginal skin to that of the cervical mucous membrane.

56. **Dermatitis Herpetiformis in Children.**—Bowen reviews a report of 6 cases of bullous dermatitis following vaccination made several years ago, and adds 9 cases occurring in children varying in age from 3 to 10 years. The vaccination preceded the outbreak of the skin affection in but 3, and in 2 of these cases the interval of time between the vaccination and the first outbreak was so long as to render a causative association extremely doubtful. Bowen believes that in a considerable number of cases of dermatitis herpetiformis, as it occurs in children, the element of multiformity is wholly lacking, the disease showing itself by the recurrence of groups of vesicles and bullæ without other lesions. In a majority of cases the subjective symptoms, such as itching, burning, pain and tingling, are either absent or very slightly accentuated, so that this feature can not be considered one of the four cardinal symptoms of the disease in children. In certain cases vaccination may be the exciting cause of the eruption, not in the sense of an infection, but as one of probably many agents which may produce this train of symptoms in some people. Certain regions of the body are especially affected by the eruption, viz., the parts about the nose, mouth and eyes, the backs of the hands and wrists, the backs of the ankles and feet, and the genital region. Unna's "hydroa puerorum" is to be placed by itself, either as a distinct variety of dermatitis herpetiformis or as an independent affection.

#### Journal of Cutaneous Diseases, New York.

September.

- 56 Dermatitis Herpetiformis in Children. J. T. Bowen, Boston.
- 57 \*Treatment of Elephantiasis. H. C. Curl, U. S. N.
- 58 Case of Keratosis Follicularis. H. C. Curl, U. S. N.
- 59 Successful Treatment of an Extensive Case of Lupus Vulgaris with the X-Rays. J. F. Schamberg, Philadelphia.

57. **Treatment of Elephantiasis.**—Curl reports a case of elephantiasis of the leg from which 7 wedge-shaped strips of skin and subcutaneous tissue were removed, 2 transversely and 5 longitudinally, with excellent results.

#### Surgery, Gynecology and Obstetrics, Chicago.

August.

- 60 Cysts of the Thyroid Gland. A Clinical and Pathologic Study. J. C. Bloodgood, Baltimore.
- 61 Spina Bifida, with Report of Three Hundred and Eighty-five Cases Treated by Excision. J. E. Moore, Minneapolis.
- 62 Status Lymphaticus and the Ductless Glands. R. Park, Buffalo.
- 63 Amputation in Diabetic Gangrene. C. G. Cumston, Boston.
- 64 Conservation of the Parietal Motor Nerves in Abdominal Section. V. P. Blair, St. Louis.
- 65 Common and Hepatic Duct Stones. L. L. McArthur, Chicago.
- 66 De Laskie Miller. A Memorial Address. J. C. Webster, Chicago.
- 67 Pelvic Infections in Women. T. J. Watkins, Chicago.
- 68 Prolonged Lavage a Preventive of Ether Vomiting After Operation. G. S. Brown, Birmingham, Ala.
- 69 Safe, Simple and Sure Cure for Ganglion. B. B. Cates, Knoxville, Tenn.

#### Archives of Otology, New Rochelle, N. Y.

August.

- 70 Nature and Aim of Objective Measurement of Hearing, and the Use of the Objective Audiometer. Professor Ostmann, Marburg-on-the-Lahn.
- 71 Study of the Disturbance of Function in Acute Perforative Otitis Media. Ostmann, Marburg.
- 72 Annual Report of the Otolaryngologic Clinic and Polyclinic in Basel. E. Oppikofer, translated by A. Wiener, New York.
- 73 Two Cases of Mastoidectomy, Sinus Thrombosis, Ligation and Resection of Jugular Vein; Recovery. J. F. McKernon, New York.
- 74 Disadvantages of the Dry-gauze Dressing After the Operation for Septic Thrombosis of the Lateral Sinus. H. Gifford, Omaha, Neb.

#### Texas State Journal of Medicine, Fort Worth.

August.

- 75 Necessity for Better Preparation for Emergency Work by the Country Practitioner. F. J. Bell, Tyler, Texas.
- 76 Importance of Attention to So-called Minor Details in Surgery. W. B. Russ, San Antonio.
- 77 Parasites in the Blood. A. E. Thayer, Galveston.
- 78 Pathology of Malaria. W. Shropshire, Yoakum.
- 79 Differentiation of Malarial Parasites by the Microscope. J. T. Moore, Galveston.
- 80 Frontal Sinusitis. W. R. Thompson, Ft. Worth.
- 81 Care of Epileptics. J. H. Eastland, Abilene, Texas.

#### Texas Medical News, Austin.

August.

- 82 General Diseases Among the Insane. M. L. Graves, San Antonio.
- 83 The Mosquito as an Etiologic Factor in Disease. D. Munroe, Cameron, Texas.
- 84 Delay of Old Age and the Alleviation of Senility. C. G. Stockton, Buffalo.

#### Medical Sentinel, Portland, Ore.

August.

- 85 Examination and Commitment to State Hospitals of the Insane. W. J. Howells.
- 86 Psychological Phases of Anesthesia. E. Crutcher, Butte, Mont.
- 87 Neurone Theory by the Latest Authorities. R. L. Gillespie, Crystal Springs, Ore.
- 88 American Physicians. G. Barr, Portland.

#### Pennsylvania Medical Journal, Athens.

August.

- 89 Brain Tumor and Trauma. E. W. Holmes, Philadelphia.
- 90 \*Advantages of Performing Capital Operations in Selected Cases without Anesthesia. J. J. Buchanan, Pittsburg.
- 91 Study of the Contractures in Organic Nervous Diseases and Their Treatment. T. H. Weisenburg, Philadelphia.
- 92 Prevalence of Malaria in Pittsburg. J. A. Lichty, Pittsburg.
- 93 \*Operative Treatment of Tuberculous Rectal Fistula in the Tuberculous. J. C. Brick, Philadelphia.
- 94 Obstetric Superstitions. W. C. Kissinger, New Castle.
- 95 Case of Primary Cancer of the Lung. J. P. Dalbey, Gettysburg.

90. See abstract in JOURNAL, Oct. 29, 1904, page 1332.

93. Id. July 8, 1905, page 129.

#### Medical Examiner and Practitioner, New York.

August.

- 96 Medical Examiner and His Work. D. Lewis, Chicago.
- 97 Relation of the Life Insurance Examiner to Local Sanitation. J. R. Wetherbee, Portland, Ore.
- 98 Special Instruction of Medical Students in the Methods of Examination for Life Insurance. W. R. Cluness, San Francisco.
- 99 We Can Do Better Work for Our Companies. Do They Want It? W. Moore, New York.
- 100 Collision or Collusion Between Agent and Examiner. W. F. Amos, Portland, Ore.
- 101 Influence of Heredity in Life Expectation. J. Nevin, Jersey City, N. J.

#### Journal Medical Society of New Jersey, Newark.

September.

- 102 Prophylaxis in Gynecology. G. H. Balleray, Paterson, N. J.
- 103 Ectopic Gestation. E. Staehlin, Newark.
- 104 Therapeutic Agents of Animal Origin. G. E. Reading, Woodbury, N. J.

#### Louisville Monthly Journal.

September.

- 105 Acute Articular Rheumatism. C. D. Mansfield, Stanton, Ky.
- 106 Cholesteatoma. A. O. Pfingst, Louisville.
- 107 Nephroureterectomy. J. G. Sherrill, Louisville.

#### Vermont Medical Monthly, Burlington.

July 25.

- 108 Acute Articular Rheumatism. L. W. Burbank, Cabot.
- 109 Serums and Animal Extracts in Therapy. G. F. B. Willard, Vergennes.

#### Woman's Medical Journal, Toledo, Ohio.

August.

- 110 Pneumococcus General Infection—Intestinal Tract, Lungs, Meninges. Recovery. M. M. S. Johnstone, Chicago.
- 111 Uterus-Biseptum. H. Ruud, Chicago.

#### Journal Mississippi State Medical Association, Vicksburg.

September.

- 112 Beginning of Indigestion. H. M. Folkes, Biloxi.
- 113 Pulmonary Edema. T. J. Ray, Centerville.
- 114 Diagnosis of Pleurisy with Effusion. E. A. Cheek, Arcola.



- 115 Infections. H. L. Sutherland, Rosedale.  
 116 Ileocolitis, Its Treatment. B. W. Inman, Leota.  
 117 Autointoxication. J. W. Gray, Jr., Clarksdale.

### Buffalo Medical Journal.

September.

- 118 Irritability of the Bladder. J. H. Dowd, Buffalo.  
 119 Kidney Disease. N. W. Wilson, Buffalo.  
 120 Eye Symptoms of Infantile Scurvy. I. Snow, Buffalo.

### FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal.

September 16.

- 1 X-Ray Diagnosis of Renal Calculus. M. Smart.
- 2 Treatment of Ringworm of the Scalp by the X-Rays. J. M. H. Macleod.
- 3 Recent Cholera Epidemic in Persia. J. Scott.
- 4 \*Rats in Relation to Plague. B. Skinner.
- 5 \*An Investigation on the Regeneration of Nerves. B. Kilvington.
- 6 Probable Explanation of Some Drowning Accidents. H. Lawrie.
- 7 Remarkable Case of Wound of the Abdomen with Prolapse of the Large Intestine; Recovery. O. W. Andrews and F. Cock.
- 8 \*Method of Guarding the Perineum in Labor. W. J. Caie.
- 9 Case of Quadruplets. L. W. Roberts.
- 10 Primary Malignant Growth of Liver. J. B. Bays.

4. See abstract in JOURNAL, Sept. 23, 1905, page 947.

5. **Regeneration of Nerves.**—In this article Kilvington reports the results of experiments on dogs. From these he concludes that both clinical and theoretical considerations point to nerve splitting being preferable to suturing two distal nerves directly to the central end of one of them. He suggests that nerve splitting be made use of in suitable cases of anterior poliomyelitis.

8. **Method of Guarding the Perineum in Labor.**—Caie says that in the hands of an expert obstetrician rupture of the perineum should be a very rare accident. He states that the various methods of safeguarding the perineum now in use are weak in the following points: (a) In attempting to pull forward the vertex by passing the left hand between the thighs of the mother and employing traction on the scalp. (b) In "supporting the perineum" in the direct method by pressure thereon of the concavity between the thumb and forefinger of the right hand. (c) In endeavoring to push the fetal head forward by the indirect method either by inserting two fingers in the rectum or by pressure on the anus. (d) In the delivery of the shoulders. The following is the method which he has employed successfully:

When the fetal head is moderately distending the perineum, the latter and the parts adjacent are thoroughly dried with a hot sterilized towel; all moisture must be wiped off. At the moment when the tension on the perineum is approaching its maximum—this can be determined easily with a little experience—the left hand of the accoucheur is employed in pressing slightly on the vertex to prevent any premature or sudden expulsion of the head; there is no necessity for passing the arm between the thighs of the mother. The right hand then grasps the perineum in the manner alluded to in (b), but with this important difference: that between it and the perineum is interposed a hot sterilized towel, in such a way that the edge of the concavity between the thumb and the index finger, the edge of the towel, and the lip of the perineum are just in line with each other, a double fold of the towel to fit into the apex of the concavity having previously been made, to supply the deficiency alluded to at that point. Firm pressure is then exerted at every pain, through the bitemporal diameter of the fetal head, if there appear to be any undue stretching or tendency to laceration. No attempt is made to push the head forward until the occiput ceases to engage behind the pubic arch. By these maneuvers three purposes are served:

1. By firm pressure through the bitemporal diameter premature extension of the head is prevented, without retarding its progress.
2. By means of the drying of the parts and the hot towel a much firmer grip, and consequently much greater support, of the perineum can be obtained than could possibly be produced by the bare hand on a surface which is usually very slippery.
3. Uniform pressure is obtained on all parts of the perineum, and the part where there is most stretching receives its due measure of support.

The author calls attention to the danger of laceration from the shoulders and says that if after the head is born gentle traction is made backward the next pain will generally cause the anterior shoulder to free itself from its position behind the pubic arch, while the perineum lies over the posterior shoulder and is subjected to only a moderate degree of tension. If the outlet is small, the anterior arm can usually be extracted with little difficulty after the shoulder, thus substituting a much smaller diameter of the child. If the posterior shoulder be allowed to be born first, the anterior shoulder remains firmly fixed behind the pubic arch, while the posterior shoulder

presses against the perineum and again dilates it to its utmost limit.

### The Lancet, London.

September 16.

- 11 \*Angina Pectoris and Allied Conditions. T. Oliver.
- 12 Pneumothorax in Tuberculous Subjects. F. P. Weber.
- 13 Primary Tuberculosis of the Pharyngeal Tonsil, Associated with Tuberculous Glands. F. Ivens.
- 14 Eclampsia with Death on the Sixteenth Day After Delivery from General Septic Peritonitis Due to Rupture of Abscess in the Spleen. J. C. H. Leicester.
- 15 \*Germ Centers of Lymphatic Glands and Secondary Carcinomatous Deposits. J. B. Cleland.
- 16 Aneurismal Dilatation of the Right Subclavian Artery, the Innominate and the First Part of the Common Carotid. H. G. Barling.
- 17 Industrial Mercurial Poisoning. H. J. Walker.
- 18 Tuberculous Ulcerations of the Ascending Colon Simulating Appendicitis. G. G. Turner.
- 19 Primary Suppurative Parotitis. J. W. Carr.
- 20 Congenital Hypertrophic Stenosis of the Pylorus; Treatment by Gastric Lavage with Complete Recovery. A. J. Blaxland.
- 21 Acute Illness Following Inoculation with Antityphoid Vaccine. W. J. Lindsay.

11. **Angina Pectoris and Allied Conditions.**—Oliver reviews at some length the varieties of angina pectoris, the symptomatology and the pathology. In regard to treatment he says that for patients with pseudoangina much can be done. In all cases of angina, whether true or false, attention should be paid to the condition of the stomach and bowels. Dyspeptic troubles must be rectified and remedies given to check decomposition of food to prevent flatulence and to relieve constipation. Tobacco smoking and the use of alcohol must be entirely prohibited in some people and reduced to a minimum in others. In true angina the patient is living on the brink of a precipice and all worry and anxiety should be avoided. Oliver believes that amyl nitrite is the most useful drug in this condition and that inhalation of a few drops in many cases will cut short an attack. When there are signs of a failing heart behind the peripheral arterial constriction, he thinks it is often desirable to combine digitalis or nux vomica with, for example, ethyl nitrite. The other nitrites, such as nitroglycerin (liquor trinitrini) he thinks are equally useful. In certain individuals with angina pectoris in whom the arteries are so diseased that they do not respond equally over the body to the stimulus of the amyl nitrite, this preparation and its congeners do harm. The arterial tension is already low, and as a consequence some unpleasant effects are produced. In some cases of true angina, morphin or other opium preparations are the only drugs which give relief. In many cases, even when there is no syphilitic taint, iodid of potassium will lengthen the interval between the attacks.

15. **Germ Centers of Lymphatic Glands.**—Cleland calls attention to the resemblance between the "germ centers" of lymphatic glands and secondary carcinomatous deposits. He states that there is no doubt that the former have often been mistaken for the latter, even by competent men, and that cases in which sections from the primary lesion have left the question of malignancy unsettled have been finally classified as such on the finding these apparently secondary deposits in the adjacent lymphatic glands. He states that the cells of which these so-called germ centers consist are larger than the surrounding lymphocytes and have more protoplasm and a larger vesicular nucleus. The whole area stains, too, to a much lighter degree than the parts around. Mitotic figures are nearly always numerous and at the edge of the area the cells rapidly, but by distinct gradations, become converted into lymphocytes, so that no hard and fast line of demarcation limits the area. The areas are usually small and indistinctly circumscribed and in such conditions are not likely to be mistaken for a cancerous growth. In certain circumstances, however, associated with chronic irritation, they assume a most striking appearance. This is associated with increase of size and great increase of mitotic activity in the areas and suggests the idea that it is a form of compensatory hypertrophy. These hypertrophied germ centers form very sharply-defined spherical or oval areas, taking a much lighter stain than the parts around and about as deep as that of an epithelial deposit from the breast. The cells composing them are of nearly uniform size and a little smaller and much more regular than those of cancer; they are closely packed together with very little stroma detectable be-



tween them, though an occasional capillary vessel may be noticed; the nucleus resembles closely that of an epithelial cell; and mitoses are often more numerous or as numerous as in the cancerous growth. All these characters show how hard it may be to distinguish the one from the other. The most important difference between the two is, however, found in the boundary zone of each. The somewhat larger and more irregular cells of the carcinoma are separated sharply and distinctly and often by a thin zone of fibrous stroma from the surrounding lymphocytes and each individual cell at the periphery can be relegated at once and satisfactorily into one or other class of these two. In the outer zones of the germ centers, both germ center cells and lymphocytes tend to be arranged in concentric rings formed of a delicate fibrous tissue and all gradations are seen between undoubted germ-center cells, on the one hand, and undoubted lymphocytes on the other. Under a low power of magnification the germ center often seems sharply delimited from the surrounding parts and the cancerous deposit is less distinctly outlined; with higher magnifying powers this appearance is reversed and the germ center is found, on careful observation, to grade into the lymphatic tissue around while the carcinomatous growth is sharply defined. If during an examination of the lymphatic glands in a doubtful case of carcinoma the possible presence of these hypertrophied centers be borne in mind, it is not likely that any mistake will be made; but should an area of cells be encountered which gives rise to any doubt a careful consideration of the various points of difference enumerated above will enable the observer to satisfy himself as to its nature and may relieve also the mind of the surgeon and of his patient of the distressing dread of a recurrence of a disease which is not there.

#### Journal of Tropical Medicine, London.

September 15.

- 22 Methods Employed by Kelantan Malays in the Treatment of Puru or Yaws. J. D. Gilmlette.
- 23 Zambesi Ulcer. L. E. Ashley-Emile.
- 24 \*Effect of Pilocarpin in Beri-Beri (Wet Type). P. N. Ger-rard.
- 25 Malignant Disease In South Formosa. J. L. Maxwell.

24. **Pilocarpin in Beriberi.**—Gebhard reports a case in which pilocarpin was used in beriberi with good results. The most interesting point, he states, was the rapidity with which the edema disappeared after the administration of the drug, as well as the marked improvement in the disease itself. In the case reported, the patient was put on a tonic preparatory to being discharged from the hospital and he immediately suffered a relapse. He was again given pilocarpin and the symptoms subsided.

#### Indian Medical Record, Calcutta.

August 23.

- 26 Hygiene and Therapeutics in England In the Days of Queen Elizabeth. J. Knott.
- 27 Chloroform as a General Anesthetic and Its Administration. R. V. Bapat.

#### Dublin Journal of Medical Science.

September.

- 28 Sedatives and Narcotics in Treatment of the Insane. S. J. Cullum.
- 29 Fracture of the Tibia. E. H. Bennett.
- 30 Case of Intestinal Obstruction by a Gallstone. T. E. Gordon and W. M. A. Wright.

#### Glasgow Medical Journal.

September.

- 31 Leucocythemia, Lymphadenoma and Allied Diseases. R. Muir.
- 32 Perforation of an Ulcer of the Duodenum, with Remarks on the Diagnosis and Treatment of this Affection. C. G. Cumston, Boston, Mass.
- 33 Old Glasgow Hospitals. J. Erskine.

#### Journal of Laryngology, Rhinology and Otology, London.

September.

- 34 Considerations Regarding Ligation of the Internal Jugular Vein on Account of Ear Disease. D. Grant.
- 35 Continuity of the Several Cavities of the Middle Ear, with Observations on Their Development and on the Treatment of Acute Septic Inflammation of the Tympanic Cavity (so-called Otitis Media). A. H. Young and W. Milligan.

#### Presse Médicale, Paris.

- 36 (No. 72, September 9.) \*L'épistaxis grave des artères scléreuses. E. Escat.
- 37 \*La leucémie chez les animaux. P. E. Weil and Clerc.
- 38 (No. 73.) Le "quartier des tuberculeux" à l'hôpital Boucicaut. M. Letulle.
- 39 \*Alcool et strychnine. Alcool et venin. C. Valentino.
- 40 Faradisation dans les syncopes chloroformiques. J. M. Villotte.

36. **Threatening Epistaxis in Arteriosclerosis.**—Escat has had opportunity to make careful rhinoscopic examination in 43 cases of threatening epistaxis in arteriosclerotic subjects. It has revealed that the bleeding came from sclerous degeneration of the artery of the nasal septum. This sphenopalatine artery divides generally into several branches and runs a superficial course in the lower part of the septum. He gives illustrations of the points where the hemorrhage usually occurs and also where secondary hemorrhage may be expected. When the hemorrhage does not yield to the ordinary measures, he advises the application of cotton saturated with hydrogen dioxide. This is left for twenty-four hours or longer in severe cases. When removed the points can be thermocauterized or chromic acid may be applied and the nose tamponed. When the tampon is finally removed the patient must be supervised. He should carry cotton constantly with him in case of a recurrence, and should refrain from blowing his nose. Penghawar is particularly useful for a provisional tampon. Adrenalin should be avoided in arteriosclerosis. If it is impossible to discover the focus, the entire wall of the septum should be cauterized and the passage tamponed with penghawar or cotton. Posterior tamponing, he thinks, should be completely rejected.

37. **Leukemia in Animals.**—Weil has observed various forms of leukemia in 5 dogs and in a horse in the last five years, all old animals. Nocard reported 9 horses, 5 cows, 22 dogs and 1 cat affected with leukemia. The picture was about the same as in man, with the exception of 2 out of Weil's 5 dogs. The symptoms and blood findings in these differed materially from those known in man. Attempts to transmit the leukemia from one animal to another have always proved failures. One of the dogs was treated with the x-rays, and the results were similar to those observed in the clinic. The leucocytes dropped from 163,000 to 56,000; the polynuclears fell from 95 to 80 per cent., while the macrophages increased from 1 to 14 per cent. Examination of sections of tumors from the living animal showed zones of degeneration in the peripheral regions which had been exposed to the action of the rays, with accumulation of macrophages. These findings suggest that the curative action of the rays is due chiefly to leucolysis and macrophagia.

39. **Alcohol and Strychnin, Alcohol and Venom.**—Valentino has been continuing his experimental research which has demonstrated that alcohol owes its action on the brain to its dehydrating power. It is taken up by the brain in larger amounts than by other tissues, and the dehydration is more intense in the brain on this account, and is the cause of the alcoholic coma. His experiments with strychnin and with snake poison have shown that the dehydrated brain does not take up these poisons as readily as the normal brain. Animals under the influence of the dehydration consequent on injection of large doses of alcohol were able to bear otherwise fatal doses of strychnin or snake poison without injury. The alcohol dehydrating the nerve substance causes an influx of serous fluids into and through the cells, and this washes away the poison seeking to fasten on the cells. These experiments confirm the traditional benefit of large doses of alcohol in snake poisoning, and show that the stupor of drunkenness is due to dehydration of the nerve centers by the alcohol.

#### Semaine Médicale, Paris.

- 41 (XXV, No. 35.) \*La théorie des ions et ses applications en biologie. L. Ambard and A. Mayer.
- 42 (No. 36.) Pure Food and Drug Legislation in France.—La répression des fraudes dans la vente des marchandises et des falsifications des denrées alimentaires et des produits médicamenteux en France.
- 43 \*De l'hémophilie chez la femme (in women). R. de Bovis.
- 44 (No. 37.) \*Du paludisme à forme de péritonite aiguë. V. Gillot.

41. **Ion Theory in Biology.**—The ultramicroscope has shown that colloids are merely particles in suspension, too small to be seen by an ordinary microscope. Recent researches have demonstrated that precipitation is dependent on the number and valency of the ions in the liquid as well as whether these ions are electrically negative or positive. Des Banceels has lately succeeded in activating the pure pancreatic juice without kinase. Pure pancreatic juice does not digest albumin.



He conceived the idea that it might be possible to make it digest albumin by precipitating the pancreatic juice on the albumin according to the principles of colloid precipitation. He used for the purpose salts of a bivalent base, but still there was no tendency to digest the albumin. He finally succeeded by sensitizing the albumin with another colloid, toluidin blue. This stains the albumin, but does not digest it, but modifies it in such a way that the pancreatic juice then attacks and digests it. Ambard refers also to Loeb's experiments which showed that certain sea animals die in water containing only monovalent ions, while they thrive in water containing small amounts of bivalent salts or mere traces of trivalent salts. The theory of ions seems to throw light on the biologic phenomena of agglutination, hemolysis and digestion, which scientists are now striving to explain by purely physico-chemical laws. The recent international congress on radiology of Belgium was officially entitled "Congrès de Radiologie et Ionisation."

**43. Hemophilia in Women.**—De Bovis reviews the literature on the subject of hemophilia and its transmission through generations. He devotes a chapter to its effect on the genital life, the literature showing that pregnancy is rather favorable than otherwise to hemophilic women, the blood apparently becoming less persistently fluid. In 150 cases of delivery in hemophilic women, excessive hemorrhage occurred immediately afterward in 69. In 2 cases the mothers were unable to nurse their children, as it seemed to increase the tendency to hemorrhage. Abortions are noted in the history of some hemophiliacs. It is possible that hemophilia may exist in a rudimentary "fruste" form. In a case under De Bovis' observation a iv-para suffered from uterine hemorrhage during a fifth pregnancy. Artificial evacuation of the uterus was suggested, but the curetting was followed by uncontrollable fatal hemorrhage. The patient was not a hemophilic in the strict sense of the word, but nothing except the hemophilic diathesis can explain the uncontrollable hemorrhage in this case. De Lee has also reported a case of fatal hemorrhagic diathesis with premature detachment of the placenta, and yet the uterus had contracted. Ahlfeld and Switalsky have also reported similar cases, all distinguished by postpartum hemorrhage occurring in a woman whose menses were always copious, with a history of abortions or of hemorrhagic accidents in herself or in some relative. In De Bovis' service during 1903 there were 476 deliveries. The women had a record of menstruation for more than five days in 153 cases and of less than five days in 323. Postpartum hemorrhage occurred in 13 per cent. of the former and in only 8 per cent. of the latter. The hemophilic tendency may also manifest itself at puberty and at the menopause, remaining latent at other times. Hemophilia, therefore, is a condition which occurs much more frequently than is generally supposed, and women are affected as often, if not oftener than men, but the tendency does not reveal itself in women except at times of physiologic stress naturally tending to hemorrhage. At other times it may be that menstruation acts as a kind of safety valve. Groslik and Floderus have collected 43 cases of hemophilic hematuria, and Kroukovsky has related a case of bleeding from the nipple for two years in a woman of 52 who had nursed ten children. De Bovis thinks that marriage should be forbidden in families of notorious bleeders, both to men and women. He has tried injections of gelatin in one case, but without any result. He ascribes the occasional success of general treatment to the fact that the patients are usually neuropathic. The hemorrhages ceased in Anderson's almost moribund patient when she was told to drink "all the champagne she wanted." Brook reported in 1901 an attempt at "antenatal treatment of hemophilia." He administered alternately to a hemophilic woman during her pregnancy calcium chlorid, strychnin, iron and arsenic, and the results apparently were a complete success. The main reliance in the presence of hemophilic bleeding is on very hot injections, swabbing with adrenalin and tamponing. Gelatinized dressings might also be used, as suggested by Sahli, or Henkel's plan of compressing with forceps the uterine arteries at the base of the broad ligaments. Steam cauterization of the uterine cavity might also be tried, and, as a last resort, ablation of the bleeding organ. It is generally

noticeable that hemophiliacs tolerate operation on the large arterial trunks better than superficial wounds. He relates a number of instances of this paradoxical fact, and remarks that it justifies hysterectomy in case of threatening menorrhagia or metrorrhagia. In 10 cases of death from puerperal hemorrhage in hemophiliacs, 2 occurred after premature delivery and 3 after abortion. The best plan is to await spontaneous expulsion or natural termination of the pregnancy, ready for any emergency, even for hysterectomy.

**44. Malarial Peritonitis.**—Gillot has had occasion to observe several cases of what was apparently acute peritonitis, suggesting perforation in one instance, but the laparotomy revealed the absolute soundness of the peritoneum and intestines. The blood was not examined in this case, but in another, presenting similar symptoms, examination of the blood revealed the parasite of malaria and recovery was rapid under quinin. He urges the possibility of a malarial origin for the syndrome of acute peritonitis occurring in a man or woman in a malarial country or known to have malarial antecedents, even if no parasites are found in the blood. The quinin will not do much harm, even if the peritonitis is not of a malarial nature. In a woman in the fifth month of pregnancy, the symptoms of peritonitis subsided after subcutaneous injection of .75 gm. of quinin, but in his other cases he injected twice this amount. One patient required three repetitions of this dose in the course of a week before convalescence was finally established, although marked improvement followed each dose.

#### Archiv f. klinische Chirurgie, Berlin.

Last indexed page 293.

- 45 (LXXVII, No. 1.) \*Zur Pathologie und Therapie der Hirschsprung'schen Krankheit (Megacolon congenitum). G. Perthes.
46. \*Surgery of Kidney.—Ueber Indikationen und Resultate der Nierenexstirpation, speziell bei Nierentuberkulose. T. Rovsing.
- 47 \*Rückblick auf die Nierenchirurgie seit Einführung des Ureterenkatheterismus. L. Casper.
- 48 \*Nephrectomies for Tuberculosis of Kidney and Functional Diagnosis.—Welchen Einfluss haben die funktionell diagnostischen Methoden auf die Sterblichkeit der Nephrektomien wegen Nierentuberkulose gehabt? J. Israel.
- 49 \*Ueber Prostactomie. C. Czerny.
- 50 Congestive Hyperemia for Acute Inflammations.—Das Verfahren der Stauungshyperämie bei akut entzündlichen Krankheiten. A. Bier.
- 51 \*Present Status of Spinal Anesthesia.—Ueber den jetzigen Stand der Rückenmarksanästhesie, ihre Berechtigung ihre Vorteile und Nachteile gegenüber anderen Anästhesiemethoden.—Id.
52. \*Ueber die Naht von Lungen Wunden (suture). C. Garré.
- 53 100 Fälle funktioneller Nieren Diagnostik. E. Glaser.
- 54 Ueber Elephantiasis lymphorrhagica des Penis und des Skrotums infolge narbiger Unterbrechung der inguino-cruralen Lymphbahnen. G. Negroni and A. Zoppi.
- 55 Die accessoirischen Gänge am Penis (passages). A. Stieda.
- 56 Ungewöhnliche Form der Verhornung bei einem Hautcarcinom. P. Glimm.
- 57 Zur Radikal Operation des Nabelbruches (umbilical hernia). R. v. Baracz.
- 58 \*Injuries from Japanese Firearms.—Ueber Verletzungen durch japanische Geschosse. J. B. Seldowitsch.
- 59 Die Aetiologie der indirecten Metatarsal Fracturen. A. Kirchner.
- 60 Bruch der unteren Epiphyse des Radius bei Automobil Mechanikern (fracture). C. Ghillini.
- 61 \*Eine neue Methode der Sterilisation chirurgischer Messer (instruments). O. Grosse.
- 62 Ein chirurgischer Universal-Sterilisator.—Id.
- 63 Ein scheinbarer Bruch des Os navicularis tarsi (apparent fracture). Momburg.

**45. Congenital Megacolon.**—Perthes describes in detail a case in which he restored a lad of 15 to health after five laparotomies in the course of three years. A valve formation in the sigmoid flexure was the principal factor in the trouble. Examination of the cadaver in another case showed a somewhat similar mechanism, as also was discovered in a third case. It is possible for the mechanical obstruction to be a valve formation somewhere in the intestines, generally in the flexure, or it may be the result of multiple windings or folds. Volvulus of the flexure has also been observed. He concludes from the lessons learned from his case and from the autopsy findings that in another case of congenital megacolon, not due to a stricture, he would proceed to make a wide artificial anus in the descending colon. He would then empty the flexure and the colon during the next few days by cautious irrigation from the rectum. The shape of the abdomen and of the thorax is altered so much by the relief from the distension that it is wise to wait a few weeks or months



before attempting further interference. During this period the existence of the valve in the flexure is verified, and it is removed by a laparotomy after the flexure and colon have been rinsed clean from the new anus. Colopexy or resection of the part of the flexure, with or without invagination, should then be done to meet the indications. If further experience confirms what he thinks is the comparative frequency of valve formation in the flexure as the cause of Hirschsprung's disease, then operative treatment offers promise of fine results.

**46 to 49. Functional Diagnosis of Urinary Apparatus and Surgery.**—The main points in these various communications have been summarized in previous articles by the writers and abstracts published in these columns.

**51. Spinal Anesthesia.**—Bier is proverbially cautious, but he now affirms that although spinal anesthesia is yet far from being perfected, it is already sufficiently advanced for general adoption, especially in cases in which total anesthesia is considered dangerous. It is not entirely free from danger; no intoxication of any kind is absolutely harmless, and spinal as well as general anesthesia is an intoxication. He calls attention to the remarkable way in which the organism tolerates under anesthesia much more severe injuries than without it. Unilateral pneumothorax, for instance, in case of resection of the thoracic wall, or removal of a cyst in the lung, scarcely affects the pulse and respiration in the anesthetized subject. Experiments on dogs showed that they were able to survive being shot at several times until they succumbed to the effects of the hemorrhage; in unanesthetized animals the first shot generally kills, more from psychic shock than from the wound inflicted. Spinal anesthesia reduces the sensibility to shock the same as general anesthesia in these circumstances. Spinal anesthesia, he proclaims, is especially indicated for elderly and debilitated patients. They bear it well and are able to eat at once after the operation. Its superiority in these cases is particularly manifest in comparison of the condition after spinal and general anesthesia for removal of carcinoma of the rectum. The "spinal" patients appear as if they had passed through merely a minor operation, while the "generals" are sick and miserable for days. He is convinced that spinal anesthesia will materially reduce the mortality in these cases. It is a great advance in military and in veterinary surgery, and will undoubtedly aid in physiologic experiments. Improved technic has reduced the dangers to the vanishing point. During his last 300 cases the spinal anesthesia failed in only 4 per cent., and excluding the cases in which the technic was at fault, the failures were in only 2.33 per cent. The moral effect of being a witness to the operation does not seem to detract from its use, as patients who have submitted to both the spinal and general anesthesia almost invariably express their preference for the former, especially the male patients. The addition of a suprarenal preparation to the cocaine or stovaine he regards as the most important progress in the technic. He has not had a serious mishap in his 305 cases of spinal anesthesia with this technic.

**52. Suture of Wounds of the Lung.**—Garré has reviewed 700 cases of injuries of the lungs recorded in recent years. He found that 40 per cent. of the 700 cases terminated fatally under conservative treatment. More than half of the 37 cases of rupture of the lung terminated fatally, 38 per cent. of the 100 stab wounds, and 30 per cent. of the 535 bullet wounds. He points to these figures as justifying surgical intervention, and describes a case in which he sutured a ruptured lung for nearly 7 cm., and beheld the previously collapsed lung in the almost moribund patient, a lad of 11, reassume its functions at once. He summarizes the eight published cases of stab or bullet wounds on record treated by suture. Six of the patients recovered. In conclusion he outlines the technic, urging a broad incision, and suture of the lung tissue with fine silk, not drawing the thread very tight.

**53. Injuries from Japanese Firearms.**—Seldowitsch graphically describes his surgical experiences at Tieling after the battle of Liao-yang. His observation has convinced him that firearm wounds of skull and brain—to which his article is principally devoted—require operative intervention almost without exception. The prognosis is bad, but more favorable

on the whole, than firearm wounds of the chest. Wounds of the abdomen proved most serious of all.

**61. New Method of Sterilizing the Surgeon's Knives.**—Grosse was experimenting with the sterilization of catheters when he made the discovery that an infected catheter enclosed in a glass cylinder, tightly corked at both ends, became entirely sterile after ten minutes of steam disinfection. The steam does not reach the catheter, and yet it is sterilized. He explains this by assuming that the minute amount of moisture contained in the ordinary air in the cylinder is sufficient to ensure the sterilization of the catheter at the temperature of the steam outside. He at once applied this discovery to the sterilization of knives and is enthusiastic over the fine results attained. The knives come out perfectly dry, unspecked and sharp. He uses an ordinary test tube for the knives, corked tightly, the cork held in place by a small chain and coil of wire around the test tube. The knives rest in a horizontal wire frame inside the glass tube to avoid contact with each other or with the walls. He adds a number of tests made with knives thus disinfected, showing the perfect sterilization thus realized in steam at a temperature of from 98 to 100 C. (boiling point). Hours would be required to accomplish the same result with dry heat.

#### Berliner klinische Wochenschrift.

- 64 (XLII, No. 34, August 21.) \*Lumbalanästhesie mit Stovaine. O. Tilmann.
- 65 \*Ueber die Beziehungen der Hypoleukocytose zum Knochenmark (bone marrow). C. Gütig.
- 66 Tuberkulin-Behandlung und Tuberkulose-Immunität. Jurgens.
- 67 \*Zur bakteriologischen Frühdiagnose der Lungentuberkulose. C. A. Blume.
- 68 Ueber die Anwendung des Styptols bei Dysmenorrhoe und Gebärmutterblutungen (uterine bleeding). K. Abel.
- 69 Nature of Infantile Atrophy.—Der gegenwärtige Stand der Frage nach dem Wesen der Säuglingsatrophie. G. Tugendreich.
- 70 \*Ueber eine neue Milchsäureprobe (test for lactic acid). W. Croner and W. Cronheim.
- 71 \*Ueber den Wert der hohen Darmeingeisungen (value of high injections into the bowels). L. v. Aldor.
- 72 Present Status of Spinal Anesthesia.—Die Lumbalanästhesie. Hildebrandt.

**64. Lumbar Anesthesia with Stovaine.**—Tilman reports extremely satisfactory experiences with spinal anesthesia since the introduction of stovaine. Bier supplements its action with adrenalin, but Tilmann has not found it necessary in his 42 cases. He gives his patients a glass of wine and something to eat immediately after the operation. Few mishaps are credited to stovaine as yet. One reported by Sonnenberg was in the case of a pyemic woman with suppuration in the abdomen who succumbed to suppurative meningitis ten days after a lumbar injection. Chaput has reported a death after lumbar injection of .01 gm. stovaine by a non-surgeon, and he has also witnessed a case of transient collapse. Tilmann has broadened the scope of lumbar anesthesia by utilizing it for the relief of sciatica. His first patient of this kind was a young man of 22, a sufferer from rebellious sciatica. He required an operation for hydrocele, and under stovaine lumbar anesthesia the sciatic pains vanished and they did not recur after the return of sensation. Tilmann seized this opportunity to stretch the nerve by forcible flexion of the thigh, a method which he regards as extremely beneficial in sciatica, but which he is rarely able to apply on account of the excessive painfulness of the procedure. After the fourth day slight sensation returned in the sciatic, but subsided again by the eighth day, and the patient has since been permanently cured. He has had somewhat similar experience with four other patients with sciatica, and recommends a tentative stovaine injection in all cases of sciatica rebellious to internal treatment (castor oil, potassium iodid, quinin), and in which the painfulness renders it impossible to stretch the nerve. Even if used only as a palliative, instead of morphin, the injection of stovaine in the lumbar sac will have a more durable action than the morphin, as in his experience the anesthesia of the sciatic lasted always for four days.

**65. Bone Marrow and Hypoleukocytosis.**—Gütig's patient was a girl of 18 and the blood findings indicated complete insufficiency on the part of the bone marrow. The autopsy revealed pseudoleukemic proliferation of lymphadenoid tissue in the bone marrow and also miliary tuberculosis, both known to



have an injurious action on the marrow, and thus superposing their effects in the present case.

**67. Bacteriologic Examination of Cases of Tuberculosis Without Sputa.**—Blume has found it impossible in a number of cases of incipient tuberculosis to obtain enough sputum for examination. He gives such patients an ordinary object-glass, mounted in a frame like a hand mirror, and instructs them to hold the glass opposite their mouth as they cough every morning, for from eight to ten days, and then to send the glass to him, packed loosely in paper. Microscopic examination then follows after the usual double staining.

**70. Improved Test for Lactic Acid.**—Croner and Cronheim recommend as sensitive and reliable the following modified test: Two grains of potassium iodid are dissolved in 5 c.c. of water or less, and 1 gm. of sublimated, pulverized iodine is added. After all is dissolved, it is filtered through asbestos or glass wool and diluted to 50 c.c. About 5 c.c. of anilin is then added to the fluid, which is set aside in a dark-colored vial. It will keep for several months. The stomach content to be examined is diluted with water, rendered alkaline with 10 per cent. caustic potash, boiled for a few minutes, and then a few c.c. of the reagent are mixed with it. In the presence of lactic acid the odor of isonitril becomes perceptible at once or after renewed boiling, supplanting the odor of the anilin. The test was positive in one experience, even in the presence of only .0025 gm. of lactic acid to 100 c.c. of the diluted solution. Alcohol and acetone give the same reaction, but can readily be removed.

**71. High Injections into the Intestines.**—Years of experience have confirmed von Aldor's previous announcements in regard to the great benefit to be derived from injections carried high into the bowels. He uses a soft Nélaton sound, like a stomach tube, and guards against its rolling up at the sigmoid flexure by digital examination. The patient lies on the left side. Experiments with tubes coated with bismuth in a mixture of oil, glycerin and gum arabic showed that the tubes actually made their way into the higher parts of the gut, as could be seen by the *x*-rays. He gives two illustrations, one showing the wrong way to introduce the tube and its rolling up in the ampulla, the other showing the right way and the course of the tube as it reached the higher regions. The walls of the intestines can be treated just where desired through the tube, and medicated fluids introduced. When the fluid is injected without a tube, most of it accumulates in the lower bowel and very little, if any, finds its way to the higher regions. High injections of Carlsbad water have proved exceedingly useful in certain cases.

**Deutsches Archiv f. klinische Medizin, Leipzig.**

*Last indexed pages 79 and 1034.*

- 73 (LXXXIII, Nos. 3-4.) Eine kombinierte Form der hereditären Nervenkrankheiten (spino-cerebellare Heredoataxie mit Dystrophia musculorum). One case; autopsy and bibliography. H. Bing.
- 74 Zur Bakteriologie der Bronchitis. J. Karcher.
- 75 Research on Sahli's Test Meal.—Untersuchungen mit Sahli's Probemahlzeit. H. P. T. Oerum.
- 76 Influence of Upright Position on Urine Excretion in Heart Disease.—Ueber den Einfluss des Aufstehens auf die Urinausscheidung Herzkranker. C. Knecht.
- 77 Shape of Heart Muscle Nuclei.—Experimentelle Untersuchungen über die form der Herzmuskelkerne und Bemerkungen über das Verhalten der Aorta bei experimentell erzeugter Insuffizienz der Aortaklappen. R. Inada.
- 78 \*Chemische und histologische Untersuchungen an bestrahlten Leukämikern (after Roentgen treatment). J. Lossen and P. Morawitz.
- 79 Fate of Albumin-dissolving Digestive Ferment.—Ueber das Schicksal der der eiweisslösenden Verdauungsfermente im Darmkanal. J. Grober.
- 80 Die Fülle von Hospital-erysipiel im Warschauer Militärhospital (1893-1902). J. V. Maximowitsch.
- 81 \*Ueber Urine und Urinsedimente bei febrilen Erkrankungen, bei Icterus und Diabetes. C. Klieneberger and R. Oxenius.
- 82 \*Importance of Blood Pressure Measurements.—Die Bedeutung der Blutdruckmessung für die Praxis. F. Geisböck.

**78. Chemical and Histologic Findings in Leukemia After Roentgen Treatment.**—The patient was a man of 36, previously healthy, with myeloid leukemia for two or three years before it terminated fatally. Forty Roentgen exposures were made, but did not seem to arrest the progress of the disease after a first, transient improvement. The composition of the blood and the blood findings changed under the exposures, finally presenting the picture accompanying aplasia of the

blood-forming organs, and the anatomic findings were those of hypoplasia. It was most pronounced in the bone marrow, but was also unmistakable in the spleen and lymph glands. It was accompanied by pronounced proliferation of the interstitial tissue. Lossen and Morawitz are inclined to regard the hypoplasia as favored and possibly originated by the three weeks of rather intense Roentgen treatment given in this case. Of 7 leukemic patients treated by Roentgen exposures, 3 were materially improved and the others are still under treatment, with the exception of the fatal case mentioned above. In one case of myeloid leukemia the leucocyte formula became normal and the elimination of uric acid also returned to normal proportions. This suggests an increased new formation of leucocytes as probable. In the first case with extreme leucopenia, the amount of uric acid eliminated remained abnormally high throughout.

**81. Urine in Febrile Diseases.**—Klieneberger and Oxenius made 808 examinations of the urine of 79 men and 63 women suffering from a great variety of febrile affections, leukemia, icterus and diabetes. Their conclusions are to the effect that the urine is liable to be modified by toxic influences, apart from the fever or the general condition. They deny the existence of "febrile albuminuria" in the old sense. The changes in the urine in icterus and in diabetes are more pronounced than in most febrile affections. Sometimes there is a sudden copious evacuation of albumin and tube casts, possibly due to some disturbance in the circulation which may correct itself later.

**82. Blood Pressure Measurements.**—Geisböck has been making a systematic study of the blood pressure in a large number of diseases to determine the action of certain drugs and food and the effect of muscular exertion on the patients. He found the pressure at the lower limit of normal range or slightly below in tuberculosis, averaging 70 to 90 mm. Complications did not send the blood pressure up, as under other circumstances, and in 11 patients giving a febrile reaction to .5 mg. tuberculin the blood pressure sank from 15 to 40 mm. and remained low for from two to six days. The pressure was also low in pneumonia and typhoid. Caffein or digitalis were given in nine cases, but they did not raise the pressure, possibly due to the injury of the vasomotor nerves in these diseases. The blood pressure rose regularly when an ice bag was applied to the abdomen. This effect might be utilized in severe cases of pneumonia to raise the blood pressure by driving the accumulated blood out of the splanchnic region. The blood pressure rose to 120 mm. in less than twenty-four hours after the onset of acute nephritis resulting from ingestion of corrosive sublimate in one case, and had risen to 135 mm. by the sixth day. As there was no time in this case for hypertrophy of the heart to develop, it demonstrates that the rise was due directly to the kidney affection. The pressure was also high in a group of cases of acute, brief, postinfluenza nephritis. The highest pressure noted was in cases of contracted kidney (up to 250 mm.) In dubious cases, high arterial pressure speaks in favor of a nephritis. Suppurative, toxic and septic cases generally have a low pressure. In cases of heart affections, he found that a lower blood pressure after muscular exertion, such as climbing stairs, is a reliable sign of some affection of the heart musculature. It may serve to differentiate the organic from the merely functional affections of the heart. Arteriosclerosis may be the result of long-continued exaggerated high blood pressure, or the high pressure may be the result of diffuse sclerosis of the arterioles. Digitalis lowered the blood pressure, especially when the edema and serous effusions were subsiding, and other diuretics and purgatives acted on the effusions, but did not seem to affect the blood pressure. Tapping the ascites had a decidedly favorable action in reducing the blood pressure. Chloral did not reduce the pressure to any extent in the two cases of heart disease he reports. In the course of his research he encountered a number of patients with remarkably high blood pressure, large numbers of red corpuscles and very high proportion of hemoglobin. These patients were all over 40. The women were generally corpulent and well-to-do, and the men had for years been conducting large enterprises with much responsibility and mental strain. Abuse of alcohol and tobacco was common, as also hereditary influences. He calls this condition "polyeythemia hyperton-



ia," and remarks that signs of arteriosclerosis could not be detected in a number of them, although a connection seemed to be apparent in others. Slight albuminuria was the rule, with few exceptions. Apoplexy occurred in 8 of his 17 cases. In advanced cases of contracted kidney Geisböck found no increase, but rather a decrease in the numbers of red corpuscles, but in incipient cases of contracted kidney and in certain other forms of kidney affections the proportions may be unduly high. This was found in one instance in which a man of 51 was brought to the clinic after a severe attack of apoplexy with a blood pressure of 250 mm., 5,700,000 red corpuscles, hypertrophy of the heart and throbbing arteries. The autopsy findings were those of pronounced but not far advanced contracted kidney, with moderate arteriosclerosis and cerebral hemorrhage. This case seems to indicate some connection between the "polycythemia hypertonica" and the chronic kidney affection.

#### Deutsche medicinische Wochenschrift, Berlin and Leipsic.

- 83 (XXXI, No. 35, August 31.) \*Die Behandlung der Arteriosklerose. E. Romberg.
- 84 Duplication of Sound in Femoral Vessels.—Ueber Doppeltonbildung an den Cruralgefäßen. W. Schultz.
- 85 Resistenz des Pepsins gegen niedrige Temperaturen. A. Bickel.
- 86 \*Aetiologie der gleichmässigen Oesophagus-Erweiterung (regular or spindle-shaped enlargement). H. Richartz.
- 87 \*Ueber die prophylaktische Ernährung Laparotomierter mit Bemerkungen über die Punktions-Drainage des Darms (feeding and draining through laparotomy wound). von Stubenrauch.
- 88 Breast Nursing in Leipsic.—Umfang der natürlichen Säuglingsernährung in Leipzig. M. Hohlfeld.
- 89 \*Ueber Radioaktivität. P. Bergell.
- 90 \*Ueber Stovaine als lokales Anaestheticum. Schiff.
- 91 Ein neues Taschenbesteck (portable injection and instrument case). M. Neumann (Berlin).
- 92 Das med. Studium und die ärztliche Praxis in Italien (medical instruction and practice in Italy). Carrara.

83. **Treatment of Arteriosclerosis.**—Romberg reiterates the necessity for gentle, persevering measures in arteriosclerosis, avoiding abrupt changes in medicines or diet. The efficacy of small doses of potassium iodid has been long established, and recent researches show that this drug reduces the viscosity of the blood by acting on the corpuscles, making it more fluid without diluting it. He prescribes it five times a day in doses of .1 or .3 gm., to be kept up for two or three years, with suspension one week in each month and one month after every three. Gastric disturbances should be avoided by refraining from all acids in the food and drinks while it is being taken. He sometimes orders it with sodium bicarbonate, to be given in milk. He warns directly against its use in cases of uremic edema of the lung occurring under the picture of cardiac asthma, and also whenever the arteriosclerosis is complicated with any manifestations of exophthalmic goiter. In other cases the benefit may even include retrogression of organic lesions, although it is impossible to expect retrogression of thrombosis in a vessel in the brain or of fibrous degeneration of the heart muscle or contracted kidney. It is of the greatest importance to reduce to the minimum the demands on the arteries. Sufficient sleep is also to be insured, even with drugs at first.

86. **Etiology of Regular Enlargement of Esophagus.**—Richartz describes a case of spindle-shaped, regular enlargement of the esophagus, and discusses its possible origin. He thinks that the trouble may be the result of congenital or acquired weakness of the musculature of the esophagus, or that it may be of neurogenetic origin, a primary, autochthonous spasm of the cardia combining with dilatation from some affection of the vagus to produce the general enlargement.

87. **Feeding and Draining the Intestine Through Laparotomy Wound.**—For five years von Stubenrauch has been supplying nourishment to certain laparotomy patients by injecting a nourishing fluid into the intestine while it is exposed during the laparotomy. He reviews the drawbacks of nutrient enemata and the frequent lack of absorption, and then describes his experience in fifteen cases in which he drew a loop out of the laparotomy wound, choosing one a yard or more from the seat of operation, and while it was outside the abdomen he punctured and evacuated its contents, substituting them with a quart of milk containing the yolks of eggs, salt, sugar and other ingredients. No mishap occurred in any case, and the patients were thus nourished from the start, without taxing

the stomach or wasting time on nutrient enema. This injection stimulates peristalsis, which is liable to be more or less inhibited by the operation. He is careful not to stimulate it too much, and for this reason avoids large amounts of sugar, alcohol and salt in the fluid introduced. A very much debilitated patient is prepared by rectal injection of a solution of sugar and salt in small amounts repeated several times during the day, or by subcutaneous saline infusion or subcutaneous injection of olive oil. During the laparotomy, about a quart of the intestine food is introduced, and afterward a pint of saline solution is poured into the abdomen and a quart is injected subcutaneously. Nothing is allowed by the mouth during the first twelve hours, but the mouth is rinsed out occasionally. After twelve hours, tablespoonfuls of cold tea are given and after the second day milk, etc., several times during the day in small amounts. In cases requiring artificial feeding for only a few days, he sutures the loop of the intestine to the abdominal wound so that food can be introduced directly into the intestine as needed, but if the artificial feeding has to be kept up for some time he makes a fistula according to the Witzel, Albert or Maydl technic. This suturing of the intestinal loop to the lips of the wound has proved a life-saving measure in several cases of ileus, allowing gradual evacuation of the gases and fluid intestinal contents, though a metal cannula. He covers the exposed intestine with a disinfecting paste. He describes his technic in detail and cites a number of cases which have established its benefits.

89. **Radioactivity.**—Bergell reports that radioactivated water promotes the action of the pancreatic juice. Bickel has recently announced that radioactivated water is able to stimulate to greater activity fresh gastric juice from the dog, obtained through a Pawlow fistula. Radioactivated mineral water also accelerates the process of digestion more than ordinary water. Bergell has evolved a method of detecting radioactive emanations in mineral water by means of fractioned cooling. He describes his apparatus for the purpose, and suggests that it may be possible to retain the natural emanations in mineral waters by rapid cooling. The emanation he declares to be a gas which condenses at very low temperatures and which can be extracted from solutions of the radium salts.

90. **Stovaine as a Local Anesthetic.**—Schiff has used stovaine in 203 cases with but a single mishap. This was observed in a patient four hours after some teeth had been extracted under stovaine. The nausea, depression and palpitations observed could be ascribed only to the preceding anesthetic. It is possible that the patient may have swallowed some of the solution used about the teeth.

#### Münchener med. Wochenschrift, Munich.

- 93 (LII, No. 34, August 22.) \*Weitere Spirochaeten-Befunde bei Syphilis. Rille und Vockerodt (Leipsic).
- 94 Increase of Hemagglutinins in Puerperium.—Vermehrung der Haemagglutinin im Wochenbett. F. Schenk.
- 95 \*Action of Radium on Infectious Germs and on Infected Tissues.—Ueber Radiumwirkung auf Infektionserreger und Gewebsinfektion. R. Werner.
- 96 \*Ueber Muskel-Hypertrophien hyperkinetischen Ursprungs bei toxischen Polyneuritiden. H. Curschmann.
- 97 \*Myom-Operationen am graviden und kreisenden Uterus. W. Thorn.
- 98 Fall von Osteitis deformans (Paget). P. Daser.
- 99 \*Zur Roentgen-Therapie. P. Wichmann (Hamburg).
- 100 Zur Behandlung des Schweißfusses in der Armee (sweating feet). Villaret.
- 101 \*Behavior of Corpuscles in Leukemia Under Roentgen Treatment.—Zum Verständnis des Verhaltens der weissen und roten Blutzellen bei der Behandlung der Leukämie mit R.-Strahlen. J. Arneht (von Leube's clinic, Würzburg). (Commenced in No. 33.)
- 102 \*Zur Aetiologie und Therapie des Heufiebers (hay fever). R. Mohr. (Concluded.)

93. **Spirochetes in Syphilis.**—Rille has succeeded in finding the *Spirochaeta pallida* in the extragenital lesions of syphilis and also in syphilitic lesions eight or nine years after infection. He gives the particulars of 14 cases, urging that others should mention the age of the syphilis and the clinical manifestations in referring to the finding of spirochetes.

95. **Action of Radium on Infectious Agents and on Infected Tissues.**—Werner writes from Czerny's clinic at Heidelberg to report research which has demonstrated that the radium rays not only kill bacteria, but also deprive them of toxic action. The toxicity is abolished without interfering with the property



of the bacteria to induce immunization. He found, further, that cells succumbing to the action of the radium rays are liable to develop bactericidal properties, much more pronounced than the ordinary autolytic processes. Rabbits were injected with cultures that had been killed by exposure to radium rays, and the results showed that the cultures must have been deprived of toxicity, as the animals could bear even two or three times the fatal dose of cultures killed by heat alone. At the same time it was found that the serum of the animals thus treated acquired unusually strong bacteriolytic and antitoxic powers. These results were obtained invariably in experiments with four staphylococcus stems, one streptococcus and one colon bacillus stem. No results were obtained in attempts to disinfect wounds with direct exposure to the radium rays. It was found, however, that necrosis induced by the radium rays was resistant to infection with germs later. The cells evidently became altered in some way under the influence of the radium rays so that they developed bactericidal properties without the co-operation of the leucocytes which were unable to penetrate into the necrotic patches.

**96. Hypertrophy of Muscles in Toxic Polyneuritis.**—Curschmann's first patient was a neuropathic and debilitated multipara with tobacco polyneuritis with paresis from long employment in a cigar factory. For four years there have been from six to eight recurrences during the twenty-four hours of cramps of the dorsal flexors of both feet, lasting from fifteen to thirty minutes. Gradually secondary hyperkinetic hypertrophy of the tibialis anticus developed, slightly involving the peroneus longus, with atrophy of other muscles. The reaction to electricity and other features of the case and of a similar one of alcohol polyneuritis are described. He can find only one case on record (Bressler's) exhibiting the same syndrome.

**97. Removal of Myomata During Pregnancy and Delivery.**—Thorn reports the details of 9 cases to show the extreme tolerance of the gravid uterus for myomectomy. He has observed 2 cases of axial torsion of the pregnant uterus due to the growth of myomata. The new growths were so close to the three months' ovum that abortion seemed almost inevitable when they were removed by a laparotomy, but the pregnancy continued to the eighth month, when a recently dead fetus was spontaneously delivered after a few days of hemorrhage, probably due to the abnormal attachment of the placenta. In the other case the four months pregnancy continued undisturbed to the end, after removal of a large myoma from the anterior wall of the uterus below the left cornu, and two smaller ones near by. The myoma was congested, with necrosis in the center. The symptoms compelling laparotomy in this case had come on suddenly, with violent abdominal pain, vomiting, etc. Central necrosis was also observed in another case presenting the same sudden onset of symptoms. One patient, known to have a myoma in the uterus, exhibited uncontrollable vomiting, requiring abortion, after which the myoma retrogressed one-half in size. His experience shows that it is impossible to foretell whether a myoma will make trouble during a pregnancy or not. One possible source of serious trouble is the giving out of the expelling force of the uterus on account of the presence of the myoma. In 2 of his patients the intestine must have become compressed, giving rise to excessive meteorism. The unfavorable action of very large myomata on the circulation and respiration is liable to entail thrombosis. Expectant treatment of delivery in case of a complicating myoma should not be carried too far. The best plan is to have the woman under constant surveillance in a clinic, even after the head has passed the obstacle. There may be after-hemorrhage or trouble from necrosis of the myoma.

**99. Improved Roentgen Tube.**—Wichmann has his tubes made with a "lead glass" protecting mantle outside. A circular opening allows the focused rays to escape. The lead glass covering is continued to make a low wall around this opening, and a narrow metal tube with flaring top fits on this prolongation of the wall. The Roentgen rays are focused in the circular opening and can escape only through the narrow tube which is placed directly over the spot or introduced into the fistula or cavity to be treated. No rays escape except through the bottom of the tube, and the subject and the physician are

both protected against injury through the walls of the Crookes' tube by the lead glass envelope. The small tube is of the proper length so that the Roentgen tube can never be brought too near the part exposed.

**101. Leukemia and Roentgen Treatments.**—Arneth has been making a careful study of the blood findings after exposure to the Roentgen rays, and analyzes all that has been published on the subject in Europe and Senn's article. His final verdict on the testimony thus offered to date is that the Roentgen rays have an undoubtedly favorable action in leukemia, but that it is indirect. They do not cure the lesions, but they destroy the parasites which are causing the lesions. The action of the Roentgen rays in leukemia is like that of quinin in malaria. Both cure the patient by killing off the microorganisms causing the trouble. This assumption entails the necessity for more thorough and more general exposure to the rays. They should be as extensive and as protracted as possible to seek out and destroy the causal germ in its remotest lurking places, not restricting the exposures, as in the past, to the blood-forming organs alone. This conception supplies, for the first time, an etiologic treatment for leukemia and one that is proving more successful than any in the past.

**102. Hay Fever.**—R. Mohr of M $\ddot{u}$ geln here summarizes the experiences of the "Association of Hay Fever Sufferers" who make their headquarters on the island of Helgoland during the hay fever season. He insists on the necessity for careful guarding against recurrence of the affection, expressing wonder that hay fever patients show so little common sense in this respect. Intoxication from pollen should be prevented. The hay fever sufferer should not take long walks or at least not without some protecting device, if no more than breathing through a handkerchief. Railroad trips should be avoided, and all exercise inducing sweating. The windows on the side toward the wind should be kept closed, especially at night, and all drafts should be avoided. The outer garments should not be kept in the living rooms, and no cut flowers should be allowed in them. The bedding and washing should not be aired or dried out of doors. Mohr has invented a little device which is worn in the nostrils and keeps out all pollen dust. Forty persons have been wearing this device during the last season, and those who have followed directions have been protected against hay fever. He is now perfecting a device for those who can not tolerate the sensation of a foreign body in the nose. The Dunbar hay fever specific remedies were used by members of the association with favorable results from the fluid pollantin in 87 cases, no results in 77, while 22 attributed the aggravation of their trouble to it. Operative measures did not seem to benefit but a very small proportion of the 138 persons thus treated, but the suprarenal extracts, applied locally by a physician, afforded relief in many instances. Mohr adds that the nose should always be rinsed out from the rear alone. Flight to a place where the pollen production has not yet begun or is past or is always scanty is still the best means to avoid hay fever in those predisposed to it.

## Books Received

**PROGRESSIVE MEDICINE.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., assisted by H. R. M. Landis, M.D. September 1, 1905. Volume VII. No. 27. Paper. Pp. 298. Price, \$6.00. Philadelphia: Lea Brothers & Co., 1905.

**ANNUAL REPORT OF THE MILWAUKEE COUNTY HOSPITAL** for the Year Ending Dec. 31, 1904, with the Medical and Surgical Statistics, the Rules and Regulations for the Government of the Hospital, etc. E. C. Grosskopf, M.D., Superintendent. Paper. Pp. 113. Milwaukee: Breithaupt Printing Co. 1905.

**THE APSLEY COOKERY BOOK**, Containing 448 Recipes for the Uric-Acid-Free Diet. By Mrs. John J. Webster and Mrs. F. W. Jessop. Cloth. Pp. 235. Price, \$1.25. Philadelphia: P. Blakiston's Son & Co. 1905.

**CARBONIC ACID IN MEDICINE.** By A. Rose, M.D., with portraits of Helmont, Priestley and Lavoisier. Cloth. Pp. 259. Price \$1 net. New York: Funk & Wagnalls Co., 1905.

**TYPHOID FEVER EPIDEMIC**, at Palo Alto, Cal. A Report Made to the Palo Alto Board of Health, by J. C. L. Fish, President of the Board. Paper. Pp. 62. The Board of Health: Palo Alto, Cal. 1905.

**MEDICAL DISEASES OF EGYPT.** By F. M. Sandwith, M.D., F.R.C.P. Part I. Cloth. Pp. 316. London: Henry Kimpton, 1905.



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## Original Articles

### CHRONIC ULCER OF THE STOMACH AND FIRST PORTION OF THE DUODENUM, WITH ESPECIAL REFERENCE TO THE SURGICAL TREAT- MENT.\*

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Chronic ulcer of the stomach is certainly a more frequent disease than clinicians would lead us to believe. Compare for a moment the results of autopsy findings with the clinical diagnosis on hospital admission. Take three hospitals in Philadelphia—Blockley Hospital, giving 1.42 per cent. as the result of autopsy finding; University Hospital, clinical findings 0.48 per cent.; Pennsylvania Hospital, clinical findings 0.13 per cent. (Francine). In other words, in two hospitals of exactly the same character in the same city, ulcer is found clinically nearly four times as often as in the other, while both fall short of the postmortem from 3 to 11 times. Bettman finds that a diagnosis of gastric ulcer was *made* but 24 times in 27,567 Cincinnati hospital admissions (.08 per cent.) Howard, in comparative tables, shows that New York City autopsy records give 1.42 per cent. of gastric ulcers, while the records of clinical admissions show only 0.44 per cent. Boston does better, autopsy 1.84 per cent., clinical 1.28 per cent. Francine says, "I entirely agree with Dr. Howard's statement that we can not base accurate or conservative conclusions on data obtained from clinical observation."

In 10,841 autopsies in 7 large American cities (Howard), the per cent. of gastric ulcers was 1.32, while in London it was 4.6 per cent. and in continental Europe 8.54 per cent. Welch gives 5 per cent. in 32,052 autopsies at Prague, Berlin, Breslau, Dresden, Erlangen and Kiel. There are two explanations of the greater apparent frequency of gastric ulcer in Europe than in America. One is that it is not apparent but real, and another, that the pathologic departments of European cities have for a long time been permanently established and post-mortems are obligatory, while until of late years the work in American cities has been under changeable management and subjected to a variable personnel, also that consent of legal representatives must be obtained, and therefore autopsies are relatively much less frequent in this country. As showing the effect of searching with a definite purpose, Grunfeld of Copenhagen found 11 per cent. of gastric ulcers in 1,150 autopsies, and in the next 450, examined more carefully, found 20 per cent.

In regard to the relative frequency of gastric and duodenal ulcers, we have but few statistics. Francine found

38 cases of gastric ulcer in 2,830 autopsies, 2 duodenal, also 2 duodenal and gastric, practically only 10 per cent. of duodenal. As compared with surgical findings this is too small, and does not bear out the relative frequency shown by statistics of acute perforations. Moynihan in 22 cases of acute perforating ulcers found 15 gastric and 7 duodenal. Our experience with acute perforating ulcer is relatively smaller than with chronic ulcer. In 13 acute perforating ulcers 6 were gastric and 7 duodenal. Brunner collected 600 cases of acute perforation; of which one-fourth were duodenal. He also showed that 90 per cent. of acute perforating ulcers occur through the site of chronic ulcers and that diagnostic symptoms usually exist previous to perforation.

The duodenum above the opening of the common duct of the liver and pancreas is exposed to the same ulcer-producing causes that exist in the stomach, with the possible exception of traumatism; and as its tunics are thinner, it is even more readily affected by irritating secretions and ingesta. Statistics would seem to show that ulcer of the duodenum is a rare malady, but the data on which the supposition is based have been furnished either by postmortems or are the results of notoriously defective clinical examinations.

Postmortem study has certain disadvantages due to influences which have perhaps become active either shortly before or at the time of death, and which often mask the primary lesion and cloud the condition as it existed in life. Secondary changes and terminal infections may prevent a correct interpretation of the signs and symptoms which were manifested during the early stages of the disease—the curable period. This is shown by the revelations of surgery in appendicitis, extra-uterine pregnancy and cholelithiasis.

The same potent force is now at work in the field of ulcer of the stomach and duodenum, and the first fact which has been demonstrated is that those forms of ulceration which affect all the coats of the viscera and which by reason of their large size and thick, scar-like appearance can be easily demonstrated, are nearly as common in the duodenum as in the whole of the stomach. The postmortem statistics which have been gathered are certainly erroneous in their summing up as to the relative frequency of gastric and duodenal ulcer. The only conclusion which one can arrive at is that the examination was general and did not cover the duodenum with the same care that it did the stomach. The duodenum has received but little attention and therefore it was not subjected to close scrutiny during a general autopsy, especially as this particular feature was not in view at the time.

Admitting that clinical observation falls far short of the autopsy findings, in what way do results of surgical work compare with postmortem records? In 14 years Dr. Charles H. Mayo and myself have operated

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



in nearly 800 cases of stomach and duodenal disease. Eliminating gastric cancers and all other cases in which the necessity for operation did not immediately arise from ulcer, we have 384 operations for gastric ulcer and its results, and 84 operations for duodenal ulcer, or about 78 per cent. gastric and 22 per cent. duodenal; but this is not fair to the duodenal disease, because it has only been within a short time that we have recognized duodenal ulcers and many of our earlier cases marked pyloric, may have been an extension from the

involved the pylorus. In other words, out of 231 gastric and duodenal ulcers, the duodenum was involved 74 times; 55 times in males and only 19 in females.

#### CLASSIFICATION OF GASTRIC AND DUODENAL ULCERS.

For clinical purposes I will classify in 2 groups, the *indurated* and the *non-indurated*, all the ulcers operated on: First, the *indurated* ulcer, which involves all the coats of the organ and which usually shows evidences of cicatrization in some part of its extent. The diseased

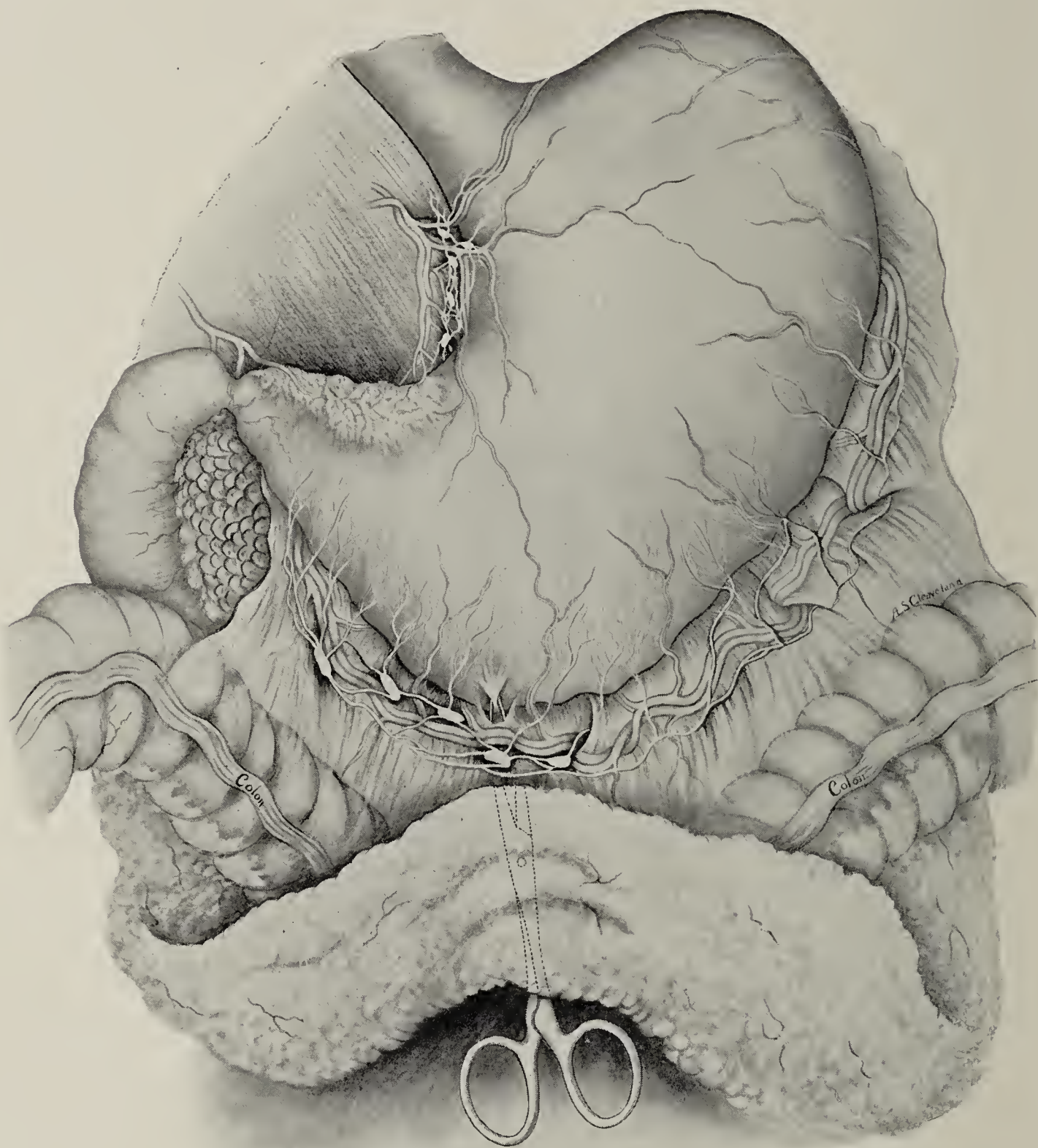


Fig. 2.—Showing forceps passed through from behind and grasping anterior gastric wall near the greater curvature at the lowest point. Saddle ulcer of lesser curvature near pylorus.

duodenum. We have thought it wise to narrow the limits of this study to a consideration of only the last two and one-half years, from Jan. 1, 1903, to July 1, 1905, and also to consider only the cases subjected to gastrojejunostomy, excluding all of the ulcers excised or subjected to Finney's operation, pyloroplasty, etc. This gives us 231 cases, 119 males and 112 females, of which 158 were gastric, 60 duodenal and 14 duodenal and gastric; 20 of the duodenal ulcers extended up to and

area is a thick, milky-white patch, easily identified from without the gastric or duodenal wall. In the stomach it involves the pyloric portion in the great majority of cases, frequently saddle-shaped, riding the lesser curvature and extending flap-like down the anterior and posterior walls. In such cases the pyloric portion beyond is usually thickened and gives rise to more or less obstruction, even if not actually involved in the ulcerative process. In about 20 per cent., more



than one ulcer was found. In the duodenum the first  $2\frac{1}{2}$  inches are always involved well above the entrance of the common duct with its alkaline discharges, and the ulcer extends up to the pylorus or within  $\frac{3}{4}$  of an inch of it. In only 3 instances could more than one duodenal ulcer be shown. Sixty-eight of the 74 duodenal ulcers were of the indurated variety, and 151 of the total 231 cases of duodenal and gastric ulcers were so classified. Of these 95 were males and 56 females.

Seymour Taylor in 100 cases found 72 males and 28

site from the exterior of the stomach upon operation. The reason for this is that the lesion involves only the mucous coat. In some cases a little thickening can be discovered (Mikulicz) or a little glueing of the mucous to the muscular coats, preventing the normal slipping of one on the other (Moynihan). But in the typical case prolonged search of the interior of the stomach may be necessary to find the diseased process. Many an individual has bled to death from an ulcer so minute that it could only be found with the microscope. Bramwell

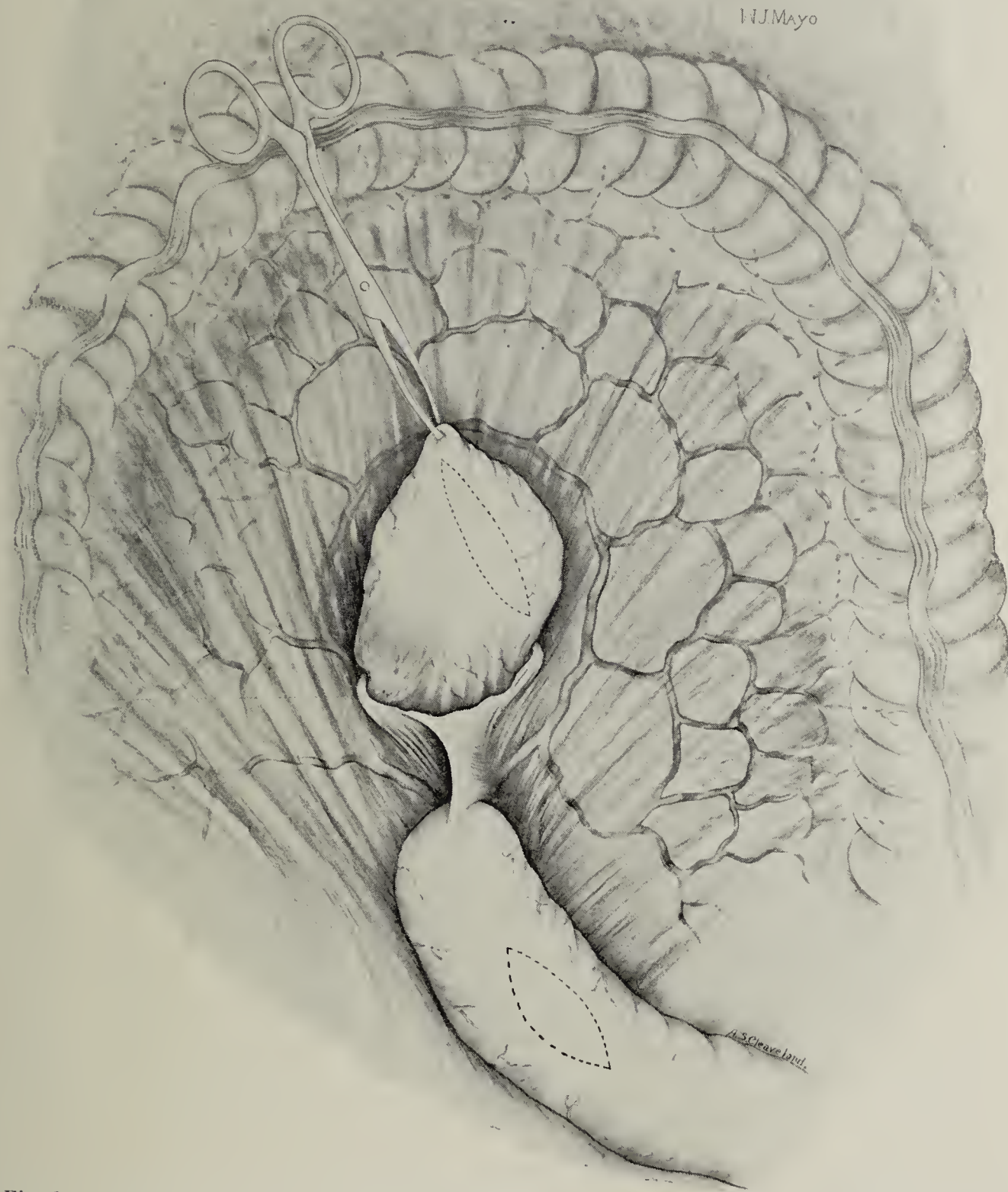


Fig. 3.—Posterior wall of the stomach drawn through opening torn in transverse meso-colon. Forceps still marking low point. Dotted lines on stomach and jejunum show situation of proposed anastomosis.

females. Associated with this group of indurated ulcers are benign, pyloric obstructions of inflammatory origin, hour-glass stomachs, adhesions and deformities arising from protected chronic perforations.

The second variety I have designated the *non-indurated* ulcer. They have also been termed medical or clinical ulcers, because although they give undoubted evidence of the disease there is nothing to show the ulcer

says that many of these cases heal so minutely that no evidence can be found at autopsy.

We have had a number of cases come to operation after years of trouble—hemorrhages, stagnation and retention of food, etc.—who were cured by operation but in whom no sign of ulcer could be shown on the exterior of the stomach. In some instances we have opened and searched the interior of the gastric cavity to find an ulcer from



which the patient had bled repeatedly and within a short time but we have not always found it. It is possible, or indeed probable, that in some of these patients an indurated ulcer may have existed in a situation not accessible to palpation or inspection.

Non-indurated ulcers are of two varieties: (a) The mucous erosion of Dieulafoy in which only the superficial epithelial layers of the mucous membrane are involved, and (b) the typical, round, peptic and fissure ulcer. In our experience the fissure-like ulcer has been of frequent occurrence. In one subject bleeding at the time

tary to the lesion. We have verified this in a number of cases.

We have noted for a long time that in nearly all open ulcers the tributary lymphatic glands were definitely enlarged to the size of a Lima bean, from one centimeter to one and a half centimeters in diameter, usually in the gastro-colic omentum; in this respect being unlike cancer, which affects the glands of the lesser curvature by preference. The enlargement is soft and shows simple adenitis. It is probable that this may be a valuable diagnostic sign, and that we should find enlarged glands

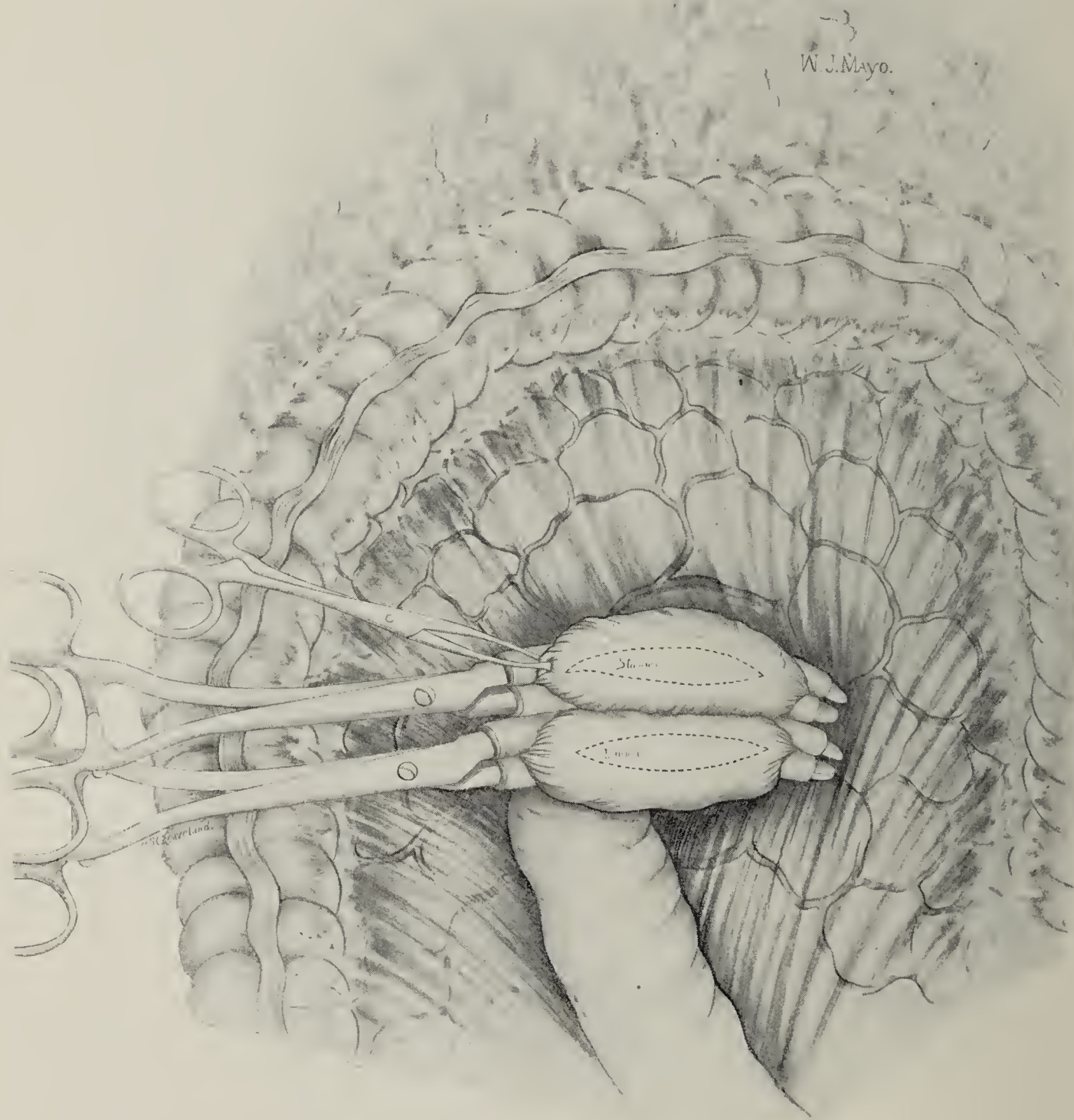


Fig. 4.—Stomach and jejunum drawn into clamps for suturing. Small forceps still marking low point of stomach.

of operation was found to proceed from a small fissure which could only be detected by bending the mucous membrane sharply, the little defect showing as the weave would show on folding a piece of velvet. Eighty of the 231 cases belong to this group of non-indurated ulcers, 56 being females and 24 males. One interesting diagnostic feature was first pointed out by Lund. He noted that an ulcer could sometimes be located by an enlarged "sentinel" gland in the omentum, tribu-

in all cases of ulcer, mucous or otherwise. The value is somewhat lessened because we have seen adenitis in the same situation in cases of cholecystitis; but in these cases enlarged glands were also found along the common duct.

The question of non-indurated ulcer needs further elucidation. The very fact that the condition may not be cleared up at the operating table prevents us from gaining in wisdom by the experience. We know that the



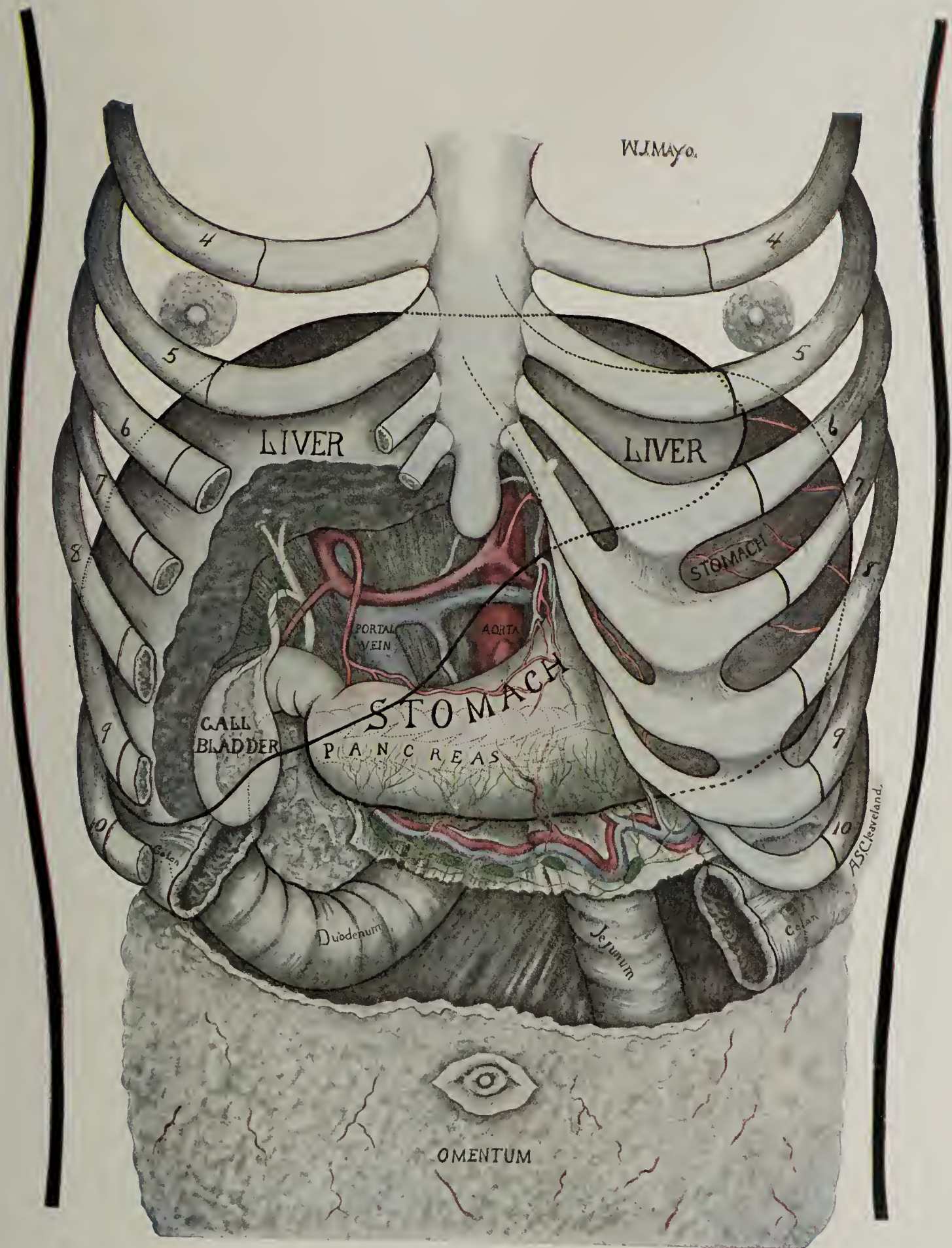


FIG. 1—Shows relation of the duodenum to the stomach







majority of well-selected subjects recover definitely; but a minority give less favorable results, and operating for purely medical indications leads to unscientific and at times indiscriminate resort to operation. Especially is this true of that vast army of neurasthenics with gastric symptoms depending on a neurosis; a complaint simulating ulcer, a prolapsed, splashy stomach, a too ready diagnosis followed by an ill-advised gastroenterostomy. The fact that the stomach appears to be normal is explained by the known inability always to locate a mucous ulcer. This is not a fanciful nor overdrawn picture. There is seldom a week but several such cases present themselves at our clinic and are refused operation. Many of them have already had their movable organs fixed (kidney and uterus) and the removable ones removed (ovaries, appendix, etc.), and now are anxious to secure relief by a further resort to the knife. That such cases are frequently operated on can not be questioned, and that they will tend to bring surgery of the stomach into disrepute is equally certain. The so-called atonic dilatations are not often greatly benefited by operation unless there is marked and persistent delay of food in the stomach. This group is closely allied to the neurasthenic class, and the individual case must be carefully considered, with a prejudice against operation unless it can be clearly shown to be indicated. Fortunately, the field of gastric surgery is too large for a few of these unfortunate instances to affect the general results, but I would urge on the profession the necessity of eliminating the neurasthenic from the field unless the signs and symptoms of ulcer are distinct. Of course the nervous condition is no valid reason for refusing to relieve actual disease.

There are some problems closely related with the non-indurated ulcer which are but little understood, and one of the most important of these is pyloric spasm. The x-ray experiments of Cannon have been very interesting in this connection, showing that the fundus of the stomach is the storehouse where maceration takes place, and the muscular, pyloric end the active agent in kneading the ingesta into a homogeneous whole. Numerous observations at the operating table have convinced us that pyloric spasm is not due to a contraction of the pyloric sphincter alone, but of any part or all of this end of the stomach.

There is undoubtedly, also, such an entity as chronic contraction of the pyloric muscle without actual demonstrable lesion, and in such a degree as to be the only evident cause of gastric dilatation, stagnation of food and chronic distress. A serious form of interference with gastric motility has been noted by Ochsner, Finney, Munro and others, as well as by myself, in which there is chronic dilatation of the stomach and duodenum as far as the common duct of the liver, giving rise to many of the symptoms of obstruction. Ochsner believes this condition is due to a pathogenic contraction of a normal excess of muscle in the second portion of the duodenum, which he has demonstrated anatomically. Another variety of interference with gastric motility is the not rare condition of "valve formation," in which a high lying pylorus is held taut by a short gastrocolic omentum. I have met with a small number of such cases, three of which were reported before the surgical section of the American Medical Association at Atlanta, May, 1896.

From our personal experience no conclusions can be drawn, but at present we do not advise operation in any case of acute ulcer, although certain complications such as perforation, hemorrhage and grave obstruction may

compel its speedy performance. We do not advise operation in chronic ulcer or its associated diseases until careful and prolonged medical treatment has failed to permanently cure, and we strongly advise against operation in neurotic individuals with prolapse of the stomach. We advise operation in all cases of stagnation and retention of food depending on mechanical causes such as pyloric obstruction, and in cases of exhausting hemorrhages. We advise and practice operation in that considerable group of chronic cases with acute exacerbations, in whom frequent relapses with their attendant disabilities prevent the patient from the enjoyment of good health. It is this latter group which reminds us forcibly of the early days of appendicitis in which great divergence of opinion was made manifest, from the practitioner who rarely saw a case to the equally honest man who saw them frequently but always cured them without trouble. We have gone through the same controversy as to the surgical treatment of gallstones and other diseases.

There are a number of careful observers who predict that the ultimate field of gastric surgery will be small, and that the diagnosis of surgical conditions can not often be made; but this was equally true of the early days of appendicitis, of gallstone disease and of pyosalpinx.

I think no unprejudiced person can doubt the conclusion that gastric and duodenal ulcers and associated disorders are more frequent maladies than we have been led to believe, and also that ulcer or some of its numerous complications, may and often does produce a train of symptoms which medicine is powerless to cure permanently.

What percentage of gastric and duodenal ulcers may be expected to be cured by medical means? Five hundred cases treated medically in the London Hospital in the five years from 1897 to 1902 gave a percentage of 18 for the death rate, and 42 per cent. were not cured at the time of discharge. As 211 of the 500 had been cured one or more times of previous attacks, who can predict the future history of the 40 per cent. discharged as cured?

Greenough and Joslin, of the medically treated ulcers in the Massachusetts General Hospital, showed that only 55 per cent. were discharged as cured, and 56 per cent. of these supposed cured were dead or still suffering at the time the report was made, five years later. Mumford reports only 4 per cent. of gastric dilatations resulting from ulcer, as cured medically, out of 122 cases in the Massachusetts General Hospital. Russell's statistics, derived from a large number of out-patients, show that 42.6 per cent. of gastric ulcers recovered; but as it was the first attack in 27.7 per cent. and might therefore be called acute, this gives a recovery of only 14.9 per cent. of the chronic cases. The balance either died or continued to suffer (Blake). Munro well remarks, "Is it surprising that an increasing number of ulcer subjects are spontaneously seeking surgical relief?"

It is wise to be conservative and to compel each new departure to bring its own proof. What results can surgery show in this field? First, it has demonstrated the clinical frequency of ulcer of the stomach and duodenum, not a *new* thing, because it has been shown for years in the autopsy records as already pointed out; second, it has developed a symptomatology which enables the diagnosis to be made, and has demonstrated the operative curability of ulcer and certain associated disorders. Surgery has brought back to a safe ground a large num-



ber of ulcer victims who, after repeated medical cures had taken to fakers, patent medicine venders, christian (?) science (?) or were making the best of their condition and using patent foodless foods and a restricted diet. In doing even this much, surgery has been open to sound criticism, first on the occasional selection of an unfortunate case for operation, and second on the occasional unsatisfactory results of operative interference both as to mortality and permanence of cure. It is the surgeon's duty to overcome this prejudice by furnishing better results.

The history of successful gastric surgery is not more than five years old, and the best of it not over two years' duration. The medical man must discard the older statistics as to technic and mortality which have become merely venerable relics, and do not at all represent advanced surgical thought on the subject. It is certainly discouraging to turn to the newer works on medicine and find not the slightest attempt made to show the advance which surgery has made, and the question of surgical relief being arbitrarily determined by the achievements of two decades ago.

Surgery is essentially mechanical and must benefit the patient in a mechanical way to a large extent (Fig. 1). Most surgical questions connected with chronic ulcer arise from interference with good stomach drainage, either by actual obstruction or by muscular spasm, so that the food and secretions are subjected to delay in that part of the stomach lying to the left of the pyloric muscular portion (the pyloric portion is that part covered by the lesser curvature), and the method of relief which has the largest field of usefulness consists of gastrojejunostomy made on a line perpendicular with the cardiac orifice of the stomach (Fig. 2). This will usually be found to be the most dependent portion. The opening must be placed on the posterior wall, at the very bottom of the gastric cavity, and should extend anteriorly  $\frac{1}{4}$  inch, so that the jejunum is mortised on to the stomach (Fig. 2). The line of the gastric opening should be that of Moynihan, oblique from above down and left to right (Fig. 3). The jejunum should be anastomosed within three inches of its origin (Fig. 3) so that there shall be no loop (Fig. 4). After an experience of somewhat over 500 gastroenterostomies, including gastroduodenostomies and pyloroplasties, we have come to Peterson's conclusion, that the loop has been responsible for the greater part of the evils arising after gastrojejunostomy, such as biliary regurgitant vomiting (vicious circle). The intestine should be secured so high that there can be little loss of nutrient absorbents. The straight drop of the bowel gives protection against secondary jejunal ulcer by the constant presence of the alkaline biliary and pancreatic secretions, and also adds to the security against future complications. There is no doubt that contraction of the opening is less liable to take place if there is no loop to make traction. As to mortality, we have had less than 3 per cent. mortality in our last 150 suture operations, and in the last 81 cases of benign disease there has been but 1 death. These results are no better than those of Ochsner, Murphy, Munro, Deaver and others in this country, and Robson, Moynihan, Mikulicz, Kocher, Hartman and others abroad.

The operation here advocated has given us better results than any other which we have tried, but we have had two cases of chronic bile regurgitation occur, evidently due to faulty technic. In both patients there

has been great relief of the original symptoms and in neither has the complication as yet been of sufficient moment to require a second operation.

Next to gastrojejunostomy, the operation of gastroduodenostomy, devised by Finney, is of the greatest value. It is especially suited to narrow strictures. In open ulcer it does not drain the stomach to the proximal side of the muscular pyloric region, and the food must still pass into the ulcer area to reach the outlet. The pyloroplasty of Hoeinke Mikulicz is now but little practiced and the method of closure is of the utmost importance after an ulcer is excised. As a matter of fact, the pyloroplastic principle has been one of the great factors in modern plastic surgery. The operation of Rodman, consisting of a complete excision of the entire ulcer-bearing muscular pyloric end of the stomach, with independent gastrojejunostomy, will gain ground in the future. Graham has found a good precancerous history of ulcer or associated disorders in 36 per cent. of our operated cases of cancer of the stomach, and clear evidence of cancer development on ulcer in 30 per cent. of the last 40 pylorotomies and partial gastrectomies; certainly an argument for the radical operation. Excision of the ulcer may be of value in a small group of cases if there be no obstruction and one is sure that only one ulcer exists.

Admitting that the technic and mortality of gastric surgery is satisfactory, have the patients been relieved? Excluding some cases of bad selection, I can conscientiously say that we are doing no kind of surgery to-day which gives more pleasing results in properly selected subjects than in the field of chronic gastric and duodenal ulcer and associated disorders. The disappointments have been due to inability to secure and maintain good stomach drainage through imperfect technic, rather than failure of a properly executed operation to relieve. While gastrojejunostomy has the largest field of usefulness, we must not look upon it as a cure-all. It is purely a drainage operation. If the stomach is not dilated and the pylorus be unobstructed, the food will continue to pass out the normal outlet and the patient will not be benefited. For this reason, indurated ulcers with definite mechanical lesions give far better results than non-indurated ulcers in which obstructions are not found, and it is this latter group which gives a considerable percentage of secondary operations and complications. We can not agree with the opinion which has recently been advanced that gastrojejunostomy should be done almost regardless of the condition present. There is nothing mysterious about this valuable operation. It permits retained secretions and ingesta to readily escape. If motility is normal it has little function.

In conclusion let me call your attention to the vast importance of this subject as it enables us to differentiate the benign from the malignant diseases of the stomach. Nearly one-third of all cancers in the human body are in the stomach. In 70 cases in which we have excised a large part of the stomach, we have had 4 cancer cases live more than three years, 3 are still alive and without return. We have a number alive over two years and the majority live a year. The average mortality was 12 per cent., and in the last 40 cases with the technic published in the *Annals of Surgery*, March, 1904, there were but 2 deaths, a mortality of 5 per cent.

NOTE.—We are often questioned as to the reasons why we have so many stomach operations up in the Northwest. As a matter of fact, these cases represent residents of 26 states and Canada; a little less than 20 per cent. belong to Minnesota.



## THE EARLY DIAGNOSIS OF GASTRIC ULCER.\*

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For a long time hemorrhage, obstructive vomiting and a certain characteristic localized pain were regarded as the essential symptoms of gastric ulcer, and when these classical symptoms were absent this lesion was diagnosed and treated (or mistreated) under other and various names that rarely conveyed any idea of the real causative pathology. In the light of our present knowledge, we must believe that our firm but unfounded faith in these diagnostic tests excluded from rational treatment a large majority of all our cases and persuaded us to make chronic gastritis, gastralgia and dyspepsia responsible for much suffering and not a few deaths that should properly be charged to gastric ulcer.

It was not until the recent advances in stomach surgery permitted us often to observe and study gastric ulcer in life on the operating table that we were made to realize the great frequency and grave importance of this lesion. And it was not until an efficient and promising treatment was developed that the great practical need of making an early diagnosis was felt. Since then we have all been striving to evolve some methods of diagnosis that would not allow a large percentage of our cases to escape early recognition and rational treatment.

Thus far no single symptom or laboratory test has proven sufficient, and until some such infallible indication is discovered we must depend largely on our interpretation of groups of symptoms and our willingness to resort, when necessary, to the exploratory incision.

In determining the relative value of each symptom, or group of symptoms, and in deciding on the indications for an exploratory operation, I believe we must trust to the study and comparison of the early clinical histories of gastric ulcers actually seen in life on the operating table. From our accumulated recorded experiences we may hope ultimately to work out the solution of this problem in diagnostics.

Without any pretense of giving statistical information, I shall crystallize into the fewest possible words the conclusions suggested by my observations in thirty-nine cases and my experience with thirty-six cases. In each of these seventy-five cases I was able to secure the early and later clinical history and to note the actual conditions revealed during the operation.

In sixty-six of these patients (88 per cent.) the initial symptoms were those that might easily be attributed to any mild digestive disturbance. In the remaining nine patients hemorrhage, perforation, acute vomiting, or periodic attacks of intense pain occurred early, and should have insured an early recognition of the real pathology. The average time from the appearance of the first symptom until operation was done was eight years. In five cases which undoubtedly began as ulcer, cancer developed before operative measures were undertaken, and in other cases delay in operation prevented an absolutely perfect result on account of irreparable structural changes. I think, therefore, we may fairly assume that an early diagnosis and prompt rational treatment might in this series of cases have prevented a total of 600 years of suffering, saved five patients from the apprehension of recurring malignant disease, and have secured a comparatively perfect result in each case.

In the face of such figures (and I believe my experi-

ence is not very different from that of most operators) no thoughtful student can fail to be impressed with the new and grave responsibility that falls to the diagnostician to-day whenever he is confronted by a patient suffering from any obscure disease of the stomach, however mild the symptoms may be.

In the early stages of at least 85 per cent. of gastric ulcers, none of the generally recognized typical symptoms are present and a diagnosis may seem impossible. It often happens, too, that neither the physician nor the patient is impressed with the serious consequences of delay in determining the causative pathology and no special effort is made to do so until the more suggestive symptoms arise. In spite of these difficulties, I think there are diagnostic aids that may guide us to an early and correct conclusion in the majority of these obscure cases.

*First:* In making a differential diagnosis, I think we should take into consideration the frequency of ulcer as compared with other stomach lesions. We should remember that the physiologic functions and the anatomic structure and relations of the stomach render it especially susceptible to ulceration, and that on the postmortem table, as well as in the operating room, ulcer is found more frequently than all other pathologic lesions of the stomach combined. Indeed, it is estimated that not less than 5 per cent. of the human race are afflicted at some period of their lives with gastric ulcer. This knowledge of the relative frequency of ulcer should not only be accepted as a proved theory in our libraries, but it should be applied in the consulting room and at the bedside in weighing the evidence for or against gastric ulcer.

*Second:* We should remember the influence of age, trauma and habits on the development of this pathology. The average age of patients operated on was 41; the greatest number was between 38 and 48 years old; the next greatest between 18 and 28, and the fewest between 28 and 38. Hence I am led to believe that the two periods in which stomach ulcer is most likely to occur and to produce urgent symptoms are either during the years of most rapid development or near the age that degenerative changes begin. During the intervening period the ulcer is frequently quiescent. The age of the patient is therefore significant, and should be taken into consideration in estimating the probability of ulceration. Thirty-five of the patients were male and forty female, not enough difference to merit consideration.

Of the patients operated on between the ages of 18 and 28 years, few led very active lives, while the reverse was true of those operated on past middle life. Many in the latter class engaged in rather violent exercise, such as horseback riding, etc. My observations would lead me to believe that trauma or any exercise that holds the stomach in a strained or immobile position may be a rather important factor in the production of ulcer, especially in the middle aged. The young rarely give a previous history that is suggestive; the middle aged, on the contrary, either refer to attacks of pain in early life or we find their distress is associated with trauma or habits or work or exercise that may be an exciting cause. In this way the occurrence of duodenal ulcer after an extensive burn may be explained on the ground that the stomach and duodenum are involuntarily held in a strained or immobile position a long time.

*Third:* We can and should narrow the field of dif-

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



ferential diagnosis by excluding other possible constitutional and local causes of the symptoms.

*Fourth:* We will eliminate this most common source of error if we remember that gastritis, indigestion and gastralgia are the most constant results, and hyperacidity the most common cause of gastric ulcer. Hence all the symptoms of gastritis, gastralgia and so-called dyspepsia may have an ulcer as a primary cause, while hyperacidity, if persistent, points strongly to the existence or the coming of an ulcer. At least those of us who believe that ulcer of the stomach, like ulcer in other parts of the body, depends usually on local causes, must also consider that the digestive properties of the normal gastric juice can only produce local necrosis where a part of the stomach wall is immobilized by adhesions or muscular spasm, or is partially devitalized by the presence of an old cicatrix or by infected emboli carried by the vascular omentum from remote or nearby intraperitoneal infection, such as a gall-bladder, appendiceal or pelvic, inflammation might furnish. As these conditions do not prevail often it is fair to assume that in a majority of cases the fault lies in the exaggerated corrosive or excessive digestive properties of the gastric juice and is not due to any previous defect in the stomach walls. It may be said further that so far as examinations of the gastric contents have been made in the early stages of gastric ulcer, then tend to confirm the belief that hyperacidity is by far the most common cause of ulcer and that it is certainly one of the most significant symptoms.

*Fifth:* We should attach importance as to whether or not the continuance of the symptoms is favorably influenced by medicinal or dietetic measures. In other words, if the stomach ailment is of long duration or occurs or recurs without apparent cause, it is probably due to a real pathology, rather than to a transient functional disturbance, and the causative factor is most likely to be ulcer. Hyperacidity associated with chronicity points strongly to ulcer.

*Sixth:* It may help us to recall that the ulcer that occurs in the period of most rapid development (that is between 18 and 28 years) is nearly always due to hyperacidity alone, and often cicatrizes with proper treatment or even without treatment; while the ulcer that is found in patients past middle age is more likely to be due to degenerative changes in the scar of an old ulcer that may have been quiescent for years, but which when the reparative powers of nature begin to decline is likely to remain open and give serious trouble unless relieved by surgical measures. The first form of ulcer is due to an imperfect adjustment of the secretory functions, and the last to Nature's inability to protect scar tissue from the digestive effects of the normal gastric juice. In this connection the rule holds good that any inflammatory lesion of the alimentary canal when confined to the mucosa, can not be recognized by palpation, and may yield to non-surgical treatment; but an ulcer that includes the peritoneal coat can be felt during operation and is always a surgical lesion.

*Seventh:* When, governed by these thoughts, we have made a painstaking investigation of a patient suffering from an obscure stomach trouble and have weighed the history and each symptom carefully and are still in doubt, we should consider the advisability of applying the crucial test, viz., making an exploratory incision. We are all prone to postpone this operation, but with the assurance of perfect safety our improved technic gives, and the dangers of a delayed diag-

nosis in mind, I feel sure that it should always be done when in doubt, and the preponderance of evidence indicates the probability of ulcer. To wait for the appearance of obstructive symptoms, perforation, hemorrhage, tumor, or involvement of nearby structures to confirm a strong suspicion of ulcer would mean that we contend with a resultant pathology in every instance, and is nearly equivalent to waiting for abscess formation before operating for appendicitis.

Our new symptomatology of gastric ulcer is only just beginning to be formed; but we who essay to do surgery may know that when it is perfected it will be based on a clearer mental picture of the antecedent existing and resultant pathology drawn not alone from dead house findings and laboratory researches, but from observations on living subjects in our operating rooms.

### THE M'GRAW LIGATURE.\*

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More than fifteen years ago, Theodore A. McGraw invented a method of intestinal anastomosis by means of an elastic ligature. As chairman of the Section on Surgery and Anatomy of this Association, he described this method in his address and it was published in THE JOURNAL of the American Medical Association May 16, 1891.

The method was tried by its author in a large number of experiments on dogs and twice on human beings before this report was made. He then abandoned the method and employed in its place the Murphy button, which was introduced in 1892.

It was not until 1900 that McGraw again brought his method prominently before the medical profession in a paper read before the Mississippi Valley Medical Society<sup>1</sup> at Put-in-Bay.

Singularly enough, I listened to the papers at both of these meetings, but did not have the courage to employ this method of anastomosis until December, 1902, after seeing McGraw demonstrate his plan on the dog.

It seemed to be a thoroughly reasonable method, but it seemed to involve more risk than was proper without having seen the actual application of the various steps as they had been developed experimentally by the author.

He had demonstrated for me the various steps on artificially prepared organs, but the impression was quite different from that obtained when the operation was performed on the living animal.

After seeing the operation, I was convinced that its application was justifiable.

Since that time I have used the method 156 times and I have come to the following conclusions:

1. Anastomosis with the McGraw elastic ligature can be accomplished in a satisfactory way (a) between stomach and intestines, (b) between intestine and intestine.
2. The opening can be made any desired length.
3. It can be made without carrying infectious material from the lining of the stomach or intestine to the peritoneum.
4. It can be performed quickly.
5. It requires no special skill or ingenuity.

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.  
1. New York Med. Jour., Jan. 26, 1901.



## CLINICAL EXPERIENCE WITH MCGRAW LIGATURE.

No.	Age.	Sex.	Occupation.	Admission.	Discharge.	Diagnosis.	Complications.	Treatment.	Remarks.
1	39	F	Housewife.	1/7/03	2/1/03	Carcinoma of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Carcinoma involving entire posterior wall of stomach.
2	49	M	Piano key maker.	1/27/03	2/11/03	Carcinoma of stomach.....	Tumor invol'd retroperitoneal glands.	Gastroenterostomy, McGraw ligature.	Carcinoma involving posterior wall of stomach and retroperitoneal glands
3	37	M	Farmer.	2/1/03	3/1/03	Pyloric obstruction, ulcer, dilated stomach.	None.....	Gastroenterostomy, McGraw ligature.	Ulcer 3 c. m. in diameter at pylorus.
4	30	F	Housewife.	2/2/03	2/25/03	Pyloric obstruction, non-malignant.	None.....	Gastroenterostomy, McGraw ligature.	Cicatricial contraction of pylorus.
5	57	M	Railr'd man.	2/14/03	3/12/03	Chronic appendicitis, pyloric obstruction, (cicatricial?)	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large indurated mass about pylorus, apparently cicatricial.
6	30	F	Housework.	2/21/03	3/29/03	Pyloric obstruction from ulcer.	None.....	Gastroenterostomy, McGraw ligature.	Some induration of pylorus with enlargement of glands about.
7	45	M	Coal miner.	3/24/03	4/7/03	Chronic appendicitis, carcinoma of stomach, adherent gall bladder.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature.	Large carcinomatous mass near pylorus.
8	55	F	Housework.	3/29/03	4/27/03	Right femoral hernia, right ovarian cyst, carcinoma of stomach, gallstones.	Gallstones....	Gastroenterostomy, McGraw ligature; removal of fifty gallstones; herniotomy.	Carcinoma of pylorus with glands extensively involved.
9	32	F	Housework.	4/5/03	5/2/03	Pyloric obstruction.....	None.....	Excised pylorus; enlarged old gastroenterostomy opening by means of McGraw ligature.	Had gastroenterostomy by means of Murphy button 8 months previously for cicatricial stenosis.
10	65	F	Housewife.	4/10/03	5/7/03	Gallstones, pyloric obstruction, chronic pancreatitis.	Gallstones and chronic pancreatitis.	Gastroenterostomy, McGraw ligature; 27 gallstones removed.	Marked hypertrophy of tissue about pylorus with obstruction.
11	29	F	Laundry girl.	4/26/03	6/18/03	Chronic appendicitis, dilated stomach.	Chronic appendicitis.	Finney's operation by means of McGraw ligature.	Found gastropptosis.
12	33	F	Housewife.	5/9/03	5/28/02	Chronic appendicitis, pyloric obstruction, cicatricial; general enteroptosis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature.	Cicatricial stenosis of pylorus and general enteroptosis.
13	27	M	Piano finish'r.	5/26/03	8/2/03	Cicatricial constriction of pylorus.	None.....	Finney's operation by means of McGraw ligature.	Found cicatricial contraction of pylorus; no relief of symptoms for six weeks.
14	33	M	Coachman.	5/27/03	7/15/03	Non-malignant stricture of pylorus.	None.....	Gastroenterostomy, McGraw ligature; closure of pylorus by placing silver wire around.	Cicatricial contraction of pylorus, greatly dilated stomach.
15	53	M	Farmer.	6/1/03	6/20/03	Carcinoma of stomach, pyloric obstruction.	None.....	Gastroenterostomy, McGraw ligature.	No vomiting, but patient has had daily gastric lavage for four months.
16	34	F	Cook..	6/1/03	6/27/03	Pyloric obstruction from old ulcer.	None.....	Gastroenterostomy, McGraw ligature; closed pylorus by passing silver wire around.	Cicatricial stenosis of pylorus.
17	44	F	Housewife.	6/2/03	7/2/03	Dilated stomach, pyloric obstruction, non-malignant.	Cholecystitis..	Gastroenterostomy, McGraw ligature.	Pylorus small; stomach greatly dilated.
18	25	F	Housewife.	6/10/03	7/5/03	Ulcer of stomach, pyloric obstruction.	None.....	Gastroenterostomy, McGraw ligature.	Small ulcer of pylorus; large scar on lower border near pylorus.
19	40	F	Housewife.	6/16/03	7/18/03	Ulcer of stomach, pyloric obstruction, ovarian cyst.	Ovarian cyst.	Gastroenterostomy, McGraw ligature; excised right ovary and tube.	Large ulcer posteriorly, near pylorus.
20	36	F	Housewife.	6/16/03	7/10/03	Carcinoma of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Carcinoma of pylorus with complete obstruction; extensive enlargement of glands.
21	41	M	Farmer.	6/27/03	8/7/03	Carcinoma of stomach, chronic appendicitis.	Chronic appendicitis.	Excision of appendix, gastroenterostomy, McGraw ligature.	Carcinoma involving pylorus and pancreas. Patient did fairly well for 3 weeks, then gradually became weaker and died 6 weeks after operation.
22	16	F	School girl.	6/28/03	7/22/03	Gastric ulcer.....	None.....	Gastroenterostomy, McGraw ligature.	Had operation for appendicitis one year previously; ulcer on inferior surface pylorus.
23	21	F	Housework.	7/1/03	10/22/03	Gastric ulcer.....	None.....	Gastroenterostomy, McGraw ligature.	Ulcer of posterior wall near pylorus.
24	44	M	Farmer.	7/4/03	7/24/03	Carcinoma of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Carcinoma posterior wall; extensive glandular involvement.
25	33	F	Housewife.	7/11/03	9/21/03	Gastric ulcer, pyloric obstruction, peritoneal adhesions.	Cholecystitis..	Gastroenterostomy, McGraw ligature; drained gall bladder.	A round ulcer on posterior wall of stomach.
26	28	M	Janitor.	7/14/03	8/23/03	Gastric ulcer.....	None.....	Gastroenterostomy, McGraw ligature.	Small ulcer near pylorus.
27	19	F	Laundress.	7/15/03	8/10/03	Gastric ulcer, pyloric obstruction, adherent gall bladder.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature.	Pylorus adherent to gall bladder. Two large scars, one at pylorus, one on posterior wall of stomach.
28	27	M	Switchman.	7/16/03	8/9/03	Chronic appendicitis, pyloric obstruction, old ulcer.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	A scar at pylorus; greatly dilated stomach.
29	48	M	Farmer.	7/29/03	8/23/03	Dilated stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; drained gall bladder.	Cicatricial stenosis of pylorus; greatly dilated stomach.
30	38	M	Farming engineer.	8/4/03	9/5/03	Carcinoma of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Stomach had two distinct, separate carcinomatous growths, one on anterior and one on posterior wall.
31	44	F	Housewife.	8/13/03	9/20/03	Dilated stomach, varicose veins, hemorrhoids.	Hemorrhoids and varicose veins.	Gastroenterostomy, McGraw ligature.	Had appendix removed 2 years previously; numerous adhesions about pylorus.
32	64	M	Merchant.	8/23/03	9/14/03	Gastric ulcer, stenosis of pylorus, cholecystitis, pancreatitis, appendicitis obliterans, right inguinal hernia, hypertrophy of prostate gland.	Cholecystitis pancreatitis chronic appendicitis.	Cholecystostomy, gastroenterostomy, McGraw ligature; excision of appendix.	Greatly dilated stomach; ulcer with marked stenosis; also had cystitis; died three weeks after operation.
33	33	F	Housewife.	8/30/03	10/1/03	Gastric ulcer, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excision of appendix.	Ulcer on anterior wall.
34	65	F	Housewife.	9/9/03	9/24/03	Carcinoma of stomach, pyloric obstruction.	None.....	Gastroenterostomy, McGraw ligature.	Large carcinoma with complete obstruction; greatly emaciated; died 15 days after operation from exhaustion.
35	38	F	Housewife.	9/10/03	10/18/03	Gastric ulcer, chronic appendicitis, tubercular salpingitis duplex.	Chronic appendicitis, tuberculous salpingitis.	Gastroenterostomy, McGraw ligature; excision of both tubes, ovaries and appendix.	Ulcer on posterior wall of pylorus; both ovaries and tubes and uterus covered with tubercles.
36	43	M	Janitor.	9/15/03	10/24/03	Gastric ulcer, chronic appendicitis, varicocele, left; hydrocele, right.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature, excision of appendix; excision of varicocele, inversion tunica vaginalis.	Ulcer size of twenty-five cent piece on anterior wall.
37	47	F	Housewife.	9/28/03	11/4/03	Carcinoma of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Large carcinoma on anterior wall near pylorus involving pancreas.
38	42	M	Farmer.	10/13/03	11/3/03	Pyloric obstruction.	None.....	Gastroenterostomy, McGraw ligature.	A hard cicatricial ring about pylorus.
39	28	F	None...	10/13/03	11/16/03	Gastric ulcer and chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; appendix removed.	Ulcer size of a nickel on anterior wall near pylorus.
40	40	M	Farmer.	10/14/03	11/25/03	Ulcer of stomach (?) Carcinoma.	None.....	Gastroenterostomy, McGraw ligature.	A thickened area in lesser curvature of stomach: impossible to say whether ulcer or malignant.



## CLINICAL EXPERIENCE WITH MCGRAW LIGATURE.—Continued.

No.	Age.	Sex.	Occupation.	Admission.	Discharge.	Diagnosis.	Complication.	Treatment.	Remarks.
41	50	M	Farmer.	10/28/03	11/30/03	Ulcer of stomach, cholecystitis.	Cholecystitis.	Gastroenterostomy, McGraw ligature; drained gall bladder.	Ulcer on posterior wall near pylorus.
42	32	F	Housewife.	11/10/03	12/21/03	Contracted gastroenterostomy opening, intestinal adhesions.	Intestinal adhesions.	Enlarged old gastroenterostomy opening by means of McGraw ligature.	Had gastroenterostomy opening made eighteen months ago; enlarged by McGraw ligature seven months ago.
43	39	M	Cabin-maker.	12/6/03	1/19/04	Appendicitis, carcinoma of pylorus.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Indurated area on posterior wall of stomach near pylorus; question as to malignancy.
44	59	F	Housewife.	1/2/04	1/4/04	Carcinoma of stomach, obstruction of pylorus.	Gallstones.	Gastroenterostomy, McGraw ligature.	Carcinoma involving pancreas; complete obstruction of pylorus; greatly emaciated; died from shock, 2d day.
45	34	M	Bar hand.	1/4/04	2/4/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma involving pylorus, gall bladder and pancreas.
46	32	F	Housewife.	1/5/04	1/31/04	Ulcer of pylorus, peritoneal adhesions.	Peritoneal adhesions.	Gastroenterostomy, McGraw ligature.	Ulcer of pylorus; adjacent glands enlarged.
47	29	F	Housewife.	1/10/04	4/6/04	Ulcer of stomach, peritoneal adhesions.	Peritoneal adhesions.	Gastroenterostomy, McGraw ligature.	Stomach greatly dilated; two scars near pylorus.
48	23	F	Housewife.	1/13/04	2/10/04	Gastric ulcer.	None.	Gastroenterostomy, McGraw ligature.	A thickened scar on anterior wall near pylorus.
49	43	F	Domestic.	1/14/04	2/12/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large ulcer on posterior wall near pylorus.
50	51	M	Farmer.	1/15/04	2/21/04	Chronic appendicitis, ulcer of stomach.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer near pylorus.
51	30	F	Seamstress.	1/24/04	3/1/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer posterior surface of pylorus.
52	37	F	Housewife.	1/28/04	2/18/04	Chronic appendicitis, double salpingitis, dilated stomach.	Chronic appendicitis, salpingitis.	Gastroenterostomy, McGraw ligature; excised appendix, left ovary and tube.	Stomach greatly dilated. Old ulcer near pylorus.
53	62	M	Carpenter.	2/4/04	2/28/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma involving posterior wall of stomach.
54	42	M	Dealer in notions.	2/11/04	2/26/04	Carcinoma of stomach and mesenteric glands.	None.	Gastroenterostomy, McGraw ligature.	Large carcinoma with complete obstruction; greatly emaciated; died from exhaustion fifteen days later.
55	58	F	Housewife.	2/16/04	2/25/04	Cholelithias, obstructed pylorus.	Gallstones.	Gastroenterostomy, McGraw ligature; enlarging old gastroenterostomy opening; removed G. S.	Found old gastroenterostomy opening made by Murphy button size of lead pencil; died nine days after operation from exhaustion and starvation.
56	31	F	Housewife.	2/18/04	3/28/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma in smaller curvature of stomach.
57	29	F	Housewife.	2/22/04	3/20/04	Ulcer of stomach.	None.	Gastroenterostomy, McGraw ligature.	Large ulcer posterior wall of stomach near pylorus.
58	50	M	Farmer.	2/24/04	3/18/04	Contracted gastroenterostomy opening.	None.	Enlarged gastroenterostomy, opening by needle and thread; cut off jejunum on side and made end to end anastomosis of this with descending loop of jejunum.	Found old gastroenterostomy opening only large enough to admit tip of little finger.
59	59	M	Painter.	2/28/04	3/16/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Large carcinoma on anterior wall near pylorus.
60	29	F	At home.	3/3/04	3/24/04	Ulcer of stomach.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer in posterior wall near pylorus.
61	29	F	Nurse.	3/29/04	4/26/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer in posterior wall near pylorus.
62	59	M	Farmer.	3/30/04	4/18/04	Carcinoma of pancreas and stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma involving pancreas, stomach and duodenum.
63	48	F	Housewife.	4/6/04	6/4/04	Dilated stomach, cholecystitis, peritoneal adhesions.	Cholecystitis, peritoneal adhesions.	Gastroenterostomy, McGraw ligature; drainage of gall bladder.	Gall bladder adherent to pylorus; stomach greatly dilated.
64	25	F	Domestic.	4/29/04	6/12/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer on anterior wall near branch of gastropiploic artery.
65	34	F	Housewife.	5/1/04	5/31/04	Obstruction of sigmoid.	None.	Anastomosis between ileum and sigmoid by McGraw ligature.	A very marked narrowing of colon at splenic flexure.
66	47	F	Housewife.	5/8/04	6/6/04	Ulcer of stomach, cholecystitis.	Cholecystitis.	Gastroenterostomy, McGraw ligature; drained gall bladder.	Ulcer on posterior wall of stomach near pylorus.
67	56	M	Painter.	5/26/04	6/15/04	Carcinoma of stomach.	None.	Excised pylorus together with three-fourths of stomach; gastroenterostomy, McGraw ligature.	Carcinoma of pylorus.
68	45	F	Housewife.	5/29/04	7/6/04	Pyloric obstruction, old ulcer.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large scar of pylorus.
69	41	M	Farmer.	6/5/04	6/28/04	Carcinoma of stomach involving liver and pancreas.	Carcinoma liver and pancreas.	Gastroenterostomy, McGraw ligature.	Carcinoma of lesser curvature involving liver and pancreas; almost complete obstruction of pylorus.
70	35	F	Housewife.	6/28/04	8/18/04	Gastric ulcer, cholecystitis, hemorrhoids.	Cholecystitis, hemorrhoids.	Gastroenterostomy, McGraw ligature; cholecystostomy, clamp and cautery for hemorrhoids.	A large hard area on posterior wall of stomach near pylorus, probably ulcer.
71	37	M	Farmer.	7/6/04	7/30/04	Ulcer of stomach, chronic pancreatitis, chronic appendicitis.	Ulcer, chronic pancreatitis, chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large ulcer anterior wall of pylorus extending into duodenum; small ulcer on posterior wall of stomach near pylorus; appendix cicatricial.
72	48	M	Farmer.	7/19/04	8/12/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma of posterior wall, causing almost complete obstruction; retroperitoneal glands involved.
73	34	F	Housewife.	7/19/04	8/2/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Large carcinoma of anterior wall involving transverse colon.
74	61	M	None.	7/27/04	8/10/04	Carcinoma of descending colon.	None.	Anastomosis between ileum and sigmoid with McGraw ligature.	Carcinoma of descending colon too extensive to be removed; obstruction.
75	43	F	Housewife.	9/1/04	9/26/04	Gastric ulcer, chronic appendicitis, chronic pancreatitis.	Chronic appendicitis, chronic pancreatitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer on posterior wall near pylorus; appendix adherent and three-fourths cicatricial.
76	44	M	Farmer.	9/2/04	9/25/04	Gastric ulcer.	None.	Gastroenterostomy, McGraw ligature.	Ulcer of posterior wall near pylorus.
77	15	F	Domestic.	9/5/04	9/22/04	Gastric ulcer, chronic appendicitis, cholecystitis.	Chronic appendicitis, cholecystitis.	Gastroenterostomy, McGraw ligature, cholecystostomy; excised appendix.	Ulcer of anterior wall of stomach; appendix thick and congested; gall bladder contained thick, dark, sandy bile.
78	41	M	Brick-maker.	9/6/04	9/18/04	Carcinoma of stomach.	None.	Gastroenterostomy, McGraw ligature.	Carcinoma of anterior wall of stomach, extensive granular involvement.
79	33	F	Housewife.	9/6/04	10/4/04	Gastric ulcer, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large ulcer on anterior wall of pylorus; appendix adherent at middle making sharp bend at this point.
80	50	F	Housewife.	9/8/04	10/6/04	Gastric ulcer, cholecystitis, chronic pancreatitis.	Cholecystitis, pancreatitis.	Gastroenterostomy, McGraw ligature; cholecystostomy.	Ulcer on anterior surface of pylorus; thick dark bile in gall bladder.
81	62	F	Housewife.	9/15/04		Carcinoma of stomach, sarcoma of ovaries.	Sarcoma of both ovaries.	Gastroenterostomy, McGraw ligature; excision of both ovaries and tubes.	Carcinoma of stomach with hour glass condition; retroperitoneal glands involved.
82	33	M	Timber.	9/17/04	10/9/04	Gastric ulcer.	None.	Gastroenterostomy, McGraw ligature.	Ulcer on posterior wall of stomach near pylorus.



## CLINICAL EXPERIENCE WITH MCGRAW LIGATURE.—Continued.

No.	Age.	Sex.	Occupation.	Admission.	Discharge.	Diagnosis.	Complications.	Treatment.	Remarks.
83	55	M	Stone cutter.	10/6/04	10/18/04	Carcinoma of stomach.....	Involvement of pancreas.	Gastroenterostomy, McGraw ligature.	Carcinoma on posterior wall of stomach involving pancreas; patient died from exhaustion 11 ds. after opera'n.
84	25	F	Housewife.	10/4/04	.....	Gastric ulcer.....	None.....	Gastroenterostomy, McGraw ligature.	Ulcer near pylorus.
85	22	F	Domestic.	10/9/04	.....	Gastric ulcer, cholecystitis; chronic pancreatitis.	Cholecystitis, ch. pancre'tis.	Gastroenterostomy, McGraw ligature; cholecystostomy.	Ulcer on anterior wall; omentum adherent in pelvis pulling stomach downward.
86	17	F	Domestic.	10/12/04	.....	Duodenal ulcer.....	None.....	Gastroenterostomy, McGraw ligature.	A well-defined ulcer in duodenum.
87	39	F	Housewife.	10/16/04	11/12/04	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature.	
88	53	F	Housewife.	10/28/04	11/27/04	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystitis.	Two ulcers, one at pylorus; one 3 cm. wide, 1 lesser curvature. Gall bladder sacculated and contained sand and dark bile.
89	33	M	Mechanic.	10/30/04	12/23/04	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; enterostomy of two loops of jejunum, cholecystostomy.	Ulcer on posterior wall; pylorus open; gall bladder contained sand and dark bile.
90	46	M	None..	10/31/04	12/2/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Large ulcer suspicious of carcinoma; membrane appendix thick, adherent, mucous, granular.
91	30	M	Milk dealer.	11/8/04	11/26/04	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer on posterior surface of pylorus almost complete obstruction; appendix cicatricial and thick.
92	23	F	Domestic.	11/8/04	.....	Appendicitis, ulcer of stomach and duodenum.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix.	Ulcer near pylorus; also in duodenum; appendix adherent, club shaped.
93	39	F	At home.	11/17/04	12/10/04	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystostomy.	Ulcer posterior surface near pylorus; gall bladder filled with black sandy bile.
94	64	M	La borer.	11/17/04	12/10/04	Pyloric obstruction from adhesions.	.....	Gastroenterostomy, McGraw ligature.	Adhesions between pylorus and gall bladder diffuse.
95	40	F	Housewife.	11/17/04	11/23/04	Ulcer of stomach.....	None.....	Gastroenterostomy, McGraw ligature.	Patient died from acute dilatation of stomach.
96	39	F	Housewife.	11/20/04	12/24/04	Ulcer of stomach, ventral hernia.	Ventral hernia.	Gastroenterostomy, McGraw ligature; herniotomy.	Ulcer on posterior wall of stomach; induration for 4 cm. around ulcer.
97	22	F	Domestic.	11/25/04	1/31/05	Pyloric obstruction from old scar.	Ovarian cyst..	Gastroenterostomy, McGraw ligature; removed cyst.	Old scar on anterior surface of pylorus; stomach greatly dilated.
98	35	F	Housewife.	12/7/04	1/17/05	Ulcer of stomach, chronic appendicitis.	.....	Gastroenterostomy, McGraw ligature; enterostomy of branches of jejunum.	Stomach adherent to anterior abdominal wall; hour-glass condition of stomach; old scar on posterior surface of pylorus.
99	29	F	Dress maker.	12/7/04	1/17/05	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; excised appendix, enterostomy, McGraw.	Two scars, one on greater curvature, one at pylorus; appendix adherent, necrotic mucous membrane.
100	18	F	Clerk..	1/1/05	2/8/05	Ulcer of stomach.....	.....	Gastroenterostomy, McGraw ligature; enteroenterostomy, McG.	Ulcer on posterior surface of pylorus.
101	54	F	Housewife.	1/2/05	1/10/05	Carcinoma of stomach.....	Involvement of pancre's omentum, & upper jejunum.	Gastroenterostomy, McGraw ligature; enteroenterostomy.	Patient died from exhaustion.
102	32	F	Housewife.	1/5/05	2/5/05	Gastroptosis, ulcer of duodenum purulent append'tis.	Purulent append's chronic pancre'tis.	Gastroenterostomy, McGraw ligature; excised appendix.	Glands behind duodenum enlarged; appendix contained pus.
103	45	F	Housewife.	1/7/05	3/18/05	Multiple ulcers of stomach...	.....	Gastroenterostomy, McGraw ligature; enteroenterostomy.	Two ulcers near pylorus; one large one on lesser curvature; hour glass constriction of stomach.
104	49	M	Farm-er.	1/17/05	1/20/05	Ulcer of stomach; obstruction of pylorus, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; enteroenterostomy; cholecystostomy.	Old ulcer on pylorus with much narrowing; gall bladder contained thick sandy bile. Patient died from shock.
105	23	M	Fact'ry hand.	1/23/05	2/17/05	Ulcer of pylorus; chronic appendicitis, cholecystitis.	Chronic appendicitis, cholecystitis.	Gastroenterostomy, McGraw ligature; Cholecystostomy, excised appendix.	Ulcer at pylorus; gall bladder distended with thick bile; appendix adherent.
106	23	F	Domestic.	1/23/05	2/18/05	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystostomy.	
107	34	F	Housewife.	1/24/05	1/29/05	Ulcer of duodenum, gastrectasis, nephroptosis, lacerated perineum.	Nephroptosis, lacerated perineum.	Gastroenterostomy, McGraw ligature; enteroenterostomy, suture; perineorrhaphy.	Died acute gastric dilatation.
108	24	F	Clerk..	1/31/05	2/21/05	Ulcer of stomach, chronic appendicitis, cholecystitis.	Chronic appendicitis, cholecystitis.	Gastroenterostomy, McGraw ligature; cholecystostomy, appendectomy.	
109	41	M	Farm-er.	2/2/04	2/28/05	Ulcer of stomach with obstruction of pylorus.	.....	Gastroenterostomy, McGraw ligature.	Scar on posterior surface of pylorus; regional lymph glands enlarged; gall bladder adherent to pylorus.
110	49	F	Housewife.	2/8/05	3/23/05	Contracted gastroenterostomy opening.	Obstruction of pylorus.	Enl'r'd gastroenterostomy opening with McG. lig. entero'tomy.	
111	23	F	Housewife.	2/25/05	3/23/05	Ulcer of stomach.....	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; appendectomy.	Ulcer on posterior wall; appendix sausage-shaped and walls very thick.
112	36	F	Clerk..	3/7/05	4/19/05	Ulcer of stomach.....	.....	Gastroenterostomy, McGraw ligature.	Ulcer near pylorus; regional glands enlarged.
113	21	M	Farm-er.	3/28/05	4/17/05	Gastroptosis, ulcer of stomach with obstruction.	.....	Gastroenterostomy, McGraw ligature.	Ulcer at pylorus; pylorus very small.
114	34	M	Laborer.	3/29/05	5/13/05	Ulcer of stomach, chronic appendicitis.	Chronic appendicitis.	Gastroenterostomy, McGraw ligature; appendectomy.	Ulcer at pylorus; regional glands enlarged; appendix long, club-shaped and adherent.
115	30	F	Teacher.	4/20/05	6/10/05	Ulcer of stomach, umbilical hernia.	Umbilical hernia.	Gastroenterostomy, McGraw ligature; herniotomy.	Ulcer near pylorus.
116	55	F	Housewife.	4/22/05	6/19/05	Gastrectasis, cholecystitis....	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystostomy.	Adhesions of gall bladder to stomach; gall bladder cont'd thick sandy bile.
117	57	M	Coop-er.	5/3/05	.....	Ulcer of stomach, cholecystitis, pancreatitis.	Cholecystitis, pancreatitis.	Gastroenterostomy, McGraw ligature; cholecystostomy.	Pancreas much enlarged; ulcer near pylorus; regional glands enlarged; gall bladder cont'd dark sandy bile.
118	43	M	Steward.	5/8/05	6/3/05	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystostomy.	Scar at pylorus; opening small; gall bladder contained thick dark bile.
119	29	F	Housewife.	5/12/05	.....	Ulcer of stomach.....	Ch. append'is, umbilical hernia.	Gastroenterostomy, McGraw ligature.	Ulcer at pylorus; appendix club-shaped and contained pus.
120	50	F	Housewife.	5/14/05	5/22/05	Carcinoma of stomach.....	.....	Gastroenterostomy, McGraw ligature.	Large carcinoma on posterior wall of stomach.
121	42	M	Farm-er.	5/18/05	.....	Ulcer of stomach.....	Cholecystitis..	Gastroenterostomy, McGraw ligature; cholecystostomy.	Ulcer on posterior wall, near pylorus; gall bladder cont'd thick dark bile.
122	25	F	Domestic.	5/24/05	.....	Ulcer of stomach.....	.....	Gastroenterostomy, McGraw ligature.	One ulcer near cardiac end and one near pyloric and of stomach.
123	18	F	Housewife.	5/24/05	.....	Ulcer of stomach, cholecystitis.	Cholecystitis..	Gastroenterostomy, McGraw ligature.	Pylorus adherent to omentum and omentum adherent to anterior abdominal wall; ulcer on posterior wall near lesser curvature.
124	35	F	Housewife.	5/26/05	.....	Ulcer of stomach with obstruction and dilation.	.....	Gastroenterostomy, McGraw ligature.	Ulcer along greater curvature anterior wall; pylorus small.



6. The patient shows very little, if any, shock after the operation.

7. The patients are relatively very free from pain and can usually sit up in bed with the aid of a head-rest a few hours after the operation.

8. The method should not be employed in making a pyloroplasty.

9. It should not be used in making a cholecystenterostomy.

I will here add four conclusions from Dr. McGraw's paper which will undoubtedly be of great value to those who do not possess his original paper.

1. The ligature should not be a rubber thread nor a flat band; these lack the necessary strength to cut their way with certainty through the thick walls of the stomach. The surgeon must use a hard, round, smooth and strong rubber cord, at least 2 millimeters in diameter.

2. It must include in one loop all the tissue which it is desirable to sever. The formation of small connected loops is an error. In general, the larger the amount of tissue included in the loop the quicker and more certainly will the ligature perform its work.

3. The cord must be drawn as firmly and tightly together as possible and fastened by a silk thread, which is tied around it. I have myself tied the rubber first in a single knot, fastened the silk around it, and then repeated the process for the sake of greater security. This may not be necessary, as the knotting of the silk thread once would probably serve the purpose.

4. Before inserting the rubber ligature the viscera should be joined together by a row of Lembert sutures for a distance of six or seven centimeters, and when the ligature has been tied a similar row in the front should complete the function. If ever there should be an ill success with the ligature, it will, I believe, occur from its too rapid action. The failures to cut through observed by certain German surgeons have, as I said before, been due to some fault in the technic.

I have formulated the method in ten short, concise steps which can easily be followed, especially when one has seen the beautiful drawings which Dr. H. O. Walker published in *THE JOURNAL of the American Medical Association* Jan. 17, 1903, page 166.

1. A round rubber cord, 2 mm. in diameter, made of the best material, should be used.

2. A posterior row of Lembert sutures is applied.

3. A long straight needle, armed with the rubber ligature is passed into the lumen of the intestine and out again at the desired distance, from 5 to 10 cm. away from the point of introduction.

4. While an assistant holds the intestine the surgeon stretches the rubber in the needle, and when quite thin draws it rapidly through the intestine.

5. The same step is repeated through the stomach.

6. A strong silk ligature is placed across and underneath the rubber ligature between the latter and the point where the stomach and the intestine come together.

7. A single tie is made in the rubber ligature after the latter has been drawn very tightly.

8. The silk ligature is passed around the ends of the rubber ligature where they cross, and tied securely three times.

9. The ends of the latter are released and cut off, being held by the silk ligature.

10. The Lembert suture is continued around in front until the point of its beginning is reached, where it will be tied.

11. Care must be exercised to prevent tying the rubber ligature too far backward and thus getting behind the posterior row of Lembert sutures.

I have used the McGraw elastic ligature 156 times. All but 32 of these operations were performed at the

Augustana Hospital. I have had the 124 cases in which the patients were operated on in this institution carefully tabulated in order to give as comprehensive an idea as possible in the smallest amount of space.

Of these cases, 28 patients were operated on for the relief of pyloric obstruction due to the presence of a malignant growth. Of this group 5 patients died. All of these were greatly reduced by their disease and they all died of exhaustion.

Ninety-six patients were operated on for the relief of conditions due to non-malignant disease. In all of these cases, there was obstruction to the pylorus due either to cicatricial contraction resulting from ulcer or to the presence of an acute or a chronic ulcer.

In this series of 96 cases, there were five deaths. In Case 32 in the table, the patient was 64 years of age and very much reduced. He suffered from chronic appendicitis, cholecystitis with pancreatitis and ulcer of the pylorus with obstruction, and with a greatly dilated stomach. He also suffered from right inguinal hernia, hypertrophy of the prostate and cystitis.

I removed the appendix, made a cholecystostomy, and found a great quantity of thick, black, sandy bile in the gall bladder, which accounted for the pancreatitis. I also made a gastroenterostomy with the McGraw ligature. The patient died three weeks after the operation from exhaustion.

Had better surgical judgment been used, it is possible that this patient might have recovered. He was too greatly reduced to bear the extensive operation at his age.

It would have been proper to remove the appendix and to have made a cholecystostomy at the first operation, to have used gastric lavage and concentrated food by mouth and rectal feeding for a time, to have made the gastroenterostomy and herniotomy at a second operation and a perineal prostatectomy at a third, unless the continued rest in bed had in the meantime relieved the condition of the prostate at least for a time, thus postponing the indication for its removal temporarily.

In Case 55 in the table, a woman, 58 years of age, had previously been operated on. A gastroenterostomy opening which had been made two years before with the Murphy button had contracted until it was just large enough to admit a uterine probe. This was enlarged by the use of a McGraw ligature, and a second ligature was employed to make an opening between the two branches of the jejunum. A cholecystostomy was made and a gallstone removed.

The patient was a mere skeleton when operated on. She died on the ninth day from exhaustion.

It is doubtful whether this patient's life could have been saved by any method.

In Case 94, a man, 64 years old, had pyloric obstruction resulting in gastric dilatation and marked malnutrition. He died from starvation three weeks after the operation; no autopsy was permitted, and we were unable to determine why the patient could not assimilate the food he was given.

In Case 104 of this series the patient died of shock. He was 49 years of age, and the same error in judgment was committed as in Case 32, with a more immediately fatal result.

Case 107 in this series was more instructive, because it explained a condition which I had met before after gastroenterostomy, but which I had been unable to explain.

The patient, a woman, aged 34, suffered from an ulcer of the duodenum, with a greatly distended stom-



ach. She also had a movable right kidney and a lacerated perineum. I made a gastroenterostomy with the McGraw ligature and an enterocenterostomy of the jejunum with needle and thread. A perineorrhaphy was also done. The patient did very well until the fourth day, when she suddenly complained of difficulty in respiration. She died within a few hours. The patient had been in the sitting posture, and we had not diagnosed the cause of her death. An autopsy showed an enormous dilatation of the stomach. The abdominal bandage had made it impossible for the abdominal wall to dilate; hence, the diaphragm had been pushed upward, the heart had suddenly been pushed out of its place, which accounted for the dyspnea and the sudden death. Had a stomach tube been inserted and gastric lavage employed, this patient would have recovered, as she was in an excellent condition before this accident occurred.

I will not compare this with other methods, but will simply record these clinical facts in support of the conclusions made at the beginning of this paper.

### DISCUSSION

ON PAPERS OF DRS. MAYO, NILES AND OCHSNER.

DR. HUGO O. PANTZER, Indianapolis, said that in a certain percentage of cases it is possible to palpate an ulcer accompanied with induration, and that tenderness, increased consistency and tumefaction should be painstakingly searched for. He reported briefly a case of anterior implantation of the duodenum into the stomach for stenosis of the pylorus, in which the patient suffered extreme gastrectasis owing to the almost complete occlusion of the pylorus. The duodenum was dissevered, the pyloric end of the stomach closed with running suture, and the duodenum implanted into the stomach just proximal to the thickened, ulcerated pylorus. The patient at the time of the operation was *in extremis*. Dr. Pantzer saw the patient three months before the operation and at that time he found a tumor of the pylorus the size of a goose egg, the stomach filling practically the entire abdomen. Operation at that time was refused. Just before the operation the local conditions were practically the same. The patient was extremely emaciated and enfeebled, necessitating quick work. A slit transverse to the circular fibers of the pylorus of length equal to the outstretched duodenal opening was made, the ends of which, together with the angle of the transverse incision in the stomach, were caught up by two guypoint sutures; then a running suture, a continuous suture all around and one or two enforcing sutures where the knot of the former was placed, completed the anastomosis. The patient made an uneventful recovery. On the third day feeding by stomach was resumed. At no time was there the least evidence of defective drainage. The patient recovered good health quickly and fully. For over twenty years she had had stomach trouble and was restricted to a limited diet; since the operation she eats all kinds of food without any difficulty. The operation here practiced is virtually the implantation of the duodenum into the stomach, as done by Billroth after pylorotomy for cancer. Examination of Dr. Pantzer's patient six months after operation, and again recently, fails to reveal any tumefaction in the region of the pylorus. The patient was presented before the Marion County Medical Society and examined by several surgeons. It is fair to suppose that restitution occurs here as elsewhere in the body. When the source of irritation, the flow of acid gastric contents over the ulcerated areas, ceases, it is reasonable to expect a cure of the ulcer and subsidence of the inflammatory swelling. On this supposition it is not necessary to remove the thickened pylorus in ulcer cases, as has been advocated by Rodman. Dr. Pantzer expressed his conviction that several rows of sutures in intestinal surgery are often the cause of bad functional results. A single peritoneal suture correctly and carefully placed, with here and there an enforcing suture, usually will be found all-sufficient. The immediate drainage provided by this method will obviate the bad effects resulting from methods wherein

the opening between stomach and intestine is delayed, as when the McGraw elastic ligature is employed. An opening provided, as in Dr. Pantzer's case, will continue patent. Experience has shown that the patency of gastrointestinal openings is less assured, particularly in cases in which the pylorus remains. The extent to which this operation is available, and to what extent it may take the place of the more complicated procedures, must be ascertained by further experience.

DR. A. P. FRANCINE, Philadelphia, read a brief extract of the statistics to which Dr. Mayo referred. They were obtained from the analysis of 2,830 consecutive autopsies in the Philadelphia Hospital. In this number there were 42 cases of ulcer, of which 2 were purely duodenal. He analyzed the associated condition or disease in these cases and found that in 17 there was chronic nephritis; in 12 tuberculosis, either miliary or of the lungs; and in 3 both tuberculosis and nephritis. Thus in 76 per cent. of the cases there was an associated condition of either nephritis or tuberculosis, and it would be interesting to know what relation, if any, these diseases bear to the gastric ulcers. In 20 out of 42 cases, or 47 per cent., the ulcers were multiple. Mayo says that in 20 per cent. of cases more than one ulcer is present. Brinton, in 463 autopsies on patients with ulcer of the stomach, found 57 with two ulcers, 16 with three or four, 2 with five, and 4 with more than five. The sexes in this series were equally divided, there being 21 males and 21 females, and the average age for the males was 43 years and for the females the same, a remarkably equal distribution. Welch, in his statistics, found 40 per cent. in males and 60 per cent. in females. The largest number of cases in his series occurred in males between 30 and 40 years, and in females between 20 and 30 years, but there was much uniformity in the distribution in relation to the four decades. In Dr. Francine's series the greatest number of cases occurred in males between 50 and 60 years, and in females between 40 and 50 years. Here, too, there was a tolerable uniformity in relation to the four decades. Three of the cases were in infants, aged 10, 20 and 36 months respectively. Osler mentions a case reported by Godhart in an infant 30 hours old. It should be borne in mind in relation to these figures that the age given is the age of death, not the age of the incidence of the ulcer, which must be considered as occurring earlier. In regard to size, Osler mentions an ulcer 19 cm. by 10 cm., reported by Peabody, as the largest one he knows of. The largest one in Dr. Francine's series was 9 cm. to 10 cm. by 8 cm. to 10 cm. Osler also refers to a case reported by Berthold in which there were 34 small ulcers. Similar cases of multiple ulcers are seen in some of Dr. Francine's cases. The total number of medical admissions to the Philadelphia Hospital for ten years from Jan. 1, 1893, to Dec. 31, 1902, inclusive, was 39,542. The total number of autopsies was 2,830. The total number of ulcers was 42, of which two were purely duodenal. The summary, therefore, including the figures given by Dr. Howard for the Pennsylvania and University hospitals, is as follows:

Hospitals.	No. of Autopsies.	No. of Gastric Ulcers.	Percentage.
Philadelphia Hospital .....	2,830	40	1.41
Pennsylvania Hospital .....	547	7	1.28
University Hospital .....	279	3	1.07
Phipps Institute .....	107	1	0.94
City of Philadelphia....	3,763	51	1.32

DR. GEORGE GOODHUE, Dayton, Ohio, acknowledged the quickness with which the McGraw ligatures are applied and the fact that the opening does not contract, but he does not see that the ligature has any great advantage over the old procedure. On the other hand, there are disadvantages, the principal one being that it interferes with early nutrition through the stomach. It takes three or four days for this ligature to cut through, so that nothing can pass from the stomach to the intestines, and during this time nutrition from the stomach can not be secured. In many cases early nutrition is important, and Dr. Goodhue thinks this is the great objection to the McGraw ligature.

DR. J. H. CARSTENS, Detroit, Mich., said that an operation can not be described; it must be seen. If a physician simply reads the description of a written article he will probably make a little break and discard it, but if he would go to the



surgeon and see him do it he would have no trouble. Dr. Ochsner says the operation is not good for pyloroplasty, but it seems to Dr. Carstens that it is in just such cases that it does good.

Dr. ANDREW C. SMITH, Portland, Ore., said that Finney's operation as Finney performs it is an ideal procedure in all cases of benign stenosis. As Moynihan's modification of gastroenterostomy has no loop, it is a much less complicated operation. Dr. Smith's experience, though limited to three cases, sustains Moynihan's assertion that it does not cause vicious circle.

Dr. A. J. OCHSNER, Chicago, stated that reasoning *a priori* he had come to the same conclusions as Dr. Carstens. Dr. Ochsner saw Dr. Finney demonstrate his operation, and it seemed to him as though that operation performed with the McGraw ligature would be an ideal operation. Dr. Ochsner performed it in three cases, and all of them were unsatisfactory. It is possible that he simply chose three unfavorable cases, and it is equally possible that in each case the Finney operation would have resulted badly. The operation looked very beautiful after it was completed, and when he had finished the first one he felt certain that it would be an operation he should constantly use. Dr. Ochsner believes that there is some reason for fearing interference with the early nutrition through the stomach. With the Moynihan operation, and the one which Dr. Mayo makes at the present time, the patient can be fed at once. With this method if the patients are very weak and the pylorus is not entirely occluded, Dr. Ochsner has fed them within twenty-four hours. They have not been quite so well as the others, and that is an objection. There is not a communication that is sufficient, unless there is a partly open pylorus. Dr. Ochsner has done the operation described by Dr. Pantzer, using the McGraw ligature for making the anastomosis. He irrigated the stomach thoroughly before the operation and communication occurred soon enough to be perfectly satisfactory.

Dr. W. J. MAYO, in reply to a question, said that the Finney operation is ideal when it can be properly carried out, but it took two deaths to teach him that one can not do the Finney operation safely if there be a large amount of scar tissue in the vicinity, and especially along the suture line. In suitable cases, it is the operation of choice. He called attention to one good feature of the method of gastrojejunostomy advocated; it is not only easy and safe of performance, but it gets the food into the jejunum at the highest possible point. Practically every operator in some way or other has had to make provision for possible biliary complications in all the loop operations. Dr. Mayo has done this no-loop operation about sixty times. In two cases there has been trouble with bile. A little would get into the stomach and make the patient very uncomfortable, but in spite of this these patients gain so much in strength and health that he has not as yet considered it wise to operate to relieve the condition. From previous experience with such complications, however, he presumes that a second operation may be required to produce a cure. The percentage of such complications will prove to be as small in this as in any of the simple suture operations. It is true that the Roux operation and some of its modifications are not open to this objection, but the operative manipulations are very extensive, take a longer time and have risks that are not found in the method described. The opening of the common duct, which lies four inches below the pylorus, really marks the beginning of the small intestine. In this operation food gets into the jejunum eight inches below this point. By getting the food into the intestine high up, a large amount of absorptive surface is saved, which is lost in all the loop operations. Dr. Mayo believes that some valuable changes in technic will overcome the few remaining difficulties which are not now of serious importance as they can easily be corrected.

**The Public and the Profession.**—The public at large will hold no high estimate of those engaged in any calling if the members themselves do not stand up for each other. There is no place for jealousy in the heart of the true physician.—McCormack.

## PERIODIC PARALYSIS.\*

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This very unique and rare affection has been recognized by various European and a few American observers. Dr. E. W. Taylor<sup>1</sup> of Boston, in a very extensive and carefully written article on this subject, gives, in chronological order, a complete bibliography of all the cases that had been previously reported in detail. Some of the cases reported in this summary do not have the characteristic features of family periodic paralysis, e. g., Caveré, in 1853, described a case of general paralysis of the lower extremities. Both were quotidian in type and relieved by the administration of quinin. In 1882 V. P. Gibney reported the case of a child of 7, who after an attack of malaria suffered from paralysis of the four extremities. Recovery was slow. There is almost no similarity between these cases and those of typical periodic paralysis.

The first death was alluded to by Schaechnowitsch in 1882, who described a case of intermittent paraplegia in a patient whose father was similarly affected and who is said to have died from increasing attacks. The first authentic case was reported by Westphal in 1885. It occurred in a boy of 12, beginning with a weakness and pricking sensation in his legs. Attacks usually came on at night. The patient would awake and find himself paralyzed. The muscles usually involved were those of the head, arms and legs. Those of the face, eyes, tongue and larynx remained free. The paralyzed muscles were flaccid. There was thirst, heat and sweating, and no excretion of urine. There were no mental nor sensory symptoms except tickling in the soles of the feet. Recovery usually occurred the following evening. Swallowing was usually unaffected. There was temporary enlargement of the heart, with murmurs indicative of cardiac insufficiency. Knee jerks were lost. At the height of an attack there was complete loss of electrical excitability. Later there was permanent weakness of the legs.

The number of cases reported in the summary by Taylor is 53. Thirty-five of these cases occurred in three families, which fact is sufficiently demonstrative that this is a distinctly hereditary affection.

Cousot reports 5, Goldflam 19 and Taylor 11 cases, respectively, having occurred in one family.

Three cases have since been reported by Drs. J. K. Mitchell, Flexner and Edsall. They found a diminished excretion of kreatinin for several days prior and at the onset of an attack, with a rise to the normal after the attacks.

It has been my privilege to live and practice for twenty-two years in the midst of a family suffering from this affection. In the cases thus far reported I have failed to learn of any deaths due to this disease, except one reported by Schaechnowitsch, which classification was questioned by other observers, and I believe the disease is considered not serious. Osler says: "Improvement begins within a few hours or a day or two, the paralysis disappearing completely and the patient becoming perfectly well."

Of the family of which I write, six have died in an

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Journal of Mental and Nervous Diseases, September and October, 1898.



attack; one died in my presence. Many members of this family have suffered from attacks of periodic sick headache, which appears to be the equivalent to an attack of paralysis, both having a common cause, whatsoever that may be.

This affection in its typical form is characterized by periodic flaccid motor paralysis, involving all of the voluntary muscles, except those of the face, eyes, tongue, organs of speech, of deglutition and the sphincters of rectum and bladder. The attacks may be distinctly periodic for a time and at short intervals, especially in young adults, but frequently later in life at much longer and irregular intervals. The paralysis may be partial or complete, localized or general, the upper extremities alone or only the lower may be involved. It may be confined to the neck, or one-half of the body may be completely paralyzed, while partial paralysis affects the other half. The paralysis may be partial in the morning and become complete during the day.

During an attack of paralysis there may be one or more periods of marked improvement, usually of a few hours' duration, followed by complete helplessness. In a typical attack of complete general paralysis the patient is utterly helpless, can not move a finger or toe, can neither lift nor turn the head on the pillow, and if unsupported, the head either drops on the sternum or backward between the scapulas. In some instances breathing becomes distinctly labored, and deep breathing, cough and vomiting are impossible. Speech and deglutition are in rare instances affected. The order of involvement is not always the same. It most frequently begins in the muscles of the lower extremities, but may only involve those of the upper or the muscles of the neck. There are no sensory symptoms, except in some instances formication and numbness in the paralyzed parts, also a sense of heaviness and a tired feeling, which at times become very annoying to the patient, necessitating frequent change of posture, to the great relief of the patient.

During an attack of complete paralysis the reflexes and the faradic excitability are abolished in the paralyzed part, but return with the restoration of motor power. In some instances I have found the deep reflexes slightly exaggerated during the prodromal period, when the patient felt an impending attack, but I am not certain that this was the result of any change in the central nervous system caused by the approaching attack of paralysis. In such instances the reflexes were always abolished when the paralysis was complete.

Some can predict with a certainty an impending attack, others can not. If any symptoms precede an attack they consist of a peculiar heavy, tired feeling in the extremities, some numbness and formication, and some feel impelled to move and stretch themselves. These symptoms usually come on toward evening and may be accompanied by a voracious appetite, and if this is satiated by indulging in rich food, an attack is almost certain to be precipitated the following night. Over-indulgence in rich food is certain to result in an attack in some individuals, though at the time there may not have been an inordinate appetite; other members of this family are apparently unaffected by rich food, hard work and worry. Some will retire, feeling perfectly well, and awake to find themselves completely helpless, able to speak and swallow, but unable to move head, extremities or trunk. The onset is most always at night during sleep. When the individual wakes he may find himself partially paralyzed, possibly to be-

come utterly helpless some hours later; or a period of marked improvement may be followed by complete paralysis. The onset may, therefore, be very abrupt, as in patients feeling perfectly well, retiring, and after sleeping a few hours, discover themselves helpless, or there may be premonitory symptoms during the preceding day. Some individuals may experience the heavy, sleepy, tired feeling, and sometimes a slight weakness in the extremities with an inco-ordination of the finer movements for days and in rare instances even a week, without the development of an attack. These are doubtless abortive attacks. The members of this family call this "feeling the spell." The duration of an attack may be a few hours, or one, two and in rare instances three full days. Improvement may be very rapid and of short duration, or it may require three or four hours, or even a half day. Improvement is sometimes interrupted by a recurrence of complete paralysis. This is not frequent. It is nothing uncommon for one of these patients to be as helpless as a log at 7 a. m. and at 11 a. m. be engaged in doing a hard day's work, not feeling the slightest inconvenience from having been completely paralyzed a few hours before.

In some, improvement is more rapid when it begins in the upper extremities and in others when it begins in the lower. The first symptom of improvement is simply the ability to produce slight muscular contraction here or there, may be a finger or toe, and this condition soon followed by the ability to move a large portion of the part involved.

Vomiting or one or two loose movements of the bowels sometimes occurs during the period of improvement. Some patients contend that forced exertion aids materially in hastening improvement or in warding off an impending attack. Some complain of muscular soreness on the day following attack, especially if they had to be handled much, while others do not complain of anything. The frequency of the attacks varies greatly in the different members of the family, and also in the same individual at different periods of life. They are usually most frequent between puberty and the middle period of life, and later become less frequent and more irregular.

Some members may be incapacitated for a few hours in the morning, daily, or once or twice a week, and in others the attacks may be at intervals of one or a few months and even longer. During last year it was a rare opportunity to see a typical attack of complete paralysis among the remaining ten members of this family who are subject to these attacks. During an attack there are absolutely no psychic symptoms. The mind remains perfectly clear, and in a patient who died in my presence it was clear until the last moment. The cranial nerves are not involved; none of the special senses have been affected. The bowels almost never move and urine is seldom voided during an attack, unless the bladder is overdistended. The patient retains full control of the sphincters of rectum and bladder.

Patients during an attack usually have no desire for food, some suffer slight nausea, but they usually take nothing but water, until they have fully recovered. In an ordinary attack the circulation remains good; the color of the lips and finger nails is normal and capillary circulation is not sluggish. During a very severe attack I have seen the pulse weak and irregular with evidence of cardiac dilatation. The temperature is not elevated. Some patients during a seizure are almost constantly affected by congestion of the conjunctivas and the mu-



cous membranes of the respiratory tract. The accumulation of mucus in these cases may, at times, greatly embarrass breathing. It would be a serious misfortune for such to be taken with an attack in the midst of a severe cold.

Most of the members of this family began to have attacks at about the period of puberty or later in the second decade, and a few had seizures, at long intervals, as early as the eighth or ninth year. During the intervals between attacks these people seem perfectly well. The hereditary nature of this affection is, I think, established, inasmuch as every one of the paralytic group had either a father or mother who was subject to seizures of paralysis or sick headache, or both.

The general clinical description of the attacks of headache in this family is very much the same as of ordinary hemicrania. Most of these members began to have attacks when only a few years old. The attacks in many recurred once a week with great regularity until after puberty, when the intervals were usually somewhat longer. One member had weekly attacks of sick headache during her whole lifetime; death occurred at 76. These attacks were seldom associated with any apparent disorder of the digestive organs. A number had attacks until the age of 20 or 30 years, when they were replaced by attacks of paralysis, and a number had both alternately. A severe attack of headache would in some individuals seem to protect for a short period against an attack of paralysis.

I have made these observations during the last twenty-two years in a family in four generations. The total number of this family who have had periodic paralysis is seventeen. Eighteen members have had sick headache. Five had attacks of paralysis and headache. Fourteen members have had attacks of paralysis only, and thirteen have had attacks of only headache. The total number afflicted with either paralysis or headache is thirty-two.

Of the seventeen who have had attacks of periodic paralysis, ten are yet living. One of the seven who are dead died from chronic nephritis. The remaining six died in an attack of paralysis, one in my presence. Fourteen of this paralytic group have been under my personal observation. The disease was transmitted through the father having had attacks of paralysis, in six instances, through the mother in four instances; through the father having had attacks of sick headache only, in four instances, through the mother having had attacks of sick headache only, in three instances. In nine instances the disease was transmitted through the father and in eight through the mother.

The parents of the first generation were F. and M. O., of German descent. Both parents were hearty and well, except Mr. O., who was afflicted with periodic sick headache. There is no neuropathic history obtainable. The first generation consisted of five males and five females. Three of the sons had attacks of paralysis, one attack of headache and one was unaffected. Of the daughters, four had sick headache, none had attacks of paralysis and one was unaffected. I will append brief histories of the paralytic group:

CASE 1.—Mr. M. O. is a member of the first generation, the oldest member now living, aged 70 years. His family history and early personal history are negative. There is no luetic history in the whole family. He was of strictly temperate habits, but used tobacco rather freely. He spent his early youth in a store and later served an apprenticeship as bricklayer. His first attack occurred at 14. The paralysis always came on at night. To indulge in rich food, especially

in the evening, was sure to precipitate an attack, and to have a severe cold would predispose to a spell. There were no premonitory symptoms; he would retire feeling perfectly well, wake up and find himself helpless. In a severe attack he would be unable to move a finger or toe, neither could he take a deep breath and speech was often difficult. He could usually swallow well, and the muscles of the eyes and face were not involved, while the muscles of the neck were often completely paralyzed. He never suffered from headache and there were no mental symptoms. His appetite was usually gone, nausea was common, but he was never able to vomit. His bowels never moved during an attack, and he always had full control of the sphincters of the rectum and bladder. He never had pain in the extremities, even if handled by the nurse. The paralyzed parts often felt numb.

On examination he is found to be well nourished, color of skin, lips and mucous membrane is good. Tongue slightly coated, slight arcus senilis, arteries at wrist not very stiff. On examination, nothing of special interest is found except the muscles of the extremities are emaciated, and those of the lower so weak that locomotion is impossible. The extensor muscles of the extremities are all slightly stronger than the flexors. Tactile and painful sensations are normal above the hips. The weakness in the lower extremities began eighteen years ago and increased gradually until four years ago, when he was compelled to take an invalid chair. His arms are strong enough to work the chair. The special senses are unaffected, and there are no mental symptoms. The pupillary reflexes are normal. The tendon reflexes of the upper extremities are scarcely to be elicited and those of the lower extremities are abolished. The sphincters of the rectum and bladder are not affected.

CASE 2.—C. F. O., son of Mr. O., had a very severe attack when 24. He died since from chronic nephritis. He left a son and daughter, thus far unaffected.

CASE 3.—Mrs. J. G., daughter of M. O., now 32, has had repeated attacks since she was 15. The characteristic features of her attacks are almost identical to those which are found in the seizures of her father.

CASE 4.—Mr. L. G., son of Mrs. J. G., a teacher, aged 18, had a number of typical attacks. As a child had measles and chicken pox. Never used alcohol, tobacco in moderation, coffee in small quantity. His appetite is good, bowels are regular, is regular with his meals, never indulges late at night, gets slight headache at long intervals, but never has the characteristic headache of this family.

Recently he had an attack which came on during the night. During the evening before he felt numb in his fingers and incoordination for finer movements was very marked. The lower extremities were free from symptoms at this time. There was no headache, no gastric distress, no constipation. He was away from home, teaching, and without medicine. He retired at 10 p. m. At 2 a. m. he awoke and was paralyzed; could move only fingers and toes slightly. There were no sensory symptoms. Improvement began at noon, at 2 p. m. was able to sit up, and at 5 p. m. was able to walk with a cane, the following morning at 9 a. m. he had completely recovered. There was at this time some soreness in his legs. During the attack he had full control of his bladder and rectum; no urine was voided for twenty hours; no pain from distension. There was no gastric distress during attack or period of improvement, and the appetite was normal immediately after recovering completely. Later he had an attack, limited to his arms, at 6:30 a. m., when he took a dose of medicine. Sodii brom. 3ss. Caffein citras gr. ii, and at 9 a. m. had completely recovered.

CASE 5.—Mr. J. O., member of the first generation, began to have attacks of periodic paralysis at the age of 20. He never had the characteristic headache. He was otherwise well, but the attacks of paralysis were of frequent occurrence until the age of 54, when he died in an attack.

CASE 6.—Mr. J. O., Jr., began to have paralytic seizures at 16; they were often of weekly occurrence, frequently seen by me. The attacks were most severe during damp cold months. At the age of 25 he went to Missouri, had an attack and died.



CASE 7.—Mrs. L. P., daughter of J. O., had attacks of headache until the age of 31, when the headache ceased, and she began to have attacks of periodic paralysis. The following is a description of a recent attack: She retired feeling well. At 1 a. m. she awoke, found herself helpless, except that she could move hands and feet. At 5 a. m. improvement commenced; at 9 a. m. it was complete. She cleaned a few rooms in her house, retired at 10 p. m., feeling perfectly well. Next morning at 4:30 she was again almost completely helpless. She improved some later on forced exertion, but at 12 noon she became worse again, and at 3 p. m. was completely paralyzed. I saw her at 6 p. m. She could move head from side to side, but could not lift it from the pillow, neither could she move a finger or toe. She suffered no pain when at rest, but on being handled, a rather severe, dull, muscular soreness. There was no numbness in the extremities; there were no mental symptoms; special senses and cranial nerves not involved. Speech and swallowing were unaffected. Color of skin, lips and mucous membrane normal. Pupils reacted readily to light and shade. Capillary circulation active. Temperature was normal, respiration 20, pulse 80, full, regular in force and rhythm, of good volume, tension normal. Her appetite was good, but she was afraid to eat. There was no nausea. She drank water freely and without difficulty. The bowels had not moved and urine was not voided since she was completely paralyzed; yet she felt that she had full control of the sphincters of the rectum and bladder. Breathing was sometimes a little labored and deep breathing was impossible. Heart sounds were clear, cardiac impulse easily felt, apex in fifth interspace in nipple line. Tactile and painful sensation normal. The tendon reflexes and the faradic excitability of the muscles involved were lost. I saw her the following day at 10.30 a. m. and found she had completely recovered. Her appetite was good, pulse 76, respiration 20. The tendon reflexes and faradic excitability were restored to normal. At 6.45 the preceding evening, as was her custom in such a condition, she took a dose of her medicine, sodii brom. 3ss. and caffein citras gr. i. At 7:30 she felt decided improvement. At 8 p. m. she took another dose; improvement continued, and at midnight she discovered herself well.

CASE 8.—C. O., a member of the first generation, had frequent attacks of periodic paralysis during a period of three years when he died in an attack.

CASE 9.—Mr. F. G., son of Mrs. J. G., later reported as having been afflicted with the characteristic headache, began to have attacks of periodic paralysis at 17. His family history is negative except for his mother's condition. His early history is negative, except that he had spasms when quite small. His attacks occurred at intervals of a week, to three or four months, most frequent in spring. The duration of an attack varied from a few hours to three full days. The attacks came on at night, and lack of exercise always predisposed to a seizure. He had attacks of headache more frequently than paralysis, and an attack of headache would protect him for a time against the development of an attack of paralysis.

He never suffered pain during an attack, nor muscular soreness afterward. He was a big eater, and attacks were always preceded by a voracious appetite, which, if satiated, was sure to precipitate an attack. He had no premonitions except the bulimia. During an attack his appetite was gone, bowels remained quiet, and he retained control of the sphincters of rectum and bladder. He was usually troubled by an accumulation of mucus in the throat and bronchial tubes, which at times greatly embarrassed his breathing. His mind always remained clear. His last attack developed during a Saturday night and continued unimproved until the following Monday at 9 a. m., when I was called to relieve him of the accumulation of mucus which had embarrassed his breathing very greatly. I found him cyanosed, breathing very much labored, pulse very irregular and at times imperceptible at the wrist, with the physical signs of cardiac dilatation. His mind was perfectly clear. I was with him until 9.30 a. m., when his pulse suddenly ceased to beat at the wrist, there was a vacant stare and he was dead. His age was 27.

CASE 10.—Rev. E. O. G., a brother of the preceding patient, would sometimes have a tired and drowsy feeling toward evening that would betoken an impending attack. Sometimes an attack was preceded by slight jaundice. The onset was always at night. His attacks began at the age of 16, and recurred at intervals of a few days to a few months, being most frequent during damp cold months. During attacks he would suffer from a lame, tired feeling, which would necessitate frequent change of position. Improvement was sometimes abrupt, at other times it would require a few hours. He was often completely paralyzed in the morning, and in a few hours would be busily engaged in doing a hard day's work, not suffering any inconvenience from having been completely paralyzed just shortly before. His appetite and general health were usually good immediately after the return of the motor power. His last attack came on during a Saturday night and continued until the following Monday at 4 a. m. There was nothing unusual in the manifestations or behavior of this attack until at the hour mentioned he told his wife, who was nursing him, that he felt very badly, and expressed a wish to be turned on his side, which was done, when he requested to be quickly returned to his former position, and he was dead.

CASE 11.—Mr. F. G., another brother of the preceding two, had repeated attacks at more or less irregular intervals. The characteristic features of his attacks were same as of all the rest. He was taken with colic, which continued for a week, when he was seized by an attack of paralysis, and died twenty-four hours later, at the age of 43.

CASE 12.—Mrs. J. F., a sister of the preceding brothers, is still living and has attacks of headache and mild attacks of paralysis. It may be noted here that the three brothers above mentioned and this sister all had both headache and attacks of paralysis, and the disease was transmitted to them through their mother, who never had an attack of paralysis, but was a life-long sufferer from the characteristic headache.

CASE 13.—Mrs. G. H., a daughter of Rev. E. O. G., is one of the most frequent sufferers now living. She is 24. There are times when she is incapacitated daily for a few hours in the morning, and at other times the intervals may be weeks or months. She gives positively no premonitory symptoms. Overeating, exertion and worry do not seem to predispose to an attack in her case. Attacks are more frequent in damp weather, and to lie in a draft at night is sure to precipitate an attack. When paralyzed she is simply helpless and has no pain anywhere. She may suffer some from sore throat and an accumulation of mucus. The paralysis may be partial or local, and appetite remains good. There is no nausea nor vomiting during the height of an attack, nor during the period of improvement, which was not uncommon in the case of her father. She does not seem to be affected by the kind or quantity of food taken. The following note was recently made which corresponds to repeated observations in her case:

She retired late in the evening, feeling perfectly well, except being slightly tired. During the night she awoke and was paralyzed. On examination, she complained of being little sore throughout her body. There were no sensory symptoms, no numbness, tingling nor formication. There was no muscular twitching; muscles of the neck and extremities were paralyzed; tactile and painful sensation normal; reflexes and faradic excitability in the affected parts were abolished. Pulse regular in force and rhythm, full, tension normal. Cardiac impulse strong, apex beat in nipple line, cardiac sounds clear, no murmurs. Pulmonic second not pathologically accentuated. Capillary circulation active. Respirations 21, not labored, but she was unable to take a deep breath. Temperature normal. Pupils reacted readily. She had little headache; eyes not sensitive to light. She had full control of the sphincters. An ordinary urinalysis and examination of blood negative.

CASE 14.—Mr. H. F., the second son of Mrs. J. F., is one of the worst sufferers living. His family history is negative except that his mother has both the headache and paralysis. He gives no specific nor alcoholic history: had most of the diseases of childhood. He began to suffer from sick



headache at 9. The attacks were frequent, but severe during damp seasons. At 16 he ceased to have headaches and began to have typical attacks of paralysis, some of which were very complete and protracted. His attacks are usually preceded by a tired, dull, irritable, sleepy feeling. There is usually some twitching of the muscles of the neck, trunk and extremities, besides a dry, stuffy feeling in the head; also a slight cough, injected conjunctivæ, and a numb feeling which gradually extends over the whole body. If he retires with these feelings he is sure to awake and find himself paralyzed. When the paralysis is incomplete the flexors are more affected than the extensors. The muscles of the face have at times been slightly involved. Swallowing and speech may be affected, and breathing is often labored, which is aggravated by the accumulation of mucus. Any gastric disorder is apt to be followed in his case by an attack of paralysis. He could bring on an attack at will by eating a rich meal in the evening. When an attack is about to come on he feels impelled to move and stretch himself, and this feeling is a frequent forerunner in his case.

CASE 15.—G. F., daughter of H. F., aged 13 years; had the ordinary diseases of childhood, tonsillitis and complains of rheumatic pain in extremities. Had considerable headache last three years. Her first attack of paralysis occurred at 10; had attacks at long intervals since. So far she had no premonitory symptoms, goes to bed feeling well and awakes paralyzed. During an attack there is no nausea, nor pain; no headache, nor muscular soreness, but some soreness following an attack. If she wakes in the morning to find herself helpless, she has so far recovered by the following noon. Attacks have not been followed by any gastrointestinal disturbance.

CASE 16.—Dr. F., a brother of H. F., has had a number of typical attacks, none the last few years. He is well built, a hearty man and enjoys splendid health.

CASE 17.—Mrs. V. L., a sister to Dr. F. and H. F., aged 40, has only one daughter, aged 18, who has felt the attacks a number of times. No note is included in her case. Mrs. V. L. as a child had measles, mumps, chicken pox, later rheumatism and influenza. She lived an out-door life much of the time, and was well except for the disease named. She commenced to menstruate at 14, which has been regular since. No history of any disease or functional disturbance of any of the pelvic organs. She was always a hearty eater; bowels were regular and she never indulged in alcoholic drinks. Drinks freely of coffee, not much tea. Commenced to have attacks of headache at 15, which recurred every few months. Paralytic seizures set in at 22, and recurred as often as every week, sometimes every few months, and during rare intervals every day for a short period. On the day preceding an attack she would have a voracious appetite a tired, heavy, sleepy feeling in arms and legs, and usually more marked in the latter. When retiring with this feeling she would usually awake about midnight and find herself paralyzed. In a severe attack, and they were numerous, she would be unable to move a finger or toe, to turn or lift the head from pillow. She could swallow and speak, but breathing was often difficult, and coughing and sneezing would be impossible. Her attacks were never complicated by any catarrh of the respiratory tract. Appetite usually continued during an attack, though she avoided taking food, but would drink water. Never voided urine, and bowels never moved during the height of any attack. She had full control of the sphincters of the rectum and bladder. She suffered no pain except at times slight headache and a lame feeling in the extremities, which became painful unless their position was changed frequently. Paralysis would sometimes be limited to lower extremities, but never to neck or neck and upper extremities. There were no psychical symptoms, and special senses were not affected. Never had any cardiac distress during an attack. Duration was usually twelve to fifteen hours. Improvement usually started in the hands, and in one or two hours she would often have completely recovered. Patient thinks work and overeating predisposed to an attack, but not so by overexertion. Attacks were most frequent in fall and spring, and especially when it was damp.

During period of improvement would often be nauseated, and have a few loose movements of the bowels. Paralytic attacks have been mild and very infrequent since she was 37. Her general condition at present is very good and suffers at times from slight rheumatic pain in the extremities.

I will here append a few histories, very briefly, of some of that suffer very severely from the characteristic headache:

CASE 1.—Mrs. J. G., a member of the first generation, never had an attack of paralysis, but was the worst sufferer from sick headache in the four generations of this family. She had on an average one attack a week during her lifetime, each attack lasting about twenty-four hours. She seemed to be benefited by vomiting, but not by sleep. She was a moderate eater, though rich food did not seem to predispose to an attack. During an attack she was often chilly and nervous, but had no visionary disturbances. She never had any convulsive seizures, such as are sometimes seen in hemi-crania. Thirst was an indication that improvement would soon set in. During the last three years of her life she became very weak and uncertain in her gait. At times she was almost completely helpless in her lower extremities; upper extremities were not appreciably affected. Sensation was much diminished in lower extremities. Mrs. J. G. had three sons and four daughters, and as noted before, all of the sons suffered from headache and paralysis, and all died in an attack of paralysis. Patient died at 76.

CASE 2.—Mrs. I. S., a grand-daughter of Mrs. J. G., aged 38. During the interval between attacks she feels well. As a child she had measles, whooping cough, mumps and scarlet fever. Since this she was well and suffered only from headache, which attacks began when she was only a few years old. The attacks were most frequent and severe during the period of puberty and for a few years afterward, since which the intervals have been gradually becoming longer. When most frequent, attacks occurred once a week, now every few weeks. The attacks are nearly always preceded by vertigo gastric distress and inordinate appetite. Also by visionary disorders, such as floating specks and almost complete blindness. No swelling of the face during an attack. Vomiting often affords some relief. Recovery is slow and gradual, requiring from one to a few days. She is a good eater and has trouble with constipation. Physical examination during the interval between attacks is negative.

CASE 3.—M. S., aged 13, a daughter of Mrs. I. S., when a small child had usual infantile diseases. Began to suffer with very characteristic attacks of sick headache when 2 years old. From the age of 5 to 12 years she had an average of one attack a week. At this time the attacks are further apart. She feels perfectly well between attacks, which usually come on during the night without any premonitory symptoms. Vomiting does not relieve her; she never has attacks of dyspnea or convulsive seizures during an attack. Her general condition is good, no icterus. Deep reflexes normal; physical examination negative.

CASE 4.—Miss M. G., whose mother is a member of the first generation and a sufferer from headache, is a seamstress, aged 23. She is of small stature, well nourished, color good no jaundice. She feels well except for the attacks of headache, which began in early childhood. Always suffered much, but more severely last few years. Attacks vary in frequency of late, one attack every fortnight; vomiting is followed by some relief. She is a moderate eater, and regular with her meals. As a child, she had the common infantile diseases. At 18 she had rheumatism. She menstruates regularly and without pain. On physical examination nothing is found of any special significance except soft mitral systolic murmur transmitted to left midaxillary line, doubtless the result of a previous rheumatic endocarditis. There is also a systolic thrill in mitral area. Pulmonic second sound very slightly accentuated above the normal for a lady of 23. The radial at the wrist not palpable; liver and spleen not enlarged, neither tender on pressure.

I have thus attempted to give a brief sketch of the individuals of this family who have been afflicted with



TABLE OF URINALYSIS OF INDIVIDUALS SUBJECT TO ATTACKS OF PERIODIC PARALYSIS.

1. Mrs. L. P., age 51, weight 165 pounds.

Specimen.	Quantity, c.c.	Specific gravity.	Solids, in grams.	Urea, in grams.	Indican.			
					Marked.	Slight.	Absent.	Bowels.
1	1920	1020	93.8	13.5	1	..	..	
2	1440	1025	88	21	1	..	..	
3	1440	1030	105.6	31.5	1	..	..	
4	2400	1020	117.33	10	1	..	..	
5	1920	1022	103.2	12	1	..	..	
6	1920	1022	103	11	1	..	..	
7	1440	1023	80.93	16.5	1	..	..	
8	1680	1020	85	3.9375	..	1	..	
9	1920	1019	89.13	4.5	1	..	..	
Av.	1686	....	96.24	13.77	8	1	0	L

\*2. Mrs. H. F., aged 34, weight 130 pounds.

1	1440	1011	45.33	3	..	1	..	
2	1920	1011	51.6	7	1	..	..	
3	1680	1017	69.8	12.25	1	..	..	
4	1920	1017	79.73	9	1	..	..	
5	1680	1018	73.86	8.31	1	..	..	
6	960	1023	53.93	9	1	..	..	
7	1200	1028	82.13	12.5	1	..	..	
8	960	1018	42.2	2.37	1	..	..	
9	1440	1019	66.86	8.62	1	..	..	
10	2700	1016	112.6	16.5	..	1	..	
11	2160	1018	75	14.6	1	..	..	
12	1440	1020	70.4	33	1	..	..	
Av.	1625	....	68.62	11.55	10	2	0	C

3. Miss G. F., age 13, weight 75 pounds.

1	720	1011	18.66	.56	..	1	..	
2	960	1011	25.8	1.75	1	..	..	
3	720	1020	35.2	3	..	..	1	
4	720	1019	33.4	2.75	..	1	..	
5	720	1016	28.13	.8	..	1	..	
6	720	1016	28.13	.8	..	1	..	
7	720	1020	35.2	1.31	..	1	..	
8	720	1019	33.4	.56	..	1	..	
9	840	1018	36.93	1.12	..	1	..	
10	720	1019	33.4	2.25	..	1	..	
11	720	1017	29.86	1.5	..	..	1	
12	840	1018	36.93	2.625	..	1	..	
Av.	760	....	31.25	1.58	1	9	2	R

4. Mrs. V. L., age 40, weight 195 pounds.

1	1770	1016	68	9.57	..	1	..	
2	1770	1015	63.8	11.745	1	..	..	
3	1440	1018	63.33	12.34	1	..	..	
4	1200	1019	55.73	15	1	..	..	
5	1320	1018	58.06	6.39	1	..	..	
6	1800	1017	63	18	..	1	..	
7	1920	1018	76.8	4.8	1	..	..	
8	1440	1023	73.6	10.08	..	1	..	
9	1440	1022	77.4	10.8	1	..	..	
10	1440	1024	84.66	14.4	..	1	..	
11	1800	1023	101.2	25.2	1	..	..	
12	1200	1026	72.26	18	1	..	..	
Av.	1553	....	71.9	15.027	8	3	..	R

5. Mrs. H. G., age 36, weight 165 pounds.

1	1920	1018	84.46	26.88	..	1	..	
2	1680	1018	73.6	15.12	..	1	..	
3	1920	1019	89.13	18.23	..	1	..	
4	2160	1023	121.4	17.28	..	..	1	
5	1440	1027	95	24.48	..	1	..	
6	1200	1023	67.46	14.40	..	..	1	
7	1440	1030	105.6	25.92	..	1	..	
8	1440	1025	88.26	18.72	..	..	1	
9	1680	1021	86.2	8.4	..	..	1	
10	1440	1026	91.2	18.72	..	..	1	
11	1920	1024	112.6	6.72	..	1	..	
12	1920	1024	112.6	12.48	..	..	1	
Av.	1676	....	93.96	17.21	0	6	6	—

6. Mrs. G. H., age 25, weight 145 pounds.

1	....	1007	.....	.003	..	1	..	
2	....	1015	.....	per 4 c.cm. .013	..	..	..	
3	....	1014	.....	per 4 c.cm. .018	1	..	..	
4	....	1011	.....	per 4 c.cm. .021	..	..	1	
5	....	1010	.....	per 4 c.cm. .009	1	..	..	
6	3360	1015	123.2	26.88	1	..	..	
7	4320	1009	95	4.86	..	1	..	
8	3360	1016	131.4	5.46	..	..	1	
9	2880	1010	70.4	3.24	1	..	..	
10	2400	1011	64.53	2.40	1	..	..	
11	2400	1011	64.53	2.70	..	1	..	
12	3360	1008	65.66	3.36	1	..	..	
Av.	3154	....	87.78	6.98	7	3	2	—
T. av.	1742	....	74.95	11.019	34	25	10	—

Average weight of patients, 145.3 lbs.

this unique disease. I say disease, because some have been permanently crippled by it, and six have died in an attack, one in my presence; and whatsoever disorder causes permanent damage to the central nervous system, so as to cause a slow paralysis and very sudden death in over 35 per cent. of those affected, I think is worthy to be entitled a disease.

## PATHOLOGY.

Numerous and very careful observations have been made, but we are yet ignorant of the pathology of this disease. The findings of a necropsy would doubtless reveal much that would explain the pathology, but no autopsy has thus far been obtainable in this family. Theories have been advanced, but none has been proved by demonstration. Some observers believe this condition is due to a toxemia affecting the nerve endings of the motor fibers in the muscles. Goldflam discovered vacuolation of some of the muscle fibers. Until the truth is positively known one dare have views of his own.

I have always been inclined to view this affection as a vasomotor neurosis affecting the blood supply to the anterior horns, which are supplied almost wholly by the anterior spinal artery. I do not know that vasomotor nerves have ever been demonstrated in the vessel walls of the spinal cord, but vasomotor centers do exist in the anterior horns, and it is not likely that the arteries supplying so important a tissue as is found in the anterior horns would not be supplied with vasomotor nerve-regulating influence. The nutritional changes noted in the muscle fibers may have been due to disturbance of function of the trophic cells. The exciting cause, be it toxic, may have a direct influence on the vasomotor nerves regulating the blood supply to this part of the central nervous system, or it may have an indirect influence, when due to gastrointestinal disturbance or when paralysis results from sleeping in a draft.

The slow but progressive permanent paralysis, which occurred late in life in two of the cases herein reported, I always believed to be due to a slow degeneration in the anterior horns, due to frequent disturbance of nutrition and the atrophy of the muscles due to involvement of the trophic cells. Only a careful autopsy will determine the validity of this argument. The paralysis in this disease always appeared to me to be closely allied to the paralysis which sometimes occurs in migraine or hemicrania, such as oculomotor paralysis, aphonia and paralysis of one extremity or of half of the body. Believing there is either a deficiency of elimination or the absorption of some toxic substance from the gastrointestinal tract, in either case resulting in an intoxication by some substance which may be the exciting cause of a supposed vasomotor spasm of the anterior spinal artery, thus causing temporary anemia and paralysis, and ultimately degeneration and permanent paralysis, I attempted some practical investigations to deter-

\* Summary of Case 2 in opposite column.

	Specimen.	Quantity, c.c.	Specific gravity.	Solids, in grams.	Urea, in grams.	Indican.			
						Marked.	Slight.	Absent.	Bowels.
Attack ...	1	1920	1022	93.86	13.44	1	..	..	..
Attack ...	2	1680	1023	94.4	16.8	1	..	..	..
2d day ...	3	1440	1025	88	27.28	1	..	..	..
3rd day ...	4	1920	1027	126.66	42.24	1	..	..	..
Av. follow-									
ing attack	...	1740	....	100.73	24.94	4	..	..	C



TABLE OF URINALYSES OF INDIVIDUALS SUBJECT TO PERIODIC ATTACKS OF HEADACHE.

Mrs. I. S., age 38, 132 pounds.

Specimen.	Quantity, c.c.	Specific gravity.	Solids, in grams.	Urea, in grams.	Indican.			
					Marked.	Slight.	Absent.	Bowels.
1	....	1016	.....	.017	per 2 c.cm.	1	..	..
2	....	1025	.....	.019				
3	....	1031	.....	.027	per 1 c.cm.	1	..	..
4	960	1026	61	24.96				
5	1020	1025	62.33	23.46	1	..	..	..
6	2400	1016	93.86	26.40	..	1	..	..
7	1920	1027	126.66	44.16	..	1	..	..
8	1440	1026	91.46	36	1	..	..	..
9	1920	1025	117.33	19.20	..	1	..	..
10	2160	1028	147.8	34	1	..	..	..
11	1440	1028	98.53	34.56	1	..	..	..
12	2400	1020	117.33	36.60	..	1	..	..
Av.	1740	....	101.81	31.03	8	4	0	C
2. Miss S., age 13, weight 98 pounds.								
1	....	1025	.....	.014	per 1 c.cm.	..	1	..
2	....	1030	.....	.018				
3	....	1020	.....	.011	per 1 c.cm.	..	1	..
4	720	1030	52.8	5.4				
5	480	1030	35.2	7.68	1	..	..	..
6	960	1025	58.66	11	..	1	..	..
7	960	1030	70.4	13.44	1	..	..	..
8	1200	1025	73.33	18	1	..	..	..
9	1920	1019	81	13.44	1	..	..	..
10	1440	1027	95	27.36	1	..	..	..
11	1920	1026	110.93	20.16	1	..	..	..
12	1200	1027	79.2	13.20	1	..	..	..
Av.	1200	....	72.94	14.41	9	3	..	R
3. Miss M. G., Age 22, weight 108 pounds.								
1	500	1025	29.33	9.12	..	1	..	..
2	500	1027	31.66	8.16	..	1	..	..
3	720	1027	47.46	11.52	..	1	..	..
4	1080	1022	58	4.32	..	1	..	..
5	1200	1021	61.6	3.6	..	1	..	..
6	960	1024	56.26	7.2	..	1	..	..
7	720	1025	44	5.04	..	1	..	..
8	960	1024	56.26	4.8	1	..	..	..
9	960	2023	53.93	5.76	..	1	..	..
10	960	1027	63.33	15.84	1	..	..	..
11	840	1028	57.46	10.08	1	..	..	..
12	1200	....	.....	1.8	..	..	1	..
Av.	883	....	50.84	7.27	3	8	1	R
T. av.	1274	....	75.19	17.57	20	15	1	..

Average weight of patients 113 lbs.

mine if these people, as a class, differ in any way from those who are supposed to be perfectly well.

I obtained in all 139 specimens of urine, 73 specimens from six members of the paralytic group, 36 specimens from three individuals who have the characteristic headache, and 30 specimens from five persons who were the picture of health. From the patients I obtained a specimen of the mixed urine for twenty-four hours, on three successive days, at short intervals, and from the well, six specimens from each, on six successive days. The specimens were all submitted to the same examination and the results compared. The only findings recorded in these tables are the daily quantity voided, the specific gravity, the total quantity of urinary solids, the total quantity of urea and the presence of indican which is noted as marked, slight or absent. In none of these specimens was albumin found (only ordinary tests were used) nor sugar, though only those specimens were examined that had an abnormally high specific gravity. The significance of the presence of indican would serve as an index of the degree of putrefactive change of the foodstuff in the stomach and bowels, especially of the albuminoids. If regularly found in large quantity it would point to a possible source of intoxication. If either the total quantity of urinary solids or of urea

TABLE OF URINALYSES OF NORMAL INDIVIDUALS.

1. A. T. H., age 33, 145 lbs.

Specimen.	Quantity, c.c.	Specific gravity.	Solids, in grams.	Urea, in grams.	Indican.			
					Marked.	Slight.	Absent.	Bowels.
1	1460	1024	73.2	30.66	..	1	..	..
2	960	1029	68	25.92	..	1	..	..
3	900	1023	50.6	15.30	..	1	..	..
4	1050	1018	46.2	17.85	1	..	..	..
5	1260	1023	70.8	27.72	..	1	..	..
6	1260	1026	87.4	25.83	..	1	..	..
Av.	1148	....	66.03	23.88	2	4	0	R
2. J. A., age 19, weight 132 pounds.								
1	840	1029	59.53	11.76	..	1	..	..
2	900	1030	66	18	..	1	..	..
3	1500	1020	73.33	24	..	..	1	..
4	1200	1022	64	10.8	..	..	1	..
5	1020	1027	67.26	13.77	..	1	..	..
6	900	1023	50.6	14.40	..	..	1	..
Av.	1060	....	63.45	15.44	0	3	3	R
3. A. H. T., age 30, weight 150 pounds.								
1	1140	1029	80.8	27.36	1	..	..	..
2	1080	1025	66	23.76	1	..	..	..
3	1320	1022	70.93	23.76	..	1	..	..
4	1380	1028	94.4	29.67	1	..	..	..
5	1230	1026	78.13	31.98	1	..	..	..
6	1200	1027	79.2	32.4	1	..	..	..
Av.	1258	....	78.24	28.15	5	1	0	R
4. C. W., age 18, weight 131 pounds.								
1	1050	1022	56.46	15.75	1	..	..	..
2	1920	1017	79.73	13.44	1	..	..	..
3	1260	1023	70.8	17.64	..	1	..	..
4	960	1016	37.53	9.6	..	1	..	..
5	1140	1019	52.93	15.96	..	1	..	..
6	1380	1023	77.53	26.22	..	..	1	..
Av.	1285	....	62.49	16.435	2	3	1	R
5. P. L., age 16, weight 140 pounds.								
1	2220	1022	119.33	44.4	..	..	1	..
2	2100	1023	118.06	38.85	..	1	..	..
3	1530	1020	74.8	27.54	..	..	1	..
4	1950	1019	77.33	27.30	..	1	..	..
5	1620	1023	91.06	40.5	..	1	..	..
6	1470	1027	97	38.22	..	..	1	..
Av.	1815	....	96.19	36.13	0	3	3	R
T. av.	1313	....	73.28	20.006	9	14	7	..

Average weight, 139.6 lbs.

are constantly below the normal, it would establish the existence of renal insufficiency and would point to an intoxication by the retention of one or more metabolic products, which may, in these people, having a peculiar idiosyncrasy, be the exciting cause of this mysterious affection. In comparing the accompanying tables we find the average quantity of urine voided, the average output of urinary solids, about normal in all the classes examined, i. e., the paralytic group, those subject to headache only, and the normal cases, but one is very much impressed at the marked diminution in the average quantity of urea eliminated by the members of the paralytic group. All of the individuals from whom these specimens were obtained live an active life, and, while the specimens were collected, none were subjected to any restrictions or change in their habits or mode of living.

There is also a striking daily variation in the quantity of urea eliminated by the members of the paralytic group, which is not in harmony with the variation in the quantity of urinary solids excreted. By excluding the little girl, aged 13, weight 75 pounds, from the paralytic group, it is seen that the worst sufferers are those in whom there is the most marked diminution in the average daily output of urea.

In the tables will be noted two specimens from H. F., examined after an attack, and two daily specimens following the one attack, yielding an average daily excretion of 100.7 grams of urinary solids and 24.9 grams



urea, whereas the same individual excreted a daily average of 68.9 grams of urinary solids and 11.5 grams urea in twelve specimens examined between attacks. A summary of the average of all the observations made is as follows:

Individuals.	Average weight, lbs.	Average quantity, c. c.	Average solids grams.	Average urea grams.	Indican.		
					Marked. Per ct.	Slight. Per ct.	Absent. Per ct.
Paralysis	145.8	1742	74.95	11.019	49	36	15
Headache	113	1274	75.19	17.57	55	42	3
Normal..	139.6	1313	73.28	20.006	30	47	23

In studying the accompanying tables every one can draw his own conclusions, but they seem to establish at least one fact, that the patients included in the paralytic group are not excreting the normal quantity of nitrogenous metabolic products. This being a family affection, there is doubtless a peculiar idiosyncrasy that makes these people susceptible to this peculiar affection when under the influence of some exciting cause, that would not so affect others. What relation there may be between this diminished excretion of urea and the paralysis, further observations may explain.

#### TREATMENT.

Believing that these attacks were due to a vasomotor spasm of the anterior spinal artery, I resolved to try large doses of bromid. I began this treatment twenty years ago, immediately after witnessing a death reported in this paper. The dose of bromid, preferably of potassium, usually consisted of 3ss with caffein citrate gr. i or ii, and this dose repeated in one or two hours. This seemed to give unmistakable relief, so that from this time on most of those who were subject to this disease kept the medicine on hand, and without exception, these patients were certain that while it did not cure, it did have a very decidedly abortive influence and hastened improvement, when taken during a paroxysm. Prior to this nothing was attempted but prophylactic measures when predisposing causes were known. Prophylaxis is an important matter with some, for if, in the presence of a severe acute catarrhal inflammation of the respiratory organs one should indulge in rich, heavy food, life might soon be in danger.

In one case reported, E. O. G. took one or two doses during the evening if he felt an impending attack, and for a period of two years he did not fail to meet a pulpit appointment. He was then taken with a febrile affection, which he attributed to the medicine taken, and from this time on he took no more bromid. During the two years he took the medicine he felt the attacks often. After the febrile attack, he was free from the disease for about a year. He was then taken with an attack on a Saturday evening, which continued until Monday at 4 a. m., when he died very suddenly. This was the first attack after he discontinued the bromid. He did not take the bromid unless he felt an impending attack, which he was always able to do. A number of these patients have told me that they feel an improvement invariably in half an hour after taking the medicine. I do not know of a single instance in which a severe attack developed when the bromid had been taken during the onset; small doses were never tried, only large doses to make a decided impression on the nervous system. The frequency of the attacks does not seem at all affected by the use of the bromid.

In these cases no autopsy has been obtainable, thus far, but the patient, aged 70, has consented to an autopsy after his death, and then we may learn more of the pathology of this disease.

#### AMERICAN HYGIENE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON HYGIENE AND SANITARY SCIENCE, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, ORE., JULY 11-14, 1905.

JOHN S. FULTON, M.D.

BALTIMORE.

The same Scripture which forbids a man to think of himself more highly than he ought to think, warns also against the opposite sin, bidding him think soberly, according as God has dealt to every man the measure of faith. Applying to the duty of this hour the rule and measure of scientific faith which has been dealt to me, I desire to consider soberly the office of this Section as a member, first, of the body medical, and afterward of that greater body in which the profession itself is a member—the body politic. If I confess no surprise that a majority of the members of the American Medical Association see in this Section no very distinguished merit, I imply no disparagement of the past history of the Section, nor any want of intelligence on the part of those who think less highly than I of the capabilities of this Section.

The Section on Hygiene and Sanitary Science seems to me in certain respects the most important division of the American Medical Association, and includes among its future possibilities a very eminent distinction, that of becoming the chosen agent in bringing the powerful and beneficent influence of medical common sense to bear on public opinion. That the Section will be raised to a place of such dignity and influence seems to me manifest destiny, and the question is not whether it shall come to pass, but when. Early—the answer is—if we recognize the advantage of our position and carry forward our responsibility; late—and to our disgrace—if the event must wait until the great body of the profession discovers the advantageous position of the Section on Hygiene and Sanitary Science. A mere perception that this Section articulates the medical profession to the body politic will not of itself commend us to the Association. It is interesting information, to be sure, but, stated in words it carries no conviction. Stated in works, the special utility of the Section will compel the interest of the Association and rapidly develop in the Section its true organic function.

A brief consideration of the circumstances which have been determined internal boundaries in the Association may help us to a better understanding of our own relations. The purpose of these annual meetings is primarily educational. Every man who speaks is for the time being a teacher; every man who listens is for the time being a learner. In the pursuit of information the members are free to go wherever their personal interest leads them, but one's desire to impart information is stringently regulated, first by the individual sense of power to contribute, and next by the selection which a man has made for the sake of a particular technical excellence. A man may gather honey or wax wherever he will, but he brings the product of his industry home to his own hive. Each division of the Association, therefore, stands toward the remainder of the Association as a source of knowledge, a teaching



body; and, conversely, the Association as a whole is a student body, deriving from each of its subdivisions the particular knowledge on which the general efficiency of the profession is nourished.

The distinctions which separate the Association into sections are not equally sharp. Some of them cut so deep that, in order to be a highly efficient individual, one must practice within limits so definite and exclusive that he may lose in time many of the attributes and almost the name of a physician. Allowing for the influence of numbers, the most efficient divisions of the Association are made up of men whose names are but rarely in the mouths of the people, who are spoken of by us not as physicians, but as pathologists, anatomists or physiologists. These sections, in which the title of physician is most apt to be abbreviated so that the special designation may be spelled out, are central to the body of medical science. About them are grouped other sections with looser distinctions, not wholly enclosed by the natural sciences, but having some contact with human affairs. The place of Section on Hygiene and Sanitary Science is peripheral to the body of medicine, and, in contrast with all the others, fully half of its area lies in political science. Here, more than anywhere else, "special knowledge will leak out, and general knowledge will leak in, though a profession were covered with twenty thicknesses of sheepskin diplomas." Here, or nowhere on medical territory, "statecraft and medical knowledge should sincerely take counsel together for the health of the people." From the reaction between American medicine and American politics, American hygiene results, and all its virtues are not derived from medicine, nor all its vices from politics.

The profession should be deeply concerned about the fate of its members who venture into this field. It is a rash adventure for any man, and the wonder is not that so many fail but that any succeed. All honor to those who in the past have done good work in American hygiene, and all charity for those who have been lost. Every one of them, whether surviving or perishing, came to his task in all but nakedness, for medical education does not prepare a man for the dangers of this field, nor is it likely that, from an academic viewpoint, its dangers are visible. Great numbers of physicians feel qualified to practice hygiene, and great is the mortality of medical men in the service of Hygia. He who develops no political sagacity in this environment is rejected by the people; he who acquires political sagacity of a wrong kind is rejected by the profession. Both may continue in office, but neither can be a profitable servant of the people.

Of the notable faults in American hygiene, one owes its bad eminence equally to politics and to medicine. I refer to the abject, disgraceful, ignorant poverty of American hygiene in the fundamental data of the subject. A country which swells its population by admitting a flood of immigration, with no more than a show of caution about the physical and moral results to the country, can not be expected to care about the minutiae of loss and repair in its native population. A country which offers citizenship, on the simplest conditions, to any uncouth outlander, is not likely to learn, save in the shadow of disaster, the value of a son born in the land and nourished in its institutions for 21 years before he may become a sovereign citizen.

Excellent reasons justify four volumes of United States Census Reports on manufactures, two on agriculture, and abundant information published by state gov-

ernments and class journals. Complete and accurate data on these subjects are worth many times the cost of collection. Just as satisfactory reasons justify two census volumes on population and two on vital statistics, while a great majority of the states are absolutely silent on these subjects. And such reports! Better than formerly, but beginning in 1900, as in 1890 and 1880, with an apology for 30 or 40 per cent. defectiveness of the mortality evidence, on this point, or in that locality; loaded with asterisks which mean "data insufficient;" expressing a most reasonable doubt whether nine jejune pages on births ought to be printed at all—these reports express Columbia's sense of business responsibility for 78,000,000 lives. People are cheap; worth less than the cost of acknowledging the beginning and recording the end of life. Faster than disease, accident and crime can diminish their numbers, the land can be replenished by opening the gate to cheaper people.

Vital statistics originated, as the word statistics indicates, in political science, but the neglect of the subject in this country has incited so much medical preaching that politicians have come to regard vital statistics as a kind of medical arithmetic. Such progress as registration has made in the United States is undoubtedly due to the influence of a few physicians, but it is at least doubtful whether the vital statistics of this country would improve very rapidly if wholly committed to the medical profession. Numerical completeness of returns of birth and death might be obtainable, but in a qualitative sense the results would be but little better, for the value of the results depends not on the number of observations but on their accuracy, and their accuracy depends in part on the prevailing standard of medical education, and partly on the physician's sense of responsibility in making his small contributions. In one of the United States the whole subject of sanitary government is, and from its inception has always been, in the hands of the state medical society. No state in the Union is more ignorant of its population, no state more destitute of the fundamentals of sanitary organization. To those who believe that the sanitary destinies of a state would necessarily be safe if confided wholly to physicians, the history of Alabama is a sufficient answer.

The consent of the people to systematic registration of vital data may not be easily obtained, but after that is done the consent of the medical profession will still be necessary in order that the will of the people may be effective. If in certain parts of the country the total neglect of vital registration is a vice of politics, in those states and cities where registration laws are in force, the unsatisfactory results of registration are chargeable against American medicine. To the best of my knowledge, there are two medical schools in the United States whose students are taught to write death certificates. A very intelligent professor of hygiene told me recently that it had never occurred to him that a physician might not know how to write a death certificate. My own experience in handling medical certificates of death, and my acquaintance with the results of mortality registration in general, convince me that one physician in every three can not write a good death certificate because he is not a good enough citizen, and one in every four or five can not write a good death certificate because he is not a good enough physician. Instruction concerning the medical certification of deaths would not wholly remedy these defects, for they are, I am convinced, traceable to a neglect in medical education as



fundamental to the training of medical students as vital statistics are to the practice of hygiene.

The common omissions and occasional redundancies of medical certificates of death, as they have grown familiar to me, are more and more associated with the poor discipline of medical schools and hospitals in the matter of anamnesis. The habit of record-making is yet uncommon even among the younger men. Under the influence of a few schools the times are mending, but, with the exception of those who do undergraduate work in hospitals, very few medical students of to-day have any instruction whatever in medical anamnesis.

Assuming that the teachers of medicine in this country can write good death certificates, a rather large assumption, and assuming that they are able to ascertain the proficiency of students, I know of no exercise more likely to exhaust the complacency of a professor of medicine than to undertake the tabulation of a year's mortality records furnished by a hundred alumni. Whoever is greatly elated over the present status of medical science as compared with that of a generation ago may find in the "Census Manual of the International Classification of Causes of Death" an intimate and unflattering view of American medicine as revealed by American certificate of death. This work, rendered necessary because the mistaken notions of our grandfathers survive in the medical memoranda of to-day, shows what is probably true the world over, that the scientific advance of our generation over the last preceding, however great it may seem, can be measured by the length of a funis.

When the people have consented, and the medical profession is both willing and able to furnish memoranda concerning births and deaths, there will remain a few points for the careful consideration of hygienists. In the United States the records of public offices are apparently public in the most promiscuous sense. The laws usually state that they are open for inspection by proper persons for proper purposes. The most stringent laws hardly go further than this, and the custody of records under such loose provisions is very apt to be a nominal rather than a real guardianship.

In my first three years' experience as a registrar, access to the records was refused three times; once when information was desired to prevent a marriage, once with the design of separating a married pair, once by a physician in order to injure another physician. Later, when the records were numerically worth consulting, life insurance companies began to ask for copies of records for the purpose of verifying statements concerning the deaths of relatives made in applications for new insurance. The use of the records for this purpose was refused, and I was told that such use is constantly made of the records in all American registration offices. Thereon I sent the following inquiries to about forty American registrars:

Are records of birth and death exposed, or copies given, to any person who may apply?

Are copies of birth and death records furnished to relatives of the person named in the record without inquiry as to the reason for desiring such copies?

Are copies given to attorneys or agents of relatives asking such copies of record?

May a lawyer obtain a copy of a record to be used in the preparation or prosecution of an action at law to the prejudice or injury of the person named in the record or of a relative of that person?

May a life-insurance agent obtain a copy of a certificate of death to complete proofs of a death claim without authority from the beneficiary to receive such information?

May a life-insurance agent obtain copies of records for the purpose of verifying the statements of an applicant for insurance as to the cause of death of relatives?

May a copy of a record of birth or death be obtained merely for the sake of information?

In addition to categorical answers from twenty-eight of the men addressed, I obtained a great deal of unexpected information. Those registrars who have not the permanent custody of records of births and deaths could only reply in general terms to the inquiries. None of them knew any instance of abuse of the records. In cities the situation is different. The chiefs of health departments in large cities do not know that their records are subject to any abuse. Some of them have no restrictions about furnishing information contained in the records, and no instance of misuse has come to their attention. In some cities written memorandum is made whenever a copy of record is furnished, but copies are rarely or never refused. In some cities it appears that the records may be searched by private individuals, and that no harm is known to have arisen from this complete liberty. The records are open, and no questions asked, in Indianapolis, Cleveland, Detroit, St. Paul, Milwaukee, St. Louis, Washington, New Orleans, Memphis. The purpose of the inquiry is asked in Philadelphia, Savannah, Buffalo, Louisville, Rochester and Providence, but only the registrars of Savannah, Rochester and Providence claim the power to withhold information. One can not tell from the replies of Boston, Chicago and New York whether the registrars make any inquiry as to the reason for seeking such information, or may in any case refuse information. No inquiry is made in the state of New York nor in Michigan, but the records must not be subject to loss or damage. Attempts to regulate the use of the records have been defeated in Washington, Indianapolis, Rochester, New Orleans. The privacy of the records is partly secured in Providence by a court decision; in Minnesota, by a general statute, which declares that a public official may not be examined on any information obtained in his official character if its disclosure would create public scandal. In New Jersey the records are excluded from commercial uses by regulations of the State Board of Health. In Maryland the registration law forbids the state registrar of vital statistics, under penalty of a heavy fine, to communicate any of the personal details of the records in his custody to any person not authorized to receive the same. The discretion thus vested in the registrar has sufficed so far to protect the records of births and deaths. The recent law on the registration of tuberculosis contains a similar provision. Except local health officers, no one may inspect the register of tuberculosis or receive any of the personal information contained therein without an order of court. The health officer of a western city undertook to restrict the indiscriminate use of his records for idle, or curious, or injurious purposes. The difficulties encountered were too many for him, and the records of that city may now be consulted by any one for any purpose or for no purpose. The records of this city are interesting in the fact that they contain the records both of birth and death of unacknowledged children of distinguished Americans, including a president of the United States, and the city department of health has apparently no way of preventing the inclusion of such scandalous fiction in its so-called public records. In another city the chief of the health department protects the records to the best of his ability, and in so doing has met the successful opposition of a mayor, and the threat of open



war against the health department by a newspaper editor who desired to unearth a private scandal, though the records of the health department at the time included certain memoranda concerning a scandalous portion of his own life.

The state of Michigan has found it necessary to pass a special act providing for a secret calendar of marriages contracted for the purpose of legitimizing children born or expected. This seems to me only a plan of creating scandal out of materials not necessarily scandalous.

In a great many places the records of births and deaths are sold to commercial advertising agencies. Sometimes this sale has been effected secretly for a long time, but in some cities the practice is unconcealed. The buyers of these lists are milkmen, infant food and nostrum venders, tombstone makers, photographers, publishers of memorial cards, undertakers and florists. It is somewhat surprising that undertakers and florists should be willing to pay for records of death on the chance of getting business in so short a time. One registrar writes: "I do not know how it is in your state, but here I know that registrars in various parts of the country are under salary or commission by various firms to deliver regularly records of vital statistics for commercial purposes." In Baltimore an infant food vender went into court to compel the consent of the commissioner of health to the use of the birth records for advertising purposes. In the District of Columbia the commissioner of health asks Congress to pass a bill to protect the records, being unable, as matters stand, to prevent their free use for commercial purposes. In one city, a great one, an employe of the health department was found to be regularly selling to a quack the names and addresses of persons for whom sputum examinations were made in the laboratory. This practice was broken up, it is said, though its continuance was not made impossible.

If these experiences, or most of them, had been reported from the great cities, where the temptation to misuse of the records is greatest, or from the very corrupt cities where health departments may be expected to share in the political demoralization, one might conclude that these reports represented approximately the amount and kind of abuse existing in the field covered by my inquiry. But the populations in which these scandals are admitted are not especially good fields for advertising; with one exception all the cities concerned are free from notorious corruption; in two of them the stability and efficiency of the sanitary organization are remarkably high for American cities. Remember, too, that those who furnished me the information used official paper for that purpose, and it is likely that some officials would not communicate facts of the sort without precautions. It is significant also that, while one of my correspondents said that no abuse of the records had occurred in his department, a gross abuse was shortly after reported to me by another member of the same health department. That a majority of my correspondents have not heard of such abuses as I mention seems to be strange, for it is clear that such records are liable to be abused anywhere and can not be defended unless that liability is recognized.

I can not assent to the view that the records of a health department are public in the liberal sense which obtains with respect to other official records, and it seems to me vital to the sound development of our sanitary anamnesis that very close privacy should surround these personal memoranda. The records will always be

false on certain particulars so long as the statements of record are open without hindrance to the general public. Precautions sufficient to prevent abuse of the records need not be so stringent as to make them less serviceable for legitimate purposes. All of us will agree, I think, that they should not be available either by gift or by purchase for commercial purposes, nor answerable to the inquiries of the malicious or mischievous or merely curious, and that records with palpably and wilfully false or slanderous contents should not be admitted to the files. Reasonable care would prevent these abuses, and it is idle to hope for healthy progress of registration until the records are reasonably safeguarded.

We dare not limit the scope of registration to the subjects now included under that head. The particulars concerning population, marriages, births and deaths are by long custom established as necessary sanitary memoranda. The registration of the graver infectious diseases, though generally provided for, is not generally practiced. From time to time the list of notifiable diseases is extended, and it is evident that the scope of registration for the purpose of hygiene will continue expanding. The formal inclusion of pneumonia, tuberculosis, malaria and cerebrospinal meningitis among the notifiable diseases, idle as it is in most places, expresses a real need in public hygiene, and not to be tolerated indefinitely among the sham defenses of American communities. It is notorious that the notification laws in most American cities are practically inoperative, and the common explanation is that the people who enacted these laws do not want them enforced. Those who assume to know the real state of public opinion are the medical practitioners, and these, indeed, do truly represent the opinions of the citizens on whom, for the time being, the notification laws are brought to bear. The consent of the well can always be counted in favor of notification, and up to this time the opposition of the sick can be as confidently expected. This brings up the humiliating reflection that the American people still expect public health to be protected by punishing the sick. It is hardly less humiliating to reflect that the medical profession, perfectly able to represent us truly to the distrustful public, suffers this medieval view to persist.

There are, however, some boards of health able to operate their notification laws with very little friction, and these have found that the opposition of the public has disappeared as fast as the confidence of the medical profession was won. Where cities have made adequate provisions for infectious diseases, where the relations of boards of health to the afflicted are altogether helpful, and, above all, where the organization of the health department is not subject to the vicissitudes of party politics, their notification laws are effective.

So far as I know, the worst forms of political corruption are very seldom discovered in health departments. I like to think that the profession to which I belong is very little inclined to cupidity, and that in hygiene, as in other branches of practical medicine, moral principles are not easily broken down. I have encountered in my own experience but a single instance of what seemed to be a conspiracy to extort a bribe involving the health department of a great city. Last October (1904) a citizen of Maryland, Mr. E. T. D., asked my assistance in the following circumstances: While on a vacation tour with his family, his son, aged 9, was attacked with diphtheria and died July 13 in a western city. He engaged an undertaker, who said that



the cause of death did not prevent the transportation of the body to Maryland, and together they purchased transportation cases conforming to the interstate regulations. Permission to transport was refused by the health department on the ground that a city ordinance forbade it. There is, however, no such ordinance, though an ordinance does forbid the bringing of a body dead of diphtheria from outside into the city, and forbids the disinterment of such a body within 10 years. The Marylander was told that a permit could be obtained by "shaking hands" with the proper person. He understood this to mean the use of money, and definite instructions were given him, but when some tangible evidence of good faith was refused him he declined to do as he was instructed, bought a cemetery lot, interred the body, and returned to Maryland. He desired me to help him recover the body of his son. I gave him a letter to the western health commissioner and advised him about the legitimate cost of getting a permit. He left, saying that he would try to get his son's body without the unlawful use of money, but that if obliged to use money he would, on his return, declare all the details. In November he went west again, carrying letters from three Maryland officials besides myself. He returned with the body of his son, and on Dec. 4, 1904, told me the following story. I omit minor details: Going first to the health department, Mr. D.'s request was refused and the acceptance of his letters was refused. He went then to a railroad man of his acquaintance, who introduced him to the president of a bank, who, in turn, gave him the name and address of a lawyer. Mr. D. "shook hands" with the lawyer and gave him money for himself and several other people. He did not mention the name of the lawyer, and he implicated by name but one person, a superior officer in the health department. His resentment against this individual was very vigorous until I proposed to transmit all the information in my possession at once to the commissioner of health of that city. My fellow-citizen thereon explained that the money which he spent was in the form of gifts, and that it was possible for him to have gotten away without paying. I communicated the information in detail to the chief of the western health department. Two letters have gone each way, and such information and assistance as I can furnish are still at the service of the commissioner of health whose department is implicated in this scandalous business.

American hygiene is, as I said before, the offspring of American medicine and American politics, and is worthy of the two. While its worst faults are, perhaps, derived from politics, American medicine is measurably responsible for the moral as for the scientific deficiencies of the neglected bantling. Has the medical profession anywhere been resolutely arrayed against the corruption of American politics or ever concerned itself deeply about the welfare of its fellows exposed to extraordinary moral hazard in an honorable and necessary calling? Have the medical men who entered this field, and pursued honorable careers honorably, been defended from the predatory statesmen? Where were the physicians a few months ago, when a state, after more than twenty years of leadership in public hygiene, was turned back to the foot of the column, in order that a governor might compliment a friend?

When, "in the exigencies of politics, it seems to have been necessary, in the mind of the new mayor," to have a new commissioner of health, and to retire one of the most active and successful educators of the public that the country has produced, where were the physicians of

the city? Did the exigencies of politics really score so well that physicians can hope, with a show of reason, that a new man—any new man—may succeed at once to the efficiency of his predecessor?

At the end of this chapter of delinquencies, some uninformed person may ask whether there is any virtue in American hygiene. To speak to the affirmative of that question would have been an easy and agreeable task, for I am far more impressed with the merits than with the delinquencies of American hygiene. I am as much surprised as you can be that the honor of being your chairman has turned me to these sober reflections. Pioneers we are, every one of us; fit for the trail, perhaps, but unfamiliar with it; making in the field a new science which many suppose to have been previously made in the schools and laboratories; cut off from our former associates, yet not alone, but laboring, with other pioneers of statecraft, sociology and applied science, to build the principles of preventive medicine into the social structure. Better understood, we sometimes think, by our fellow-pioneers than by the people, on one hand, or the men of medicine, on the other, ours is a game of which the players know little and the referees know less, a game having a fine theory and a book of elaborate rules, but the crudest practice. To bring the conceited medical umpire and the willful citizen-referee together and make them know each other, to mix common sense with medicine and common honesty with politics, and to let the book of rules then and there be damned; that is the way we shall come to be known for what we are, and afterward for what we ought to be. Since the robes of Æsculapius were rent by the endosmosis of common sense, we have learned that knowledge is power in proportion, not to its concentration, but to its diffusion. I count it the highest distinction of a hygienist to be diligent and skillful in diffusing among the people a special knowledge to the salvation of their bodies, and I conceive it to be within the power of this section to diffuse among medical men a general knowledge to the salvation of their citizenship.

Of my two immediate predecessors in this chair, each very clearly expressed the feeling that the Section is not now in the full exercise of its function, if, indeed, the nature of its function is generally understood. At the Atlantic City session we agreed that at each annual session the Section should make an objective presentation of some phase of its subject. Our first exhibit in this line we devoted to the hygienic relations of water. The Board of Trustees approved our plan and promised the needful financial support. At their meeting in February the Board of Trustees appropriated \$200 to the use of the Section, and your Secretary and Chairman concluded that this amount would not finance such an exhibit as was planned at a point so remote as Portland. The exhibit here presented has cost the Association less than \$50. The program is nearly as full as we desired, but the exhibit amounts to no more than one-tenth of what could easily have been realized. Nevertheless, the program and the exhibit meet our original design very satisfactorily in one most important respect. Both program and exhibit include contributions from non-medical sources. If some foolish person suggests that this circumstance implies a poverty of medical resources, say to such a one that it indicates, on the contrary, that affluence of hygiene which we especially desire to share with our fellows in the ranks of medicine.

If I may, in concluding, express a choice of subject for a future hygienic exhibit, I shall say that our next



effort in this line should cover vital statistics, the dryest, most refractory and most neglected subject within our field, and, withal, the most necessary, the least expensive to display, and the strongest to save a man from thinking of himself more highly than he ought to think.

#### DISCUSSION.

DR. ELMER E. HEG, Seattle, Wash., said that in 1890 or 1891 the first vital statistics act was passed in Washington, and it took the old form of county registration. Strenuous efforts have been made at various times to have that changed to a central registration, without any result. At the last legislature they succeeded in having a bill pass the senate, but it was amended in the house. The amendment, in Dr. Heg's opinion, absolutely killed the bill. It was very short. It was carried by an Eddyite. The original bill required that no burial permit should be issued except on the "certificate of a legally qualified physician." The christian scientist changed it so that a burial permit could be issued on the "certificate of any member of the family or a legally qualified physician." Considering that that would vitiate entirely the accuracy of death returns, Dr. Heg asked the senate committee, at conference, to refuse to concur, and the bill died in conference, so they are now just where they were in 1891. From expressions that he has heard throughout the state, Dr. Heg is satisfied that at the next legislature a proper registration act will be passed for the state of Washington. He said that, not having had a central registration, he has not been brought in contact with the illegitimate uses of the records, but he can readily see that the bill they had before the legislature would not have safeguarded them sufficiently. In the state of Washington there is no trouble at all about the notification of eruptive diseases, but when the state board of health asks for notifications of such diseases as typhoid fever or pneumonia it meets a stumbling block, and it appears to Dr. Heg that physicians ordinarily will notify the health department of any disease when the notification receives recognition by a quarantine or something of that sort, so that they know some use has been made of the notification. For the past year or two local health officers, when they were notified of typhoid fever, for instance, have placed in each house the rules of disinfection, and physicians, on receiving that much recognition of their notification, report very much better than they did before. They used to ask: "What is the use of reporting typhoid fever? It does no good." Now, when they see these rules for disinfection, they report.

DR. W. C. CHAPMAN, Toledo, Ohio, declared that he finds that the great trouble with physicians is want of information and want of education in the matter. Physicians all through Ohio refuse to report because they do not see that there is any necessity for doing it, and the first thing that state boards of health have to do is to educate physicians to see the necessity of reporting diseases. Dr. Chapman has had a good deal of experience in the last several years with smallpox, and the physicians say: "We will not call it smallpox till we have to." Cases of smallpox are not reported in Ohio until some one finds out that it is smallpox. Some neighbor says there is smallpox in a certain house, and the health officer finds that it is so. In Toledo there has been a good deal of smallpox among the workers in the rolling mills and iron works, because the physicians have not reported it. The people themselves will not report it. The disease has been so slight that they say: "We will not report it; we will have to go into quarantine and all that trouble." Finding that this was the case, the health officer made an inspection of that whole ward; 1,500 or 2,000 vaccinations were made, and several health officers, with the physicians, inspected the region and found a great deal of smallpox among parents and children that had not been reported. Physicians must be compelled in some way to understand the necessity of reporting diseases. In Toledo Dr. Chapman believes there is not one case in four of typhoid fever reported. In very many cases this is because of a desire on the part of the people, backed by the physicians, to avoid the notoriety. This is especially so in measles, a very dangerous disease. The medical profession is very negligent about this matter, and Dr. Chapman thinks that this Section is the one that should take steps in this matter and undertake to educate

physicians and health authorities everywhere to appreciate the necessity of registration.

DR. M. L. PRICE, Baltimore, suggested that what Dr. Chapman says shows that the laws of Ohio are a little lax in prosecuting these cases. In Baltimore, in smallpox and other serious contagious diseases, health authorities have been in the habit of prosecuting in every case where it is found that a report is not made. They have obtained several convictions under that law. The essential point in vital statistics is correct and accurate returns, and if that is true as to deaths it is certainly much more essential to have reports of sickness. Dr. Price regards the confidential nature of such records as absolutely essential to secure both correctness and accuracy in mortality returns. Returns in many countries do not give the correct cause of death. The returns of tuberculosis in France are practically *nil*; they are all stated as bronchitis.

DR. WALTER F. MORRISON, Spokane, Wash., said that there is no law in Washington governing this subject and that, therefore, there is difficulty in getting people to conform to what the health authorities think ought to be law. In regard to reporting diseases, Dr. Morrison said that much depends on the health officer and the public sentiment behind him. In Spokane the physicians are pretty good about reporting those cases, because the health officers have taught them to do so. The health officials keep a supply of pamphlets for distribution among the physicians, and the reference to prosecutions, under the law, of physicians who do not report these cases is underlined. In several cases when there were two competing doctors in the same town who were antagonistic to each other, when one of them stated a case was scarlet fever, if slight, the other would say it was measles, or when smallpox, the other would say it was chickenpox. The trouble, Dr. Morrison thinks, is with irresponsible newspapers. These make trouble sometimes and give a good deal of annoyance when the health officers are trying their best to do their duty. Stringent quarantine laws have been established in Spokane, and they are strictly enforced, and the health department is very particular about disinfection of the premises afterward. Dr. Morrison recalled a very interesting case which occurred a short time ago, in which a girl of 16 came from an adjoining county. Three months before she came to Spokane county she had diphtheria; the town had been afflicted with diphtheria, and there was no quarantine and no disinfection in the town so far as this girl, who was very intelligent, knew. Their premises, she said, had not been quarantined and had not been disinfected. When three months time had elapsed, she thought she was safe in visiting her friends. She was suffering from conjunctivitis at the time, and came to Spokane for treatment, and within ten days of the time when she visited this family one child was attacked with membranous diphtheria and died. The mother, who had not received any antitoxin, was attacked with diphtheria and had a very severe case. In this case Dr. Morrison urged the physician to give all the members of the family immunizing doses of antitoxin. Dr. Morrison examined the girl's arm three months after she came from the house and found that a scar where she had been burned was diphtheritic, and, while there was no actual test, he is satisfied that she went to Spokane suffering from diphtheria, and that the secretions from her eyes and from this sore were diphtheritic, because within ten days two members of the family developed diphtheria and one died. He said that if there is a defect in this matter in Spokane county it is in raising quarantines too soon. He said that it is almost impossible to obtain reports on typhoid fever and tuberculosis. Dr. Morrison has not enough notices to send to the physicians in the city of Spokane who practice in the country, but sends such notices to the physicians practicing in Spokane county, without the city, and he occasionally gets a notification of tuberculosis and occasionally of typhoid fever, but there is no quarantine established. If there were some form of quarantine against typhoid fever and tuberculosis and the supposedly less severe forms of contagious diseases there would be less trouble in getting reports and enforcing health laws.

DR. N. K. FOSTER, Sacramento, said that he can sympathize with Dr. Heg in his trouble in getting through the legislature laws to his liking, although the health officials' success in



California last year was a good deal better. They had been working under the old laws which were passed in 1870, under which the county recorders were expected to report to the state board of health every three months. During the last legislature they succeeded in getting passed a law providing that before the remains of a person could be legally buried the undertaker must get a permit, which is issued only on the presentation of a properly filled death certificate. This law, Dr. Foster thinks, they will succeed in enforcing. In the matter of births they will not succeed quite so well, although the law has been in effect only six weeks, and the returns are coming in pretty well. In the matter of reporting deaths they have a law that will cover the ground pretty effectually. They have followed very closely the law as suggested by the Census Bureau. The question of quarantine and the reporting of cases is one that is open to a good deal of discussion. It is a broad question, and has got two sides to it. Dr. Foster is not so much enamored with quarantine as are a good many. Take, for instance, smallpox as it has been known throughout the country for the last few years. The California state board of health has taken a little different ground than any other. When there is a case of smallpox that case must be isolated; everybody that has been exposed to the disease from that case is to be offered vaccination; if they accept it and will promise to report to the health officer every day for examination, they can go on about their work. If they refuse vaccination, then they are to be isolated, of course, not with smallpox cases, but separately, until twenty-one days have passed. In that way the health officers think that they will minimize the expense and get the maximum of protection. If isolation of every person who has been exposed is insisted on, many cases will not be reported, whereas, if the exposed ones are allowed to go about their business, there will not be that incentive to secrecy and they will accept vaccination and be protected. This method is to be given a trial. In case of diphtheria, Dr. Foster believes that the patients ought not to be let out too soon, but if the health officials say that they must stay in for six weeks they can not enforce it. The patients will say, "We won't stay." In order to make a success in reporting and controlling contagious diseases three things are necessary: Good laws, a public sentiment behind them, and an executive department that will enforce the laws. If there is a law that the public will not consent to, that it thinks is unreasonable, it can not be enforced. If the law is reasonable the physicians and the people will stand with the health officers. If there is an executive officer who will enforce those laws and once in a while make a good prosecution for the non-reporting of cases, not picking out a physician that has only a case occasionally, but the man who is at the head and not at the foot, much good can be done. By educating the people and getting good laws a condition of things can finally be obtained in which all cases will be reported, and the laws will be enforced without any great amount of trouble. It is not possible anywhere, Dr. Foster thinks, to get all tuberculosis cases reported. Dr. Foster does not believe in quarantining tuberculosis, because a person with consumption is not dangerous if he knows how to take care of himself. Efforts can be better directed to teaching people how to take care of their sputa and to make themselves safe to be with others than in quarantining them.

DR. W. C. CHAPMAN, Toledo, Ohio, agreed with Dr. Foster that isolation of the smallpox patient and vaccination of contacts is practical and all that is necessary. He mentioned an illustrative case.

DR. CHARLES V. GENOWAY, Spokane, said that in a case of smallpox he would vaccinate everyone who had possibly come in contact with the patient and would take the person who had the disease to the isolation hospital. He uses serum in every case of diphtheria. He isolates the patient and gives every one who has come in contact with the case an immunizing dose of antitoxin. About the only cases of typhoid reported are those that are fatal, but he thinks they can get physicians to report those cases better than in the past. He agreed that physicians are very good in Spokane about reporting diseases. He thinks they hardly quarantine long enough for scarlet fever and diphtheria. When he went into office, ten days after the disappearance of the membrane was the rule, but he has increased that

period; now it is two weeks after a culture from the throat is taken and proves negative.

DR. DENSLOW LEWIS, Chicago, said that the most important matter is to secure the active co-operation of the profession. It is a good many years since he was health officer of what was the village of Hyde Park and of what is now a very large portion of the South Side of Chicago. In 1879 he was health officer, and at that time many physicians objected to reporting cases because cases of infectious diseases were quarantined; cards were put up in cases of diphtheria and scarlet fever, and the smallpox patients were removed to the pest house. The families often thought it a hardship; in many instances they thought it almost a disgrace; in some cases, when the family lived in the back room of a little shop, it interfered with business, and, of course, that was most serious. In order to have statistics of value they must be complete, and for that reason it is important to have every case reported. In large cities this can only be done if the profession co-operates with the health officials; no law will make physicians report. It has been tried in Chicago; fines have been tried, and recently, in the return of vital statistics, physicians were paid, or were offered pay, for returns of births. The experience in Illinois has been very peculiar. In some towns of perhaps twenty or thirty thousand inhabitants there would be reported about twenty births a year. The prosecution of physicians will not make them do their duty; it remains, therefore, to appeal to their sense of propriety, so that an intelligent and willing co-operation may make statistical records complete. It should be understood that notification of disease does not necessarily imply that an uncomfortable quarantine shall be instituted; in other words, it is well for the health officer to exercise his judgment. At the time when Dr. Lewis was a health officer there was an epidemic of scarlet fever. He was called to see one mild case after it had been in progress a couple of weeks, when the child was practically well. The family and physician both objected to the card. They had facilities for isolation; they occupied a large house, and it was possible to put the child up in the attic away from everybody; in other words, it was possible to make the quarantine complete and to protect the public perfectly. Under those circumstances Dr. Lewis thought it advisable to omit placarding the house and no harm resulted. The health officer in these cases should have some discretionary power. The main factor is to prevent the spread of contagion, and, while it is usually advisable to secure publicity in these cases so that the public may take all due precaution, there are cases in which the placarding of houses may consistently be omitted.

DR. L. M. POWERS, Los Angeles, said that he generally advises the administration of antitoxin as a prophylactic measure in those who have been exposed to diphtheria, especially children. He is doubtful, however, whether this is a benefit to the public, though it is of undoubted benefit to the individual; it permits mild forms of diphtheria to develop, while the disease is prevented from manifesting itself sufficiently to allow the condition to be recognized and the patient isolated. Consequently these individuals may go around and infect more people than one with a malignant form would. His experience has been, not only with diphtheria, but with smallpox and typhoid fever, that the mild cases are the ones that spread the disease from town to town and over the country; therefore, he looks for mild forms of transmissible diseases which are too often not diagnosed. For years all patients with diphtheria have been separated from well persons and kept separate as far as possible by placarding the home; this is an incomplete quarantine; it is impossible to maintain a complete quarantine without a guard. By placarding the home and with no guard one can not keep people from visiting, the divine healer, christian scientist and others who wish to demonstrate their powers will take chances, and these are the people who help to disseminate the disease. Diphtheria patients in Los Angeles are not released from quarantine restrictions until they show an absence of the germ in the throat, whether that be one week, two weeks or six weeks or even eighty days. Dr. Powers has held patients in quarantine as long as eighty days, and the germs would show in a virulent form in the throat. As long as those germs exist in the throat, whether they are virulent or



not, such patients are liable to transmit the disease to others with whom they come in contact. Consequently Dr. Powers thinks that quarantine restrictions should be maintained until every case shows an absence of germs at least with two consecutive cultures. In quarantining large schools or homes this procedure is necessary in order to prevent mild forms of the disease or to prevent patients who have had severe forms of diphtheria returning and reinfecting the building. The injection of small doses of antitoxin permits a mild form of the disease; the antitoxin does not kill the bacilli; it only neutralizes the toxin.

DR. KATE LINDSAY, Boulder, Colo., stated that whooping cough has been the most troublesome disease for her to quarantine, and it is a very dangerous disease, certainly during the first three years of childhood or between 6 months and 3 years. As a rule, children have whooping cough in a mild form if they are from 6 to 8 or 10 years old, and they go around the neighborhood, and yet it is a very dangerous disease in young children and very liable to be followed by sickness. Dr. Lindsay said she would like to have some light on the matter of quarantining whooping cough and saving the babies.

DR. N. K. FOSTER, Sacramento, said that in California there is no law making whooping cough a quarantinable disease; it is a reportable disease under the rules of the state board, and it is a misdemeanor to disregard these rules. He also spoke of the number of properly educated sanitarians. Our health officers are largely recruited from physicians—from those who are young and inexperienced and generally without having had any special training. He said he wished the American Medical Association, starting through this Section, would insist that the medical colleges in this country educate sanitarians or at least provide some good course of sanitary science. Let them give a two years' course, so that we can have men all over the country who are competent sanitarians. Of course, there are many good men now—men who have had extended experience and education, but throughout the country sections and a good many of the thriving cities there are men who are not what is needed, and Dr. Foster supposed that it is the same throughout the United States. There is difficulty in getting men who have had any instructions whatever in sanitary science; they may be good physicians, but bad sanitarians. Dr. Foster thinks it would have to be a postgraduate course, but thinks these men should have some teaching, at least an optional course of a few months, in sanitary science.

DR. JAMES CARROLL, Washington, D. C., said that the George Washington University is now contemplating the establishment of a course with a view to conferring the degree of doctor of public health, the special object being to qualify men for the sanitary service.

DR. W. C. CHAPMAN, Toledo, said that the only trouble is that health officers are not well paid. There is no inducement to take that course for two or three years for \$25 a year, which is about the sum paid health officers in Ohio.

DR. E. E. HEG, Seattle, said that Dr. Foster's idea of a course in sanitary science is exceptionally good. He thinks, however, that such a course should be a part of the general training of a physician. The whole point of getting reports is getting the co-operation of physicians; if they were to understand the necessity that the health authorities have for accurate reports there would be no trouble in getting those reports. If that was a part of the general training in colleges, a requisite for a degree, just as a knowledge of the eye is, they would know the necessity of it and education on the subject would start with the younger men. The older men would some time die off, and the younger men would know something about it. He said that Dr. Foster's method of handling smallpox in California has been done in the state of Washington for nearly three years. In Washington, on one side is a state with no health authorities whatsoever, on the other side is British Columbia, and there the authorities are exceptionally strict. If even one case of smallpox drifts over the line from any one town in Washington it means an absolute quarantine of a whole section of the state, so the Washington health officials have to be careful. All quarantine regulations should be tempered a great deal with tact. The object, of course, is to get the greatest possible protection with the

least possible inconvenience. Tact is a valuable quality in any health officer or in any physician.

DR. CHARLES C. BROWNING, Monrovia, Cal., said that co-operation has been dwelt on at length, and he thinks not too greatly, because that lies at the foundation of being able to secure reports. Recently he was visiting a physician, who was going to stop at a place, and asked him to step in. He stepped in and saw a child with scarlet fever and was a little surprised. The physician made a hurried call, and after leaving the case said he would not call it scarlet fever because the health officer would put a card on that house, and the man had to make a living. It seems in that particular town the physicians are not in as good accord as they are in Washington. That is one of the stumbling blocks. Another is that the people generally understand that a report means quarantine. Now, the large number of cases of tuberculosis and typhoid fever do not need to be quarantined in the general sense of the term; it is not proper or necessary, but if physicians understand that when such cases are reported a certain latitude and assistance will be extended, the disease will be attacked by educating the people. First get the physicians educated, and then educate the people to look on the health authorities as their friends, and not as a great inconvenience. That is especially true of typhoid fever and tuberculosis, diseases which are responsible for a great deal of suffering. Then get at the teachers of the public schools through the state board of health and through the county and city boards.

## INNOCENT FIBROMYOMA OF THE UTERUS.\*

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During the last few years there has appeared in the surgical literature a number of articles wherein the writers have advocated the removal of practically all fibromyomata of the uterus. This position has been taken for the most part on the ground that in many cases complications threatening life, such as the various diseases of the tubes and ovaries, etc., were found which warranted the removal of these structures together with the uterus itself.

It is my purpose to urge that in a very large proportion or in practically all fibroid tumors there exists in the tumor itself at the time of diagnosis, or will exist with considerable degree of certainty at some future time, conditions which warrant their removal, or that the tumor will sooner or later produce such conditions elsewhere. I do this with the full realization that there come to the autopsy room numerous cases wherein such tumors had existed for years symptomless, and in which they were no way responsible for the death of the woman.

That there is a tendency to exaggerate the extent to which these degenerations are found is conceded; nevertheless, that they are found in such a number of cases as to render them of much importance requires for confirmation only the careful perusal of the literature of the subject.

Camus<sup>1</sup> reports a case of multiple fibromyoma of the uterus, weight 4 kilograms, which had undergone calcareous degeneration in one part, the degeneration evidently having started on the periphery. There were no symptoms, but large abdomen.

M. Cornil<sup>2</sup> describes the removal of an intramural fibroid of the size of a fist in a state of edematous and colloid degeneration. The tissue was semitransparent

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Bull. et Mém. Soc. An., Paris, 1904, lxxix, 707.

2. Bull. et Mém. Soc. An., Paris, 1904, lxxix, 696.



and soft. The uterine cavity was filled with a cancerous growth, bathed in a milk-like liquid. (Microscopic examination.)

Haultain<sup>3</sup> believes that while fibromyomata may become secondarily malignant, this is by no means so common as might be inferred. Authentic thoroughly proved cases of sarcomatous change in a pre-existing fibroid are few, yet it is probable that all cases of encapsulated sarcomata are degenerating fibromyomata.

Von Franke<sup>4</sup> states that sarcomatous degeneration occurs in .75 per cent. of all cases, while Cullingworth met with one case of myxosarcoma in 300 cases of fibroid, and Noble only two in 258 cases. Von Franke has observed one undoubted case in 400, while in consulting the case book statistics of Professor Simpson's ward in the Edinburgh Royal Infirmary no instance has occurred in the last 300 cases of fibromyoma. In taking these statistics *en masse*, in only four cases out of 1,250 fibromyomata had sarcomatous change occurred. As a rule, he states, sarcomatous change occurs after or about the menopause and is perhaps the most common, but by no means the only cause of increase in size of a fibromyoma after the climacteric. From the rapid increase in the size of the tumor, severe pain is a very constant symptom. Thus, if after the menopause along with enlargement of a known fibroid there is pain and loss of strength, the diagnosis of sarcomatous change is almost certain. Cystic edematous infiltration and degeneration of fibroids with slight cellular proliferation resembling myxosarcoma, von Franke has observed on two occasions. In one of these, the interspaces were filled with a blood clot which gave the appearance of a telangiectatic tumor described first by Cruveilhier. In both cases the cellular proliferation, though assuming the embryonic type, was so scanty that one could hardly classify them as sarcomata. After removal there has been no sign of recurrence as was to be expected. He believes that malignant epithelial infiltration of fibromyomata is of extreme rarity, only one or two cases having been cited. In these instances, the original tumor has probably been adenomyoma, a tumor either due to Wolffian relics or to infiltration of the muscularis of the uterus by glands from the endometrium.

H. Smith<sup>5</sup> reports a case of calcareous degeneration of a fibroid tumor removed by supravaginal laparotomy. Recovery.

Dr. B. Fenwick<sup>6</sup> noticed that calcareous tumors invariably had very small pedicles and in cases he examined he found that the blood vessels were of a small caliber in comparison with the size of the tumor they had to supply. He thought, therefore, that the cause of degeneration was the want of an adequate blood supply. The walls of the ovarian and uterine vessels in cases of myoma were almost invariably greatly thickened, a condition described still more clearly by Mr. Stanhope Bishop more recently. Adhesions to the intestines and omentum were less common in calcareous cases than when the degeneration was more rapid.

B. Emmett<sup>7</sup> describes a fibromyoma filling the pelvis and a greater portion of the abdomen, causing pressure symptoms. One of the tumors was found on microscopic examination to have undergone colloid degeneration. Dr. Dougal Bissell mentioned two cases.

Francois Dainville<sup>8</sup> reports a case of cancerous degeneration of fibromyoma of the uterus.

Charles P. Noble<sup>9</sup> reports a case of the invasion of a fibromyoma of the uterus by an adenocarcinoma, which by metaplasia had assumed the appearance of a squamous cell carcinoma. There was an absence of cancer elsewhere in the body. He considers the important point in connection with this tumor to be the question of origin of the epithelial masses, and mentions the following sources reported in the literature:

1. Metastasis from tumor in other parts of the body. Such an extension has been reported by Schraper<sup>10</sup> from primary cancer of the lung.

2. Extension to myoma of cancer of uterus. Cases are reported by Bubl,<sup>11</sup> Röhrig,<sup>12</sup> Cullen,<sup>13</sup> Ruge and Veit.<sup>14</sup>

3. In the development of cancerous tumor from epithelium normally contained in fibromyoma of this type, the "myocarcinom" described by Liebmman<sup>15</sup> is not satisfactorily explained. Rolly<sup>16</sup> describes an intramural myoma presenting the picture of carcinoma, with metastasis in the liver and bones. The uterine mucosa was normal. He believed the uterine tumor to be primary and to have its origin in adenomyoma, which in turn had developed from the remnants of the Wolffian body. Complete physical examination showed no evidence of tumor in other organs, and the portion of cervix not removed appeared normal. Microscopic examination showed distinct evidence of development from the epithelium covering the tumor.

J. C. Webster<sup>17</sup> lists 210 cases of fibroid tumors treated surgically in which the degenerations were as follows: Calcareous 2, edematous 6, cystic 13, myomatous 4, suppurating 10, adenocarcinoma of cervix 1, sarcoma 2, hemorrhagic 3, necrobiosis 11; total 52.

Webster compares these findings with those of some other workers who have given particular attention to the subject in recent years. Thus Scharlieb in 100 cases of fibroid found degenerations in 26; Cullingworth in the same number found it in 52; Noble in 258 cases, found it in 47; Ellice McDonald in 280 cases, found it in 135.

E. McDonald<sup>18</sup> writes: "Since Martin in 1888 made his study of degeneration in 205 cases of fibromyomata, others have reported similar series; notably Noble<sup>19</sup> 258 cases, C. J. Cullingworth<sup>20</sup> 100 cases, Mary Scharlieb<sup>21</sup> 100 cases, and C. C. Frederick<sup>22</sup> 125 cases."

He summarizes the degenerations as follows: Fatty degeneration 7, calcareous infiltration 11, necrosis 55, cystic degeneration 34, telangiectasis 46, sarcoma 17, associated carcinoma of the cervix 15, associated carcinoma of the body 17, myxomatous (edematous) 8, associated syncytioma 1; total 788.

McDonald found degenerations as follows: Slight hyalin 18, moderately hyalin 32, marked hyalin 19, hyalin and calcareous 8, calcareous 14, calcareous, necrotic, hemorrhagic 2, cystic 8, myxomatous 4, hemorrhagic 6, necrotic 4, necrotic and hyalin 3, necrotic and

8. Bull. et Mém. Soc. An., Paris, 1903, lxxviii, 915.

9. Amer. Jour. Obst., 1904, xlix, 306.

10. Virchow's Arch., 1892, cxxix, 61.

11. Mitt. a. d. Path. Institute z. München, 1878, p. 291.

12. Zeitft. Geb. u. Gyn., 1880, vol. 265.

13. "Cancer of the Uterus," 1900, p. 410.

14. Zeitft. f. Geb. u. Gyn., 1881, vi, p. 261, 1882, vii, p. 138.

15. Virchow's Arch., 1889, cxviii, p. 82.

16. Virchow's Arch., 1898, cl, p. 555.

17. Amer. Med., 1905, ix, p. 401.

18. The Journal A. M. A., May 21, 1904, p. 1344.

19. Brit. Gyn. Jour., 1901, xvii, p. 170. Am. Gyn., April, 1903.

20. Jour. Obst. and Gyn., Brit. Emp., 1902, i, p. 3.

21. Jour. Obst. and Gyn., Brit. Emp., 1902, ii, p. 323.

22. Amer. Jour. Gyn., 1903, ii, 297.

3. Trans. Edinburg Obst. Soc., 1903-1904, xxix, 167.

4. Encyclop. Geb., Langer. u. Huff.

5. Encyclop. Geb., Langer. u. Huff, 195.

6. Brit. Gyn. Jour., 1903 xix, p. 209.

7. Amer. Jour. Obst., 1904, xlix, 547.



cystic infected 1, adenomyoma 6, associated with adenocarcinoma 6, associated with squamous cell carcinoma of the cervix 2, sarcoma 3, deciduoma malignum 1; total 135.

He concludes as follows:

1. Fibroids producing symptoms and all fibroids except those designated as small (especially when subserous or intramural) should be removed because the risk to the patient from operation is far less than from the tumors themselves.

2. In view of the sarcomatous changes, carcinomatous associations and complications of uterine fibromyomata, early removal is indicated when they are of sufficient size to produce symptoms.

3. Thorough pathologic examination should be made of all fibroids for evidence of malignancy. Particular study should be devoted to those tumors which are necrotic, cystic, or both, as among these are found the largest proportion of malignant changes.

Charles P. Noble<sup>23</sup> of Philadelphia, says A. Martin<sup>24</sup> was probably the first to tabulate and to analyze degenerations of uterine fibroids, as follows: Fatty degenerations 7, calcification 3, suppuration 10, edema 11, cystic degeneration 8, telangiectasis 3, sarcoma 6, carcinoma of the cervix 2, carcinoma of the body 7; total 57.

Dr. Noble tabulated and analyzed 258 cases of both degenerations and complications. He classes these in three groups:

1. Those which would lead to a fatal result.
2. Those which would threaten the life of the patient.
3. Those which would involve more or less invalidism.

He estimated that 95 of these patients, or 36 per cent., would have died of the complications of the fibroid tumors had they not been operated on.

Charles J. Cullingworth<sup>25</sup> reports 100 cases, covering a period from 1892 to 1901, inclusive; of these 46 were typical fibromyomata, with no structural change evident to the naked eye; two showed telangiectatic change, and 52 presented pathologic degenerations, as follows: Edematous and myxomatous 27, myxosarcomatous 1, cystic or fibrocystic 5, calcareous 1, necrotic 18; total 52.

Pain as a predominant symptom is an indication of a degenerative process. The age of the youngest patient operated on was 28, the eldest 61; the preponderant ages 35 and 45. Two of the cases showed a marked increase in size after the onset of the menopause, with initiation of necrotic change at that period. The operation resulted fatally in both these cases. No conclusions are formulated.

Carleton C. Frederick<sup>22</sup> reports a series of 125 cases of both degenerations and complications. An estimate of probably 30 fatalities from complications alone may be made or about 45 per cent. from all complications.

Mary Scharlieb<sup>21</sup> reports in 100 cases the following degenerations and complications: Edematous and myxomatous 5, sarcomatous 6, cystic or fibrocystic 7, calcareous 2, necrotic 2, sloughing 3, carcinomatous 1; total 26.

Degenerations were found in one-fourth of the patients operated on; in one-half of these it was such as directly to threaten the life of the patient without any reference to hemorrhage or pressure effects. In two patients the tumors contained cysts and were also in-

vaded by sarcoma. In 55 cases calcareous and sarcomatous changes had occurred. The age of the youngest patient was 18 years, that of the eldest 68.

In my 169 cases, degenerations were found as follows: Necrobiotic 10, sarcomatous 1, suppurative 1, calcareous 2, myxomatous 3, adenocarcinoma of body 3, telangiectatic 4, cystic 7; total 31.

Out of these 169 cases, I wish briefly to outline five cases which illustrate the impracticability and often the impossibility of a diagnosis of certain conditions in these growths prior to removal; also two patients not operated on at the time of the first examination, owing partly to the unwillingness to submit to operation and partly to an ill-advised deference on my part to the so-called classical teaching in the treatment of symptomless fibromyomata. The latter two patients died without operation.

CASE 1.—The patient came to me for consultation with regard to an abdominal tumor which on examination proved to be an interstitial fibromyoma of the uterus extending well up toward the umbilicus. She had few symptoms; her heart sounds were normal; her chief complaint was of the weight. There were no disturbances of menstruation. I advised operation, to which the patient demurred, saying it was giving her little or no trouble and she would not take the risk. A year later she appeared eager for an operation. A glance gave evidence that an operation was out of the question. Six weeks later she died; an autopsy revealed fatty degeneration of the myocardium. According to various authors<sup>25</sup>—(Hofmeyer, Fehling, Dower, Fenwick<sup>a</sup>)—heart degenerations are a common result of neglected fibromyomata.

CASE 2.—An unmarried woman came to me with a fibroid tumor of considerable size not because she suffered from it, but because her neighbors were questioning her chastity. This was in the summer, and she preferred to wait until cooler weather for operation. Before the oncome of such weather as suited her, however, she was seized with a chill, followed by high temperature and rapid pulse, and died. Autopsy here showed extensive necrobiotic changes.

CASE 3.—This patient, aged 38, came to me complaining of a not particularly severe menorrhagia. There was some history of malaria. She did not know she had a tumor. Examination, however, revealed a uterine fibroma about the size of a cocoanut, low in the pelvis, with subserous nodules protruding from the surface of the larger mass. On removal the mass showed at various places throughout its interior small areas of softening which were easily indented, while the tissues had a tendency to break down on pressure. Microscopic sections through these areas showed plainly that the tissues had a tendency to break down on pressure. Microscopic sections through these areas showed plainly that the tissues were undergoing necrobiotic changes.

CASE 4.—A colored woman, aged 45, had a tumor which extended well above the umbilicus. She suffered considerably from menorrhagia and from pressure symptoms, although there was nothing in her condition which could be construed as threatening. As a matter of fact she was able to sustain herself and a rather large family by work at the washtub. A superficial examination of the tumor after its removal indicated that it was nothing more than a simple fibromyoma. A series of sections from different portions of the mass examined under the microscope, however, showed areas in which there were distinct evidences of sarcomatous degeneration.

CASE 5.—This patient also was a negress, aged 23, from whose sister I had a year before removed a fibromyoma, and this fact was probably responsible for her coming to me at a time when the tumor, so far as she knew, was giving her no trouble, although she was rapidly declining in health, a condition which she attributed to other causes. The tumor was of the interstitial variety and measured about 3 by 4 inches. On section the endometrium was found to be very much thickened, while high up in the cavity there was a small mucous polyp, in the neighborhood of which the endometrium

23. Amer. Jour. Gyn., 1903, II, 297.

24. "Pathology and Therapeutics of Diseases of Women," Boston, 1890, pp. 268-272.

25. Jour. Obst. and Gyn., 1902, II, 223.



was much more thickened and of brainlike consistency. On microscopic section extending from this area outward and involving the uterine musculature and the tumor growth, there were numerous projections which showed carcinomatous degeneration. In addition to this there were areas entirely cut off from the endometrium and surrounded by the fibrous tissue in which the alveoli were easily made out. This patient, operated on in March, is already showing evidence of return of the growth.

CASE 6.—A woman aged 43 suffered but slightly from a tumor not larger than an orange. This tumor on removal proved not only to have undergone extensive calcareous degeneration, but telangiectatic degeneration also, so that the hemorrhage was excessive owing to the dilatation of the blood vessels as well as from the fact that the calcareous degeneration seemed to have invaded the vessel walls. The conditions found in this growth do not bear out the statement by Fenwick previously quoted. He holds that in calcareous tumors we usually find the blood vessels of small caliber.

CASE 7.—This patient had a fibroid some 10 inches in its transverse diameter. In shape it was very much like an enormous kidney, attached by its hilum as it were, to the fundus of the uterus, the pedicle being some three inches in diameter. This tumor had been of little or no trouble to the woman until she had a fall, after which the symptoms of torsion of the pedicle appeared. The tumor was promptly removed and showed evidences of neerobiotic degeneration.

These cases all present one common characteristic, the lack of any symptom which would indicate any pathologic lesion other than the tumor itself. In one case, the patient was not aware that she had a tumor; yet of these cases, two patients died for want of an operation; one from necrotic changes, the other from changes in the myocardium, which condition, according to eminent authorities, is undoubtedly one of the results of neglected fibromyomata. Another of these cases illustrates a common form of the innocent fibroid, the tumor attached to the fundus by a long pedicle. By virtue of such attachment, it is little calculated to give rise to symptoms so long as it remains in its original position. There is ordinarily no menorrhagia. As it assumes some size, it rises easily out of the pelvis. It causes no pressure symptoms, but its very conformity makes it particularly prone to circulatory changes either from a deficient blood supply through its narrow pedicle or by torsion of the latter.

Of these cases, two patients died without an operation in which there were at least nine chances out of ten for recovery. One will die after the operation as the result of a general carcinomatosis appearing promptly after the removal of a fibroid tumor which had been extensively invaded by carcinoma from the endometrium. The others are alive and well. They are all of the class in which those operators who believe in the policy of procrastination, or who, to use their own expression, take a classical view of these cases, would have advised against operation.

It is hard to realize in this day of advanced and intelligent surgery that men of unquestioned standing will delay these operations, trusting to good luck or the menopause to do away with the symptoms of which these women complain. According to my observations, so far as the menopause is concerned, it aggravates rather than improves the symptoms in at least half the cases. The idea of the menopause curing such a thing as a fibromyoma is a relic of the surgical dark ages, and admitting the bare possibility of such a thing occurring, the chance is so small that it should not be taken by the intelligent modern operator.

In this connection, J. Bland Sutton<sup>26</sup> says: "Surely

there is nothing in the whole range of surgery more ironical than a woman spending 20 or even 30 years of her life as a chronic invalid on account of a uterine fibroid, in the expectation that at the menopause she will be restored to health and begin a new life, and then to realize that, far from this being fulfilled, the fibroid becomes necrotic, extruded or septic, and places her life in the gravest peril, and that she may die in spite of surgical intervention."

John B. Deaver<sup>27</sup> says: "The mere fact that a woman has a fibroid tumor of the uterus is in no respect, however, an indication for its removal." In his opinion, no such growth should be removed unless it causes symptoms. In the seven cases mentioned above, there were at the time of examination practically no symptoms, yet as already stated, two of the patients died without operation; one from a degeneration, the other from a complication superinduced by the tumor and in the other five, operation revealed conditions which, had operation not been made, must necessarily have resulted in death or in an operation made on a patient whose vitality had been lowered by disease.

Deaver also states that he is thoroughly convinced that a myoma of the uterus which produces no symptoms is as nearly harmless as any pathologic change can ever be. It will be readily granted that a myoma is harmless as long as it remains harmless, but when one takes into consideration the large proportion of these tumors, which, according to statistics which must be accepted as accurate, do undergo degenerative changes, it is at once evident that time alone is necessary to affect pathologic changes threatening life. So far as the innocent fibroid is concerned, there is nothing so innocent, nothing so treacherous.

In respect to the statement that the dead house reports show large numbers of fibroids with which the women lived a long life in perfect contentment, Noble of Philadelphia says: "For those who are convinced that one of the classical position is correct, I would suggest that one of the strongest arguments that could be produced in support of their position would be to institute a careful research into the autopsy records of well-managed institutions in order to learn, first, in what proportion of women fibroid tumors are found at autopsy, and, second, what relation these tumors had to the state of health or to the death of the particular patients. It is a classical statement that many women live and die without the knowledge that they have had fibroid tumors. This statement I do not believe, but I would be quite willing to be convinced of its truth on adequate evidence."

Deaver further states, quoting McDonald's article, wherein he reports a series of microscopic studies of 280 cases, that there were 12 cases, or 4.28 per cent. of malignant degenerations; add to these the 14 cases of calcareous degeneration and the 4 neerobiotic degenerations, which conditions under the circumstances, in great probability, would result fatally, not to mention the other degenerations listed, we have 30 cases, or 10.7 per cent. A consideration of other statistics will give practically similar percentages. It is not possible, of course, to say how many of these patients Deaver would have operated on, but it is fair to assume that the diagnosis of the degenerations was not made in all of them before operation. In the same paper he reports a series of 105 cases, with a mortality of 2.85 per cent. His own small death rate is sufficient answer to his argu-

26. The Lancet, June 6, 1903.

27. Amer. Med., vol. 9, No. xv, page 601.



ment. Is it at all probable that the death rate would have been so small had these patients, whose cases he quotes from McDonald's table, not been operated on as soon as the tumor was diagnosticated? Take the five cases of so-called harmless fibroids which I list out of a series of 169 cases. Would these patients not all have died without operations?

It is a matter of curiosity as to what those operators who assume what Noble refers to as the classical or traditional attitude, do with other conditions in the abdominal cavity, conditions which are analogous in every respect to the so-called harmless fibroid. Recently I removed from a woman aged 73 an ovarian tumor weighing, with its contents, 30 pounds. She had carried this tumor for 25 years; she had never had any symptoms from it and was able to earn her own living. Would these classicists have allowed it to remain? They remove appendices in the interval, and small ovarian cysts; they remove symptomless gallstones from the gall bladder, not on account of any immediate danger, but on account of the fact that in no greater proportion than in fibromyomata of the uterus these various conditions will undergo changes threatening the life of the patient. For the same reason I remove all fibromyomata of the uterus.

In conclusion, considering the statistics, the accuracy of which can not be doubted, the low death rate in hysterectomy in the hands of competent operators and in cases not too long neglected, and particularly the fact that many of these tumors on removal reveal conditions threatening death, and which are not suspected, and can not be diagnosticated prior to operation. I am convinced that all fibromyomata should be removed unless there be concurrent conditions which render the operation inadvisable.

#### DISCUSSION.

DR. FRANK T. ANDREWS, Chicago, said that he is absolutely opposed to the position taken by Dr. Eastman, because it is so dangerous that it is vicious. He has seen many patients go by the menopause; in fact, it is his hope to carry them past the menopause and to watch them get well, and the vast majority do get symptomatically well. It is impossible to say in how many of Dr. Eastman's cases the tumors would have become cancerous if let alone. Few of these cases develop into sarcoma.

DR. W. F. B. WAKEFIELD, San Francisco, declared that he is absolutely in accord with everything Dr. Eastman said. His is true, up-to-date teaching.

DR. J. H. CARSTENS, Detroit, asked in how many cases the growths undergo changes of various kinds, the result of interference with the circulation, and how many patients in a hundred will die if operated on. In his opinion more patients will undergo a change for the worse in the way of malignancy, septic conditions and adhesions if they are not operated on than would die if they were operated on. There is another thing to consider. A fibroid tumor is not appendicitis. An operation for fibroid ordinarily is not dangerous and one can select the time for operation. The patient can be put in such a condition that the operation will be almost free from any danger, and a man may be selected who is thoroughly competent to do the operation. The mortality will then be so small that the point made by Dr. Eastman is well taken. Every orthopedic surgeon operates on club feet, knock knees and deformities of all kinds in which the mortality is as great, and even greater, than it is in operations for fibroid. He operates for esthetic purposes or to restore lost functions, and the operation is justifiable. If the patient is young the tumor should be enucleated; if she is old the uterus and whatever else may be necessary should be removed. To let a woman go around with a tumor for ten or fifteen years is not good practice. It is the physician's duty to relieve the mental

condition of that woman, to ease her mind and to make her mentally and physically comfortable. The patient, however, must be in good condition before an attempt is made to remove the fibroid.

DR. L. H. DUNNING, Indianapolis, agreed with Dr. Eastman in the main, but he would not like to be committed to the dictum that physicians should operate on every case of fibroid. It is true that 18 per cent. of fibroids undergo a dangerous degeneration, and, on the other hand, fibroid tumor operations—hysterectomy and myomectomy—do not, under favorable circumstances, give a mortality of more than 5 per cent.; that is to say, 13 per cent. is gained by the operative method. Many patients carry fibroids for fifteen or twenty years without any knowledge of the fact. They discover them accidentally when they are near the menopause. Many physicians have patients to show that 80 per cent. of fibroids undergo benign degeneration and absorption after the menopause. Given a woman 40 years of age, not suffering from the tumor, Dr. Dunning asked if gynecologists are not justified in assuring that woman that the probabilities are 80 per cent. in her favor that the tumor will disappear without harm to her. He would be exceedingly loth to undertake the removal of a tumor that produces no symptoms. If degeneration is taking place the signs are growth of the tumor, pain, fever, cachexia, increase of menstruation and painful menstruation. Dr. Dunning is of the opinion, based on considerable experience, that physicians are justified in many cases, especially when the patient is near the menopause, in watching the case, allowing the patient to go without operation when there are no symptoms. These patients, as a rule, take the matter cheerfully, and after the menopause their troubles gradually disappear.

DR. D. H. CRAIG, Boston, stated that to propose the rule of operating in every case of fibroid is as much empiricism as is the administration of medicine in certain diseases. It must be remembered that there are patients who need operation and there are some who do not, and the outcome of this discussion should enable gynecologists to distinguish between these two classes. He is not prepared to take sides now; he desires to remain on neutral ground and to decide which patients need operation and which do not. Of course, if the physician does not operate, he must keep the patient under close observation. It seems to Dr. Craig that this is the safest course to pursue.

DR. V. J. HAWKINS, St. Paul, said that he has found fibroids accidentally during confinement ten times where one patient comes to his office for advice. It is not wise to advise every woman who has a fibroid to be operated on. He has had many patients operated on, and they are not well after the operation. If this operation should be performed in every case good results should be obtained in a large majority of the cases, and that has not been Dr. Hawkins' experience. Knowing this, and also that many of these patients get entirely well after menopause, the tumor disappearing, he stated that he can not agree with Dr. Eastman's views.

DR. W. O. HENRY, Omaha, Neb., said that it would be a great mistake to adopt the rule that all patients with fibroid should be operated on. Gynecologists have not yet reached the point in abdominal surgery where they can say that the operation is entirely safe. It is a great mistake to urge operation when the fibroid produces no symptoms, for there is always a possibility that the patient may succumb to the operation, no matter how skillful the operator. Some women have small fibroids, and when the menopause comes on the fibroid disappears. If the tumor does begin to make trouble there is sufficient warning, and then is the time to operate. Women in the child-bearing period have fibroids, and during the involution following pregnancy the tumor sometimes disappears. Each case should be studied individually and treated on its own merits. In reply to a question Dr. Henry said that when the fibroid degenerates there will follow hemorrhage or a profuse discharge of the some kind from the uterus; then there is time enough to operate and save the patient. He has not seen patients die, but has seen them recover after pregnancy with uterine fibroids.

DR. R. T. GILMORE, Chicago, stated that hemorrhage as a



symptom of the beginning of malignancy in fibroid tumors of the uterus is of questionable value, as hemorrhages frequently occur in small fibroids in which malignant changes can not be demonstrated. Hemorrhage especially aggravated at the menstrual periods is almost a constant symptom of simple fibroma.

D. C. L. BONIFIELD, Cincinnati, said that two years ago he reported five cases of pregnancy complicated by fibroids which seriously endangered the lives of the patients. One patient required a Cesarean section and two others Porro operations in order to save their lives.

## THE AFTER-EFFECTS OF DIPHTHERIA ON THE HEART.\*

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It is well known that in diphtheria the heart muscle and the nerves which control it are the seat of certain changes which more or less seriously disturb its function, and the clinical signs of circulatory disturbance at the height of the disease and during convalescence have been carefully observed by many authorities. Much less is known, however, of the after-effects of the poison of diphtheria on the heart.

Veronese<sup>1</sup> says that lasting effects on the heart—except a moderate hypertrophy—do not follow diphtheria.

Romberg<sup>2</sup> has seen the mitral insufficiency present in convalescence in several cases last several months and then disappear.

Steffen<sup>3</sup> reports a case of mitral insufficiency following diphtheria which has been under observation for over four and a half years, and which he considers not a case of relative insufficiency, but of genuine valvular disease.

Baginsky<sup>4</sup> says that the disturbance of the heart in diphtheria even when not acutely threatening may be important by its persistence for months afterward. Occasionally a chronic myocarditis or mitral insufficiency may be left behind which does not indicate its presence by symptoms of failure of compensation until years later.

Schmaltz<sup>5</sup> has shown by a careful study of 81 cases of diphtheria with heart complications, that while diphtheritic myocarditis clears up in the majority of cases within a few months, in others it often persists after an attack of diphtheria for several years at least, and probably for life in some. The clinical picture is that of a mitral insufficiency with very few symptoms.

Jacobi<sup>6</sup> says that after severe epidemics of diphtheria cases of chronic heart diseases are frequent; some cases have arrhythmia and murmurs for life. The physical signs are irregularity of the heart, reduplication of sounds, especially the first sound, with extensive murmurs over the mitral or pulmonic areas and now and then increase of the transverse cardiac dullness. He states that this condition of the heart may be modified by a long period of absolute rest and proper hygiene, with the occasional use of cardiac stimulants.

Last year, in studying with Dr. H. H. Smith<sup>7</sup> the heart complications in nearly 1,000 cases of diphtheria treated at the south department of the Boston City Hospital, it was found that while severe heart complications are relatively infrequent, moderate disturbance of the heart is very common in diphtheria, as indicated by the great frequency of heart murmurs and a rapid or irregular pulse. It was found that these physical signs of a greater or less degree of cardiac disturbance were of long duration in many cases, making it desirable to watch the condition of the heart long after convalescence.

About one-third of these cases left the hospital after a stay of one or two months with a pulse rate of between 100 to 120 (not including babies), and in about one-third of the cases the heart was irregular at discharge.

In about three-fourths of the patients one or more murmurs were present at discharge from the hospital, which were considered in the majority of cases to be organic on account of their character, position and association with accentuation of the pulmonic second sound and irregular heart action. The condition is probably one of relative mitral insufficiency resulting from changes in the heart muscle.

The large number of children discharged from the hospital with a rather rapid and irregular pulse and cardiac murmurs is very striking, and contrasts strongly with the condition of children at the end of other acute infections, such as measles and scarlet fever, or the condition of adults at the end of such acute infections as typhoid, grip or pneumonia, and it seemed very desirable to keep a group of such children under observation until the heart had entirely regained its equilibrium or until the presence of permanent changes in the heart were evident.

This paper consists of a clinical study of 78 cases of diphtheria with heart complications after their discharge from the Boston City Hospital. The cases have been under observation from five months to a year to determine the frequency, importance and duration of subacute and chronic disease of the heart following diphtheria.

The cases were chosen from a large material as follows: 1,431 cases of diphtheria were treated at the south department of the Boston City Hospital in the last year with a mortality of 136 cases, or 9.57 per cent.<sup>8</sup> Thirty-three very severe cases survived their illness, and of this number 29 have been carefully followed since discharge from the hospital. These very severe cases, with few exceptions, had serious disturbances of the heart during their stay in the hospital, as indicated by gallop rhythm, marked irregularity, cardiac enlargement, murmurs, and rapid pulse; several had laryngeal stenosis requiring intubation; about one-fourth of the number had severe peripheral paralysis.

In addition, during the last quarter of the year 71 cases whose illness was of mild or of moderate severity left the hospital with well-marked signs of cardiac disturbance, such as enlargement, murmurs, or irregularity. Fifty-one of these patients have reported to me for observation several times a month; two cases of earlier date are also included in our series.

Of the 83 cases which have been carefully followed, 3 have been excluded on account of heart lesions which had developed before the attacks of diphtheria, and 2

\* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Veronese: Wiener Klinische Wochenschrift, 1893, vi, p. 305.

2. Romberg: Deutsches Arch. f. Klin. Med., 1892, vol. xlix, p. 413.

3. Steffen: Jahrb. f. Kinderheilk., 1898, xlviii, p. 285.

4. Baginsky: Nothnagels Specielle Pathologie und Therapie, vol. ii, 1899.

5. Schmaltz: Festschrift des. funfzigjahrigen Bestehens des. Stadtkrankenhauses zu. Dresden Friedrichstadt, 1899, p. 155.

6. Jacobi: Med. News, 1900, xxvi, p. 729.

7. White and Smith: Boston Med. & Surg. Jour., 1904, cl, p. 433.

8. If cases dying within twenty-four hours of their admission to the hospital are excluded, the mortality is 6.75 per cent.



cases are not considered because the time of observation has been too short.

The 78 cases included in this paper consist of those in which there was no evidence of previous heart disease, and in which either the cardiac disturbance due to diphtheria has entirely cleared up or has been under observation for at least five months.

The patients' ages were as follows: None less than 1 year; 20 from 1 to 5; 33 from 5 to 10; 17 from 10 to 16; and 8 adults.

The sexes were about equally divided. Eight cases were mild, 42 moderately severe and 28 severe.

Most of the cases had murmurs, with more or less cardiac enlargement; about 20 were followed chiefly for other reasons, 5 because of persistent rapid heart action, 6 because of persistent irregularity, 4 because of early cardiac enlargement out of proportion to the other signs; also various severe cases without cardiac signs or symptoms were followed to see if any would develop later.

As shown by last year's paper, about 90 per cent. of diphtheria patients have some cardiac disturbance during their illness indicated by the development of murmurs, etc., but in one-quarter to one-half of the cases it is mild in type and of short duration, clearing up soon after the actual infection has passed and before the patients leave the hospital. In all the present cases it was more persistent and was evident when the patients went home.

*Duration.*—Sixty-five cases have become entirely well during observation as far as we are able to judge by the ordinary methods of examination; we have divided them into moderate and severe groups, and the following table shows fairly accurately the duration of the heart trouble, indicating the number of cases which had entirely cleared up during the intervals stated. The time is calculated from the onset of the attack of diphtheria.

	4th to 5th week.	6th to 10th week.	11th to 12th week.	15th to 20th week.	20th to 25th week.	25th to 30th week.	35th week.
Moderate . . .	4	14	11	8	1		
Severe . . . . .		4	10	2	1	3	2
Total . . . . .	4	18	21	10	2	3	2

In five cases the duration was not accurately determined, and 13 cases with cardiac lesions are still under observation.

The history of the majority of these cases is one of gradual disappearance of the cardiac signs extending over an interval of from two to four months. On the other hand, 20 patients, or about one-quarter of the whole number, still showed signs of cardiac disturbance at the end of four months' time, and of this number only six cleared up within the following two or three months.

Of the 13 cases with cardiac lesions at the present time, 5 have been under observation for five months, 4 for six months, 2 for eight months and 2 for eleven months. In some of these cases the cardiac lesions may clear up within the next year, in others I believe they may prove permanent.

It is evident that as a rule the patients with the most intense cardiac disturbance, those who have shown in the hospital marked irregularity of the heart, with gallop rhythm or reduplication, are the slowest to recover, taking four to six months or more. This is not an invariable rule, however, as in one of the severest cases,

in a child of 4, the only sign after leaving the hospital was a rapid pulse, which became entirely normal in two and one-half months after the onset of his illness. Five other children under 8 years of age whose hearts were seriously affected cleared up within the same time. On the other hand, among the patients having a mild attack of diphtheria is one child of 6 in whom irregularity of the heart persisted for five months.

#### CLINICAL HISTORY.

Before describing the clinical history of these patients in detail I wish to say a few words about the examination and function of the child's heart in health and disease in order to avoid confusion.

Especially care is needed in examining the hearts of children and interpreting the results because in health the physical signs, such as the size and position of the heart and its rate and rhythm vary much with the age of the child and because in heart disease the signs and symptoms are not altogether like those in adults.

We must keep in mind the normal condition at different ages in order to fully appreciate pathologic changes. The pulse in early life is not only more frequent but is very much more variable than in adults. The pulse may even be irregular in healthy infants.

The heart is somewhat higher and more horizontal than in adults, therefore the apex beat is higher and further to the left. The apex is outside of the nipple line until the fourth year; more than one centimeter to the left, however, is pathological. From the fourth to the ninth year the apex is in or near the nipple line; after the thirteenth year it is invariably within the nipple line. From the end of the first year to the sixth year the relative cardiac dullness extends one or one and a half cm. to the left of the nipple line, and nearly to the parasternal line on the right side. From 6 to 12 years of age the left border is at or very near the nipple line and the right border between the sternal and parasternal lines. Any considerable deformity of the chest wall, such as is often found in rachitis, changes somewhat the heart's position in relation to it.

Functional murmurs are very much less common in children than in adults, and many competent observers deny their existence in the earlier years. The child's heart has greater powers of recuperation, and acquired heart disease runs a relatively favorable and mild course, the subjective symptoms are fewer, passive congestion is much less intense, and compensation is much more readily acquired.

I shall say very little about the condition of these patients during their stay at the hospital, having fully described the clinical history of a much larger number of cases in the paper already referred to. The signs of cardiac disturbance developed usually within the first week or two of the diphtheria and persisted during and after their discharge from the hospital; the milder cases remained in the wards about one month, cases of moderate severity from one to two months, and the severe cases, as a rule, from two to three months. Three cases stayed over three months.

#### AVERAGE TYPE.

We will consider first the average type. With few exceptions the general condition of these patients was good when they reported to me after leaving the hospital and symptoms of heart trouble were conspicuous by their absence. The discrepancy between symptoms and physical signs was often very striking. The children usually returned to school within a month after leaving the hospital, took a moderate amount of exercise, and



often felt entirely well. At most there was slight complaint of palpitation or short breath after active exercise.

It is not fair, however, to measure the character of the case by the symptoms or to conclude that the heart trouble is trifling because few symptoms appear. In spite of the scarcity of symptoms the presence of a heart lesion was plainly shown by a variety of physical signs.

One important physical sign was cardiac enlargement, usually accompanied by a systolic murmur at the mitral area and an accented pulmonic second sound. It was present in 31 cases, comprising most of those of long duration. It was not found in those which cleared up within a few weeks after their discharge from the hospital. It was undoubtedly due largely to dilation of the heart, and was usually much more apparent when the child reported a week or more after leaving the hospital than at the time of discharge, evidently showing that the child had been too active after leaving the quiet wards and the heart had not been equal to the strain.

The increase in the area of relative cardiac dullness was usually more to the left than right, and at its height the left border was one to two cm. and the right border one-half to one cm. further out than normal for the age. The apex beat was about one cm. further to the left than normal. This large cardiac area lessened gradually, month by month, till within normal limits, in the cases which recovered.

The most frequent sign was the presence of murmurs; they were found after discharge from the hospital in all but 17 of the cases. They were always systolic in time; were heard most frequently over the mitral area, less often over the whole precordia, were frequently transmitted to the axilla and usually accompanied by an accentuated pulmonic second sound. They were usually blowing in character, but were musical or alternately musical and blowing in about 10 per cent. of the cases. They were usually increased by muscular exertion.

In 35 cases the murmurs indicated by their position, character, transmission and association with cardiac enlargement and accented pulmonic second sound, the presence of a relative mitral insufficiency, or possibly in exceptional cases of a mitral endocarditis. In a few older children and adults, however, with normal, regular pulse and a heart of normal size, a systolic murmur was heard at the base of the heart, which was sometimes affected by respiration and change of position of the patient. These murmurs disappeared with improvement of the patient's general condition and were considered to be probably haemic murmurs. There seems little danger of confusing haemic with organic murmurs in this investigation, because of the rarity of haemic murmurs in children and the lack of anemia in these cases.

The pulse was usually a little more rapid than normal, and in 5 cases a rapid heart action was the only sign of importance. Irregularity of the pulse was frequently met with in the first few weeks after leaving the hospital. In eight cases the irregular action was the only striking sign of heart trouble.

It seemed wise to advise a quiet life in the presence of definite cardiac disturbance, but it was often difficult to control the patients, and a considerable number attended school and took moderate exercise while cardiac murmurs and irregularity were present, without any symptoms or perceptible bad results.

It is impossible to determine in individual cases the anatomical cause of these clinical signs, but it is doubtless a faulty closure of the mitral valves, due chiefly to dilatation of the valvular ring or imperfect function of the papillary muscles, and only in an occasional rare case to a mitral endocarditis.

Autopsies have shown the rarity of endocarditis in diphtheria, and the clinical fact that the majority of the cases apparently recover speaks against frequent injury to the valves.

The following condensed histories illustrate the course of the disease in cases of moderate severity. Cases 32, 49, 53, 70 and 77 are typical patients, with murmurs and cardiac enlargement of moderate duration. Case 42 is a type of the persistently rapid heart without other signs, and Case 7 of the persistently irregular heart.

CASE 7.—Girl, 6 years, mild diphtheria. First week: Pulse regular, 95, normal. Third week: Left hospital; pulse slightly irregular, 95; heart normal size, blowing systolic murmur over mitral area not transmitted; pulmonic second not accentuated; no symptoms. Remained at home one month; since then in school; slight irregularity persisted for nineteen weeks; absent at the end of twenty weeks.

CASE 32.—Girl, 6 years; moderately severe case. First week: Pulse irregular and rapid (100 to 160); heart normal size; soft systolic murmur at apex, not transmitted; pulmonic second accentuated. Eighth week: Left hospital; pulse regular, 115; heart same; slight debility after diphtheria; not sent to school. Twelfth to sixteenth week: Pulse regular, 100; heart dullness from  $2\frac{1}{2}$  em. outside of left nipple line to right parasternal line; no murmurs. No symptoms. Twenty-second week: Pulse regular, 86; heart normal size; no murmurs.

CASE 42.—Boy,  $11\frac{1}{2}$  years; moderate case of diphtheria, followed by palatal paralysis; in bed four weeks. Fourth week: Pulse regular, 100; heart normal. Eighth week: Left hospital; pulse regular, 110; heart normal in size without murmurs. Thirteenth week: Pulse became normal after being persistently rapid (110) and slightly irregular at times; heart normal.

CASE 49.—Girl, 5 years; moderate case. First week: Pulse regular, 95; heart normal. Third week: Left hospital; pulse regular, 95; heart normal size; soft systolic murmur over mitral and pulmonic areas, not transmitted; pulmonic second sound slightly accentuated. Fourth week: Slight paralysis of legs. Sixth week: Pulse regular, 80; heart dullness from  $2\frac{1}{2}$  em. outside of left nipple line to right parasternal line; apex beat  $\frac{1}{2}$  em. outside of nipple line in fourth interspace; musical systolic murmur over mitral area, transmitted to axilla and base; pulmonic second sound accentuated; child was found to become tired and pale after moderate exertion; symptoms disappeared with a few weeks' rest. Sixteenth week: Left border of the heart dullness was only 1 em. outside of the nipple line; the musical murmur persisted. Case still under observation.

CASE 53.—Girl, 12 years; moderately severe case. Second week: Pulse regular, 90; heart normal. Fourth week: Left hospital; pulse regular, 100; heart dullness from  $\frac{1}{2}$  em. outside of left nipple line to right sternal edge; soft systolic murmur loudest over mitral area; heard also over pulmonic area. Ninth week: Pulse regular, 96; heart dullness from 2 em. outside of left nipple line to 1 em. beyond right sternal edge; apex beat fifth space just outside of nipple line; murmur continued same. Fourteenth week: Pulse normal; heart normal in size; soft systolic murmur was heard at base only after exercise and with the patient lying down.

CASE 70.—Girl, 10 years; moderate severity. Second week: Slight laryngeal stenosis, not intubed; pulse regular, 100; heart normal size, blowing systolic murmur at apex, not transmitted. Eighth week: Left hospital; pulse regular, 92; heart normal size; blowing systolic murmur over mitral and pulmonic areas, slightly transmitted. Tenth week: Pulse 100, irregular on exertion; heart dullness from 2 em. outside of



left nipple line to 1 cm. beyond right sternal edge; apex beat fifth space just outside nipple line; murmurs continue same; pulmonic second sound accentuated. Sixteenth week: Pulse same; heart same except that murmur at base of heart has disappeared; no symptoms; case still under observation.

CASE 77.—Woman, 26 years; moderately severe case; in bed ten days. First week: Pulse regular, 110; heart normal size; blowing systolic murmur over entire precordia, loudest at apex, transmitted slightly to axilla; pulmonic second accentuated. Second week: Left hospital; pulse regular, 108; heart normal size; systolic murmur at apex, slightly transmitted. Third week: Pulse regular, 100; heart dullness from 1 cm. outside of left nipple line to 1 cm. beyond right sternal edge; apex beat fifth space in nipple line; murmur same; no symptoms save slight debility. Fifth week: Pulse regular, 80; heart normal size; no murmurs.

#### SEVERE TYPE.

The severe cases were usually kept in bed from 4 to 8 weeks, and did not leave the hospital until the end of the second or third month. The symptoms of heart trouble were more evident and were striking in occasional instances. Palpitation was frequently complained of, in others the mother noticed weakness, pallor and faintness after exertion; one or two older children complained of cardiac distress.

These symptoms were most pronounced in the first few months after leaving the hospital and gradually disappeared. In several cases the attacks of palpitation and rapid pulse after slight exertion persisted for more than six months. Where these symptoms were at all prominent a very quiet life was advised with intervals of rest in bed. There was no cyanosis or edema.

As in the milder cases cardiac enlargement was present in most of the cases of long duration, it was not common while the patients were in the hospital, but showed itself after their return home, and was undoubtedly due to cardiac dilatation from over exertion. The increase in the area of cardiac dullness was similar to that found in the milder cases, but was usually much more persistent. The murmurs were similar in character; the first sound at the apex was normal or slightly enfeebled, late reduplication of the first sound was occasionally met with and in one case has persisted for ten months.

The pulse was usually considerably more rapid than normal and was easily increased from 30 to 40 beats by slight exertion.

Irregularity of the pulse was frequently met with, and in many instances persisted for months; this was also increased by any exertion.

The following cases which have been under observation for from six months to a year illustrate the course of the disease in severe infections. Cases 17 and 33 are typical ones of moderately long duration, one having cleared up at the end of nine months and one being still under observation. Case 48 is an example of persistent reduplication of the first sound with enlargement, Cases 9 and 51 of persistently rapid hearts, and Case 13 of a persistent irregularity of the heart.

CASE 9.—Boy, 14 years; very severe case; in bed five weeks. First week: Pulse persistently irregular and rapid, 120; heart dullness from 1 cm. outside left nipple line to right sternal edge; no murmur. Eighth week: Left hospital; pulse slightly irregular, 110; heart dullness from 1 cm. outside left nipple line to right sternal edge; no murmur. Heart remained rapid for two months after discharge; only symptom dyspnea after active exertion; did not go to school for five months. Twenty-third week: Pulse regular, 100, not especially increased on exertion; heart normal size; no murmur.

CASE 13.—Girl, 7 years; very severe case; in bed four weeks. Second week: Pulse marked irregularity, 100 to 130;

heart dullness from 1½ cm. beyond left nipple line to right parasternal line; no murmurs. Sixth week: Left hospital; no symptoms except those of moderate debility; pulse irregular, 100; heart normal size; no murmurs. Tenth week: Heart irregularity has gradually disappeared.

CASE 17.—Girl 7, years; very severe case; temperature 101 to 103 for three weeks; in bed seven weeks; occasional attacks of blueness and pallor. Second week: Pulse irregular, 120 to 140; heart dullness from 1 cm. outside left nipple to right sternal edge; no murmurs; reduplication of first sound. Ninth week: Left hospital; paralysis of legs one month; pulse irregular, 120; heart normal size; no murmurs. Eighteenth week: Pulse irregular, 84; became more irregular and 108 after very slight exertion; heart dullness from 1½ cm. outside left nipple line to right costal edge; first sound weak; second aortic sharper than second pulmonic sound; systolic murmur at base and apex, loudest at base, slightly transmitted to axilla; no symptoms. Twenty-sixth week: Pulse weak, regular, 80 to 100; heart dullness from 1 cm. outside left nipple line to right costal edge; apex just outside nipple line; murmurs same; heart action stronger; no cardiac symptoms. Forty-second week: Pulse regular, 88; heart dullness from 1½ cm. outside left nipple line to right parasternal line; apex 1 cm. outside nipple line; systolic murmur at apex and base, loudest at apex; slightly transmitted to axilla, increased by exertion; pulmonic second sound accentuated; no symptoms; general condition good; case still under observation.

CASE 33.—Boy, 5 years; very severe case; in bed seven weeks. Second week: Pulse irregular, 110 to 130; heart normal size, no murmur; reduplication of first sound and gallop rhythm. Thirteenth week: Left hospital; paralysis of palate and legs; pulse regular, 105; heart normal size, slightly musical systolic murmur at apex slightly transmitted; pulmonic second accentuated. Thirty-third week: Pulse regular, 80; heart became slightly enlarged; now normal size; musical systolic murmur at apex slightly transmitted; pulmonic second accentuated; no symptoms. Thirty-fifth week: Pulse regular, 80; heart normal size; no murmurs.

CASE 48.—Boy, 7 years; very severe case; in bed seven weeks. First week: Pulse irregular, 120; heart normal size; persistent reduplication of first sound; blowing systolic murmur at apex, not transmitted. Eighth week: Left hospital; pulse irregular, 100; heart normal size; occasional marked reduplication of first sound; systolic murmur at apex not transmitted; pulmonic second slightly accentuated. Thirty-seventh week: Murmurs have slowly disappeared; heart has notably enlarged; no cardiac symptoms; pulse regular, 80; heart dullness from 3 cm. outside left nipple line to right parasternal line; constant reduplication of first sound at apex; entered school six weeks after leaving hospital; case still under observation.

CASE 51.—Man, 28 years; moderately severe case. First week: Pulse regular, 80; heart normal size; soft systolic murmur at apex and base, loudest at apex; pulmonic second sound accentuated. Second week: Pulse irregular and rapid (120), after very slight exertion; heart same. Fourth week: Syncope after slight exertion; pulse irregular and intermittent; occasional attacks of violent palpitation with cold sweat; heart normal size, no murmurs; kept in bed for one month. Fourteenth week: Heart still rapid, 110 to 120, after slight exertion; otherwise normal. Twentieth week: General condition good; returned to work. One year: For past six months heart becomes rapid, 120, after even moderate exertion; this condition gradually improving; no other cardiac symptoms or signs.

#### PROGNOSIS.

We find that in a large number of cases the cardiac disturbance after diphtheria soon clears up, but that in a considerable number it lasts a long time. In thirteen cases, or about 17 per cent. of the number studied, the heart trouble is now present after the end of five or six months, the longest cases now under observation being two for eight months and two for eleven months.

We have seen several cases in which the cardiac disturbance has lasted seven and nine months entirely clear



up. Schmaltz has seen this happen in quite a number of cases after one or even two years' duration, which shows that it is not necessary to give up hope of recovery in individual long cases.

We have seen that the duration of the heart trouble is usually in proportion to the severity of the original illness, but this is not always the case. Occasionally a quick recovery follows a severe illness, and sometimes disturbance of the heart persists for many months after a mild diphtheria.

Schmaltz cites a few cases in which heart disease developed after normal convalescence and first showed itself one or two months after the attack of diphtheria; we have not found any such cases of late development.

The fact that most children have few or any heart symptoms after diphtheria must not mislead us as to its real effect on the heart. In childhood the heart has great reserve force and it is capable of doing good work even under very unfavorable circumstances.

#### TREATMENT.

The after-treatment consists in a sufficient period of rest in bed, and then in watching the effect of mild exercise on the heart, for several months at least, and grading it to meet individual requirements. Tonic drugs, such as strychnia and iron, are occasionally useful.

How rigidly the rest cure must be enforced depends entirely on the individual case. We found last year in our study of cases in the hospital that it was not necessary to keep all patients in bed who had cardiac murmurs and a pulse which was slightly irregular and somewhat increased in rate. After four or five weeks of rest in bed the cases of moderate severity experienced no ill effects from being allowed to sit up for short and progressively longer intervals if the heart was carefully watched; frequently the heart's action seemed to be improved by this change.

We have also seen that many mild cases after leaving the hospital with murmurs and slight cardiac enlargement and irregularity became entirely well in a month or two without special care. I believe it would be a mistake to invariably keep these children at home and put them to bed, but over exertion should be carefully guarded against.

I have no doubt that much of the cardiac dilatation which was often seen in the first few weeks after leaving the hospital could have been avoided by more intelligent restraint of these children at home. Even the milder cases should be carefully watched and whatever causes shortness of breath, pallor or fatigue, or affects the heart unfavorably by notably increasing the pulse rate, causing irregularity or any increase in the cardiac area should at once be stopped, whether it consists of running, walking, playing or even in simply being out of bed. The heart must be given abundant opportunity to rest and recover its normal function. This is the only conservative treatment and the only way to avoid permanent damage to the heart in some instances.

All the severe cases require rest in bed and careful watching of the heart for months or years afterward.

#### CONCLUSION.

1. The cardiac disturbance after diphtheria usually presents the picture of a mitral insufficiency with irregular heart action and few symptoms. Occasional cases have rapid pulse or cardiac irregularity without any other signs.

2. Moderate disturbance of the heart is very common after diphtheria and in a large number of cases

persists from two to six months after the original illness.

3. In many cases the cardiac lesion does not clear up in the first half year, but lasts much longer; some ultimately recover; others probably do not. The duration of the heart trouble is usually in proportion to the severity of the original illness.

4. The fact that children often have few heart symptoms after diphtheria must not mislead us as to the importance of the injury to the heart.

5. Cardiac disturbance of long duration following diphtheria may be entirely recovered from. It is not necessary to give up hope of recovery in individual long cases.

6. The treatment of this condition consists in a sufficient period of rest in bed, and then in watching the effects of mild exercise on the heart for several months at least and grading it to meet individual requirements.

This paper is called a preliminary report because it is very desirable to keep those patients who still have heart lesions under observation for several years, and every effort will be made to do this.

In closing, I wish to thank Dr. J. H. McCullum, medical director of the south department of the Boston City Hospital, and Dr. A. E. Steele, assistant resident physician, for their hearty co-operation; also Dr. J. L. Morse and Dr. H. H. Smith for notes on two cases.

#### DISCUSSION.

DR. G. R. CAMPBELL, Augusta, Maine, declared that the thing which impressed him strongly was the necessity of rest after diphtheria as a preventative treatment for the after effects on the heart. Many physicians are apt to consider their diphtheria patients entirely recovered as soon as the throat is cleared and the patient able to sit up. The action of the heart after moderate exercise, simply the rapid action of the heart, should be a warning that the heart muscle has not resumed its normal tone. If these patients were put to bed as soon as rapid action after moderate exercise is noted Dr. Campbell thinks physicians would be enabled to prevent many of the dangerous after effects of this disease on the heart.

DR. H. M. McCLANAHAN, Omaha, Neb., said that since the introduction of antitoxin the number of heart lesions following diphtheria has seemed to increase. Among the laity he is frequently asked whether there is any danger in using the antitoxin; he would say not, and yet there is a feeling fostered by some members of the profession that antitoxin is a dangerous remedy. It is not understood that diphtheria is dangerous to the heart. Antitoxin is an excellent remedy but physicians can not guarantee that it will undo the injury done by the toxins of diphtheria. The time of its administration is an important element. Dr. McClanahan has found that within the last two years the prejudice has grown because of the statements that it is injurious to the heart. After the throat has cleared up the patient is too often considered practically well; this is not true. The danger to the heart should be watched and great care taken to keep the child quiet in bed until the pulse has resumed its normal rate. The child should then be carefully watched to note the effect exercise has on the heart muscles.

DR. W. J. BUTLER, Chicago, said that the deleterious effects of diphtheria on the heart are to a considerable extent in proportion to the delay in administering antitoxin. Patients receiving antitoxin within the first forty-eight hours seldom show any after effects on the heart. Cases in which it is administered at a later period after the diphtheria has exerted its full effect on the heart may show very positive disturbances that may be of a fatal character. The value of the systolic murmur as indicative of mitral insufficiency, he thinks is slightly overrated in these cases. In almost any of the severe acute infections there may be systolic murmurs over the heart without any organic lesion, either relative or acquired; in other words, accidental murmurs. A heart so affected as to



permit of the occurrence of a relative insufficiency will be accompanied with the most profound symptoms of incom-pensation. The systolic murmur *per se*, whether heard at the apex or base, can hardly be regarded as of positive diagnostic value. In some cases in which the heart is quite widely dilated and one would have every reason to suspect a mitral insufficiency, there will be absolutely no murmur. On the other hand, a heart not enlarged may give a systolic murmur over the apex or base; likewise, an accentuated second sound. Pulse irregularity, both in quality rhythm and rate, and dilata-tion of heart, are certainly the most important physical points in determining the deleterious effects of the diphtheria toxins on the heart.

DR. ARTHUR W. FAIRBANKS, Boston, thinks there is no doubt but that the cases of heart lesion following diphtheria have seemed to increase since the use of antitoxin, but he believes the chief factor in the increase is the fact that so many patients who had had a very severe type of diphtheria are now living. Formerly such patients died during the diph-theria. That the children get up too soon is a very impor-tant point; the fault lies not with the parent alone, but with the family physician. Dr. Fairbanks has frequently seen children up and out of bed in a couple of days after the diphtheria. The clearing of the throat has been taken as a sign by the parents that the child should be allowed to get up, and the family physician is only too ready to yield to the importunity of the parent. Fortunately, through the quaran-tine laws, some of these children are kept in a room for a good many days after they are apparently well. This is a blessing to the children. Dr. Fairbanks recently saw a child seven months after discharge from the hospital. The child was 10 years old and she had a pure dilatation of the heart with marked subjective signs of muscular incompetency. She was put to bed and the heart came down and there was then no souffle, showing that the heart dilatation was not due to an organic lesion, but to myocarditis. The child was seen two weeks after getting up and was found to be in good condi-tion, and there have been no subjective symptoms since. He thinks the occurrence of the souffle after the fever as a rule is an indication of mitral insufficiency. During the acute stage of the diphtheria he does not think it can be so inter-preted. In many cases he thinks this insufficiency is only a relative one. In this country physicians have not considered sufficiently the method of Sehoft for the treatment of heart disease. Dr. Fairbanks believes that the baths, the resisted muscular movements and massage are of value in these cases of muscular insufficiency of the heart.

DR. C. F. WAHRER, Fort Madison, Iowa, stated that when patients of this kind are first seen inquiries should be made regarding the previous diseases the child has had. The heart lesion is often found to be secondary to some other process. He sug-gested that at the next meeting some one read a paper on heart diseases of primary and secondary character. He mentioned one case showing the importance of rest after diphtheria. Four children in a family had diphtheria. The first was apparently making a good recovery, and he instructed the parents not to allow this child to make any exertion; that she needed to be at rest, kept in a horizontal position. They did this for about ten days. He called occasionally at the house to see the other chil-dren. One morning, while the parents were at breakfast, the child was lying in bed when she noticed that micturition started. She called to her parents in a startled tone, and when they reached her she was sitting on the commode, dead. This case was undoubtedly one of muscular failure, dependent on degeneration changes from the diphtheretic intoxication. Dr. Wahrer emphasized the point brought out by Dr. Fairbanks relative to the apparent increase of heart disease after the use of antitoxin. That increase is only apparent, and it is similar to the apparent increase in the number of surgical operations.

DR. H. E. GARRISON, Dixon, Ill., said that nothing has been said concerning the diet in diphtheria. In one case which she had under observation before antitoxin came into use she kept the child perfectly quiet in bed. The throat had cleared up and the child seemed to be perfectly well. The grandmother con-cluded that she needed something to eat and she gave her hard-boiled eggs. The next day when Dr. Garrison saw her the pulse

was very rapid and that night she died. Dr. Garrison thinks that it is necessary to emphasize the kind of diet needed and to keep these patients on a light diet for several days after the sub-sidence of the disease.

DR. KATE LINDSAY, Boulder, Colo., emphasized the impor-tance of Dr. Garrison's remarks concerning the necessity of care-ful dietary. Dr. Lindsay had two cases which illustrate the subject. One was a case of heart lesion before the use of anti-toxin and one after. Physicians emphasize the importance of physical rest and make that all-important in all cases of heart lesions. A child may be kept physically still, and yet if sub-jected to nervous excitement the results may be quite as bad. The question in Dr. Wahrer's case might be raised whether the child died of nervous shock or as the result of the muscular exertion. The treatment in any disease in which the heart is injured is a broad subject and as yet has not been sufficiently studied.

DR. WILLIAM J. BUTLER, Chicago, does not believe that physicians can accept the presence of a systolic murmur fol-lowing diphtheria as an evidence of cardiac disease. These cases sometimes continue for months with a systolic murmur, which is apparently considered a sign of relative insufficiency. Mitral insufficiency of relative character presupposes a considerable dilatation of the heart. A systolic murmur alone does not in-dicate relative insufficiency. It is a common thing to find these accidental murmurs in children who had not previously had an acute infection of any kind. He emphasized the fact that the presence of a systolic murmur *per se* following diphtheria can not be accepted as an evidence of cardiac disease unless there is a very marked dilatation of the heart, especially of the left ventricle.

DR. JOHN LOVETT MORSE, Boston, did not agree with Dr. White that functional murmurs in the heart were rare in child-hood. Dr. Morse thinks that they are very common in child-hood.

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## Special Article

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### IMMUNITY.

#### CHAPTER XXVIII.

##### TUBERCULOSIS AND PSEUDOTUBERCULOSIS IN ANIMALS.

Certain differences between the bacilli of human and bovine tuberculosis were mentioned in the preceding chapter. In eat-tle the disease shows a characteristic ten-deney to remain localized in one organ or group of organs over a long period. It is a nodular disease as in man, but differs from human tuberculosis in that the nodules often grow to large size, may be imbedded in and sharply differentiated from sur-rounding healthy tissue, and not infrequently involve serous surfaces, forming large masses of firm sessile or pedunculated tumors. The nodules frequently are fibrous from the begin-ning, undergo early and extensive calcification and rarely soften. We are not to understand, however, that miliary tuberculosis does not occur in cattle. Although the process in the lungs is usually of a fibrous and large nodular nature, rapid dissemination with formation of many miliary tubercles may cause the picture of acute tuberculous consolidation in a certain number of cases. According to the statistics of Oster-tag, based on 43,000 cases of bovine tuberculosis, localization is as follows: Lungs, 75 per cent.; pleura and peritoneum, 50 per cent.; peribronchial glands, 60 per cent.; spleen, 40 per cent. In more or less generalized cases the lungs are involved in 100 per cent. of the cases; serous membranes, 90 per cent.; liver, 85 per cent.; digestive tract, 60 per cent.; spleen, 50 per cent.; kidneys, 30 per cent.; mouth cavity, 5 per cent. In cows the uterus, in general infection, is involved in 65 per cent. of the cases, the udders in from 5 to 10 per cent., and the ovaries in 5 per cent. It seems that the lungs are the most common infection atrium, and transmission probably is accom-plished chiefly through the secretions of the respiratory pas-sages. In the udders the process may at first be one of miliary tuberculosis, but a large amount of fibrous tissue forms in time, many acini are transformed into retention



cysts, in which tubercle bacilli, free or intracellular, may be present in large numbers.

Aside from anatomic changes and clinical symptoms, diagnosis depends on the tuberculin reaction, and, in relation to the udder, the demonstration of bacilli in the milk by staining methods or inoculation into guinea-pigs.

The tuberculin reaction in cattle is similar to that in man and is subject to the same general limitations, but is used extensively with the most satisfactory results. The complete elimination of tuberculosis from herds of cattle is possible, by using tuberculin as a diagnostic test, the slaughtering of infected animals, and the disinfection of stalls.

Tuberculosis among sheep and goats is rare. It occurs occasionally in the horse, hog and dog, and with more frequency in the cat.

A form of tuberculosis is very common in the chicken, and attacks also the pheasant, dove and turkey. The duck and goose are exempt from it. Although the

**Avian Tuberculosis.** organism resembles that of human tuberculosis in size, staining properties and other general characteristics, differentiation is accom-

plished by means of the following points: 1. The avian bacillus shows a greater tendency to pleomorphism as shown by club-shaped forms, unstained vacuoles, "spore-like" bodies, and branching threads. 2. It has a greater affinity for aqueous anilin dyes. 3. Growth takes place in artificial media more rapidly and on solid surfaces is characterized by its moist appearance and mucus-like consistence in contrast to the dry, warty, brittle growth of the human bacillus. 4. The optimum temperature for growth (from 40 to 45 C.) is several degrees higher than that of the mammalian organism. 5. Its pathogenicity for guinea-pigs is less and for rabbits greater than that of the human and bovine bacilli. Their difference in pathogenicity is further shown by the difficulty which is met in trying to infect fowls with the human bacillus. By varying the conditions of cultivation and by animal passage the two may be made to resemble each other very closely, although the permanent transformation of the human into the avian, or vice versa, has not been accomplished.

The disease attacks especially the intestines, mesentery and liver, in which are found hard, yellowish-white nodules, often rich in lime salts, and varying in size from that of a pea to that of a walnut. These conditions suggest the intestines as the infection atrium. The foci are rich in bacilli and histologically show the essential characteristics of tuberculosis.

"*Bacillus tuberculosis piscium*" is the name given to an acid-fast organism resembling the tubercle bacillus which was cultivated from an inflammatory tumor in the abdominal wall of a carp. It grows well at low temperature, the optimum being 25 C., is found in large numbers in the lesions

**Tuberculosis of Fish, Etc.** within giant cells, and is distinctly pathogenic for frogs. Certain authors state that the human bacillus when inoculated into the frog undergoes changes in its cultural and pathogenic characteristics, eventually resembling the organism cultivated from fish.

Similar bacilli have been cultivated from a form of tuberculosis in the turtle (Friedman), and *Blindschleiche*—blind worm (Moeller).

Certain other organisms of low pathogenicity resemble the tubercle bacillus in their acid-fast properties, their ability to grow in the form of branching threads, and to produce tubercular or nodular infections of a local nature in animals. They may be placed in a group which includes the tubercle bacillus.

**Other Related Organisms.** C. Fraenkel, also Neufel, recognize in smegma two acid-fast bacilli, calling one "tuberculoid" because of its morphologic resemblance to the tubercle bacillus, and the other "diphtheroid" since it shows the pleomorphism of the diphtheria bacillus. One of these organisms may be identical with the "syphilis bacillus" (?) of Lustgarten. Smegma bacilli are most numerous beneath the prepuce in man and about the clitoris and vulva in women. Their chief significance lies in the danger that they may be mistaken for tubercle bacilli in suspected cases of genitourinary tuberculosis. Smegma bacilli

may readily enter the urethra in women and be carried into the bladder during catheterization or cystoscopic examination. In man the danger of bacteriologic error may be eliminated largely by cleansing the glans and carefully irrigating the urethra. Urine which is then passed is not likely to contain smegma bacilli (Young and Churchman).

"Milk bacilli" and "butter bacilli" are acid-fast organisms resembling the tubercle bacillus morphologically. In injecting milk into guinea-pigs as a test for tuberculous milk, Petri occasionally noted, as a consequence, a thick membranous growth which encased the liver and spleen and bound the coils of intestines together. The omentum was thickened, and this structure and the mesenteric lymph glands contained nodules. In pure culture the organism is pathogenic for guinea-pigs only when given in large doses, and may kill the animals in several weeks with the anatomic changes noted above. Its virulence is increased by the simultaneous injection of butter. It is not pathogenic for man (Herbert).

Moeller cultivated organisms resembling the tubercle bacillus from timothy (*timothy bacillus*), from manure, and a third (*grass bacillus II*) from the dust of a manger. The last is marked by great pleomorphism, thread formation and motility in young cultures.

Although some of the organisms described above are often called pseudotubercle bacilli, the term pseudotuberculosis is now applied somewhat specifically to a nodular disease occurring in rats, mice and sheep (and perhaps in other domesticated animals), and in which organisms differing from the

**Pseudo-tuberculosis in Animals.** tubercle bacillus in staining and culture properties, morphology and pathogenicity, are found. The clinical course and anatomic changes are similar in the three animals mentioned, although the organisms are different. The lymph glands near the infection atrium become enlarged chiefly by a cellular infiltrate rather than extensive proliferation of fibrous tissue. The nodules undergo a soft caseation very early and rarely show calcification. The infection finds its way to other sets of lymph glands and may become more or less generalized with the formation of smaller and larger sized nodules.

Pseudotuberculosis of rodents, occurring spontaneously in rats, guinea-pigs, rabbits, cats and also chickens, is caused by an organism of considerable pathogenicity, and may occur in epidemic form in laboratory animals. Intraperitoneal inoculations in guinea-pigs are fatal in a few days. Spontaneous infection takes place through the intestinal tract, and the regional organs show the principal changes. The liver and spleen contain many nodules which may be as large as a hazelnut, and which are frequently caseated in the center. The organism is called *Bacillus pseudotuberculosis rodentium* or *Streptobacillus pseudotuberculosis dor*.

The disease in mice is caused by a diphtheria-like organism called *Bacillus pseudotuberculosis murium* and is pathogenic especially for the gray mouse.

A similar infection in sheep is of more importance and occurs with some frequency. It is called pseudotuberculosis ovis, and the bacillus has a corresponding name. The organism is supposed to gain entrance through wounds in the feet and legs, following which the adjacent lymph glands become involved, and the infection may be transferred to the lungs and other organs through the lymphatic circulation. The lesions are nodular, of varying size, usually surrounded by a fibrous capsule, and are either semipurulent or undergo early caseation. They may be found in all the visceral organs.

An organism resembling that cultivated from the sheep has occasionally been found in nodular conditions in cattle.

The leprosy bacillus and the bacillus of Lustgarten, organisms which resemble the tubercle bacillus, will be considered later.

**Falling of Hair After Erysipelas.**—After cutting the hair short, Shoemaker uses the galvanic alternated with the faradic current every day or two, and singes the hair ends every two or three weeks. He also applies equal parts of oil of ergot and fluid mercuric oleate.—*Denver Med. Times*.



# THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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## THE NATURE OF PUERPERAL ECLAMPSIA.

Since Jürgens in 1884 described the peculiar changes in the liver in puerperal eclampsia, a large number of carefully studied cases has accumulated, so that it may be said that the pathologic anatomy of the disease now is fairly well understood. Perhaps the most active observer in this field has been Schmorl in Dresden, who has studied no less than 73 cases.

Harbitz, who recently reviewed all this work, points out that the most important, essential, anatomic changes in eclampsia concern the blood, in which there is more or less laking of the corpuscles and coagulation with the formation of thrombi and emboli; associated with and partly, at least, dependent on these alterations are hemorrhages, infarctions and necroses. The liver of eclampsia, with the congestion, infarctions and degenerations, presents a picture that is hardly ever seen in any other diseased condition. It is important to note that acute or chronic nephritis, as a rule, is absent; parenchymatous and fatty changes predominate in the kidneys, which are large, soft and pale yellowish in color. The central nervous system commonly shows hemorrhagic infiltrations, usually microscopic, into the membranes as well as into the nerve substance. Inflammations are not unusual in eclampsia, particularly in the lungs, but these processes are now regarded as secondary and accidental rather than essential. The embolism of parenchymatous and other cells, especially placental, has attracted much notice.

This incomplete summary of the morphologic changes in eclampsia serves to outline the only basis as yet available for deductions as to the real nature of the pathogenesis of the disease.

Many of the older theories have been abandoned definitely, e. g., the infectious, because bacteriologic studies have not given uniform positive results, and the mechanical, which traced the eclampsia to ureteral obstruction, because the autopsies have failed to show any such obstruction. It is also clear that eclampsia can not be identified with uremia; for uremia may occur without the changes characteristic of eclampsia, and in eclampsia the renal changes are not constant and often not at all well marked. These theories all traced eclampsia to morbid conditions in the mother.

We have also a group of theories that conceive eclampsia as the outcome of an autointoxication dependent on pregnancy. Broadly speaking, this theory at present

enjoys widest support, and it must be said that it is quite in harmony with the anatomic changes which are easily explainable as the result of the action of some toxic substance or substances of the nature perhaps of a cytolyisin. The origin of the supposed toxic bodies has been referred to disturbances in the metabolism of the mother, and eclampsia regarded as analogous with other conditions peculiar to pregnancy, such as vomiting, chorea and certain psychic conditions. The various anatomic changes in pregnancy (pigmentary abnormalities, the formation of osteophytes, etc.) have been put in the same category so far as the cause is concerned. The poisonous substances have been supposed to be derivatives of protein decomposition, but as yet no one has succeeded in actually demonstrating the presence of any such substances in the blood or urine.

Other investigators trace the eclamptic intoxication to the fetus, and regard it as due to the absorption by the mother of fetal metabolic products. At present the fetal theory of eclampsia has many supporters, especially among clinicians. The theory is supported by the facts that eclampsia most frequently occurs in primiparæ and almost always toward the end of pregnancy, as well as by the favorable influence that birth exerts on the disease.

According to a third theory, the intoxication is placental in origin. This theory was advanced by Schmorl, who claimed that eclampsia is due to coagulative substances produced in the placenta. This theory receives some support from the presence of placental cells and chorionic villi in the blood of eclamptics (but these are present also to some extent in the blood in pregnancy uncomplicated by eclampsia), and by the multiple thromboses and embolism that constitute such a prominent feature in the pathologic anatomy of eclampsia. This theory is now being subjected to experimental testing, but as yet it is too early to formulate any definite conclusion as to its stability. It is interesting to note, however, that the placental theory of eclampsia seems to point the way to rational therapy.

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## THE MORBID ANATOMY OF ASTHENIC BULBAR PARALYSIS.

Under the designation of asthenic bulbar paralysis or myasthenia gravis, pseudoparalytica has been described a condition characterized by weakness and undue readiness of fatigue in certain voluntary muscles, particularly those controlled by the bulbar nerves. The electric irritability of the affected muscles also is quickly exhausted. Sensibility, nutrition and reflex activity remain unaffected. In fatal cases, variable and inconstant changes have been found in the central and peripheral nervous systems and in the absence of definite knowledge the disorder has been considered of toxic origin. More recently, however, hyperplastic and neoplastic alterations have been described in the thymus gland in conjunction with deposits of lymphoid cells in the skeletal muscles.



At a recent meeting of the Pathological Society of London, Dr. E. Farquhar Buzzard<sup>1</sup> reported the results of postmortem examination in five cases of asthenic bulbar palsy, with a demonstration of specimens illustrative of the morbid anatomy. In three of the cases no marked changes were apparent to the naked eye. In one case the thymus gland was enlarged, weighing 41 grams and presenting microscopically the appearance of simple hypertrophy. In another case the anterior mediastinum was occupied by a large mass in the position of the thymus gland. The upper part of the mass resembled a new growth, while the lower part consisted of a multilocular cyst. Sections of the former exhibited strands of connective tissue, between which were large masses of round cells and few definite concentric corpuscles. The wall of the cystic portion contained besides occasional Hassall bodies. Nothing abnormal was discovered in the remains of the thymus gland from the other three cases. The central and peripheral nervous systems were carefully examined in all the cases, but no constant or important changes were detected. In all, however, small foci of cells resembling lymphocytes were found scattered irregularly between the cells of the viscera and in a number of muscles, with at times a small empty capillary vessel lined by a single layer of endothelium in close proximity. The appearances were suggestive of the escape of lymphocytes from the vessel and the term "lymphorrhage" is employed to describe the condition. In some instances gland cells adjacent to the cellular deposits had undergone degeneration or destruction. Some of the muscular fibers in the affected muscles were swollen and rounded, hyaline and granular in appearance and stained feebly.

Whether any significance is to be attached to the changes in the thymus gland at times observed in connection with asthenic bulbar paralysis can not as yet be determined. Comparable alterations have been found also in connection with another disorder of the muscles, namely, progressive muscular dystrophy. In cases in which they are not apparent, it is possible that functional disturbance may merely be unattended with structural alteration. Further, it may be that the changes described in the muscles may be secondary to the abnormalities on the part of the thymus gland. We have here at least a basis for more extended observation.

#### ARE FUSIFORM BACILLI AND THE ASSOCIATED SPIRILLA TRYPANOSOMES?

Considerable interest has arisen lately over the relation of various inflammatory and necrotic processes and fusiform bacilli, associated, as a rule, with long spirilla. Many articles have appeared on this subject in foreign literature, but it is only within the last three years that cases have been reported in America. The organisms have been found, usually together, in ulceromembranous angina (Vincent's) and stomatitis, pyorrhea alveo-

laris, noma, hospital gangrene, appendicitis, gangrenous ulcers of the penis, bronchiectasis, periostitis, abscess of the leg and cerebral abscess. Although it has not been absolutely proved that these organisms are the exciting agents in these pathologic lesions, it seems probable that they are. The bacilli have been isolated recently in pure culture. The spirilla have been cultivated, but only in mixed cultures. By further study of these organisms their relation to these various lesions may be settled.

Wright<sup>1</sup> has advanced the theory that these organisms are a stage in the life history of a trypanosome. He considers that the fusiform bacillus is not a bacillus, on account of its length. He points out that its vacuolation, its staining action with Leishman (blue with red chromatin bodies), its eel-like, undulatory movement, are highly suggestive of a protozoic origin, in spite of the absence of flagella and an undulatory membrane. He mentions that the plaques found in the chronic conditions of the mouth, in which the bacilli are found, are suggestive of the plaques which are a characteristic feature in dourine, a form of trypanosome invasion in horses. He also considers the anemia of pyorrhea alveolaris indicative of a blood infection.

Mackie<sup>2</sup> has recently brought forth some evidence to prove this trypanosome theory. He considers that the spirilla, fusiform bacilli, sickle-shaped bodies and ribbon-like bodies are all different stages of the same parasite. In carrying out some observations on changes undergone in trypanosomes under unfavorable conditions, he noticed the undulatory membrane and flagella disappear, the body of the animal becoming longer, thinner and more ribbon-shaped and the comma forms seeming to become quiescent. The protoplasm was seen to become granular. He says that the resemblance was very similar to forms seen in the pus of pyorrhea alveolaris.

This theory is of great interest, but further investigation along this line will be necessary before any conclusions can be drawn. It is probable that by continued study of cultures of the fusiform bacilli and spirilla, their bacillary or protozoic nature will be determined.

#### BRUTALITY OF FOOTBALL.

One of the most interesting news items of the past week was the announcement that President Roosevelt had succeeded in effecting an arrangement between the football captains and coaches of the more important eastern universities looking toward the elimination of brutality from the game. It is a rather striking coincidence that immediately after succeeding in bringing about peace between the combatants in the most serious and bloody war of modern times, our strenuous chief executive should next turn his attention to an attempt, at least, to do away with the brutality and fatalities which have marked the history of an American sport

1. Lancet, May 27, 1905, p. 1421.

1. Lancet, July 9, 1904, p. 73.

2. Lancet, July 8, 1905, p. 110.



for the last twenty years. We say an attempt advisedly, because the president of one of the most important universities in the East said in an apparently hopeless sort of way, when he heard of President Roosevelt's intervention, that he wished him success. He confessed to having tried himself and failed. It will indeed be a reflection on our American civilization if, after conciliating Russia and Japan, President Roosevelt fails to prevent further "killings" in football.

It is not much extenuation of the record of fatalities and of injuries that are more than death to say that they have occurred as a rule in minor college teams and not among the hardened athletes of the great universities. It is the great universities of the land that are expected to set an example in every way to the minor educational institutions of the country. In their hands has been the modification of the rules in such ways as to eliminate all possibility of brutality taking the place of sport. It is idle to say that it is impossible to do away with brutality.

The recent authoritative announcement that any Army or Naval cadet who, during the games played by the respective academies, may be declared by the umpire to have been deliberately brutal, will be dismissed from the service, represents the right way to treat this subject. Of course, any player who does a brutal act to win a game, no matter how great the provocation, is guilty of conduct unbecoming an officer and a gentleman. To cashier him from the service of the United States is the only right thing to do. This same regulation should be in effect at the great universities. Any football player who is deliberately brutal, that is, who performs an act which is meant to injure a player on the other side in order to put him out of the game and so weaken his side, should be barred from playing, not alone from that game, but from any other game. Although it is hopeless to look for any change in the rules during the present year, now is the time to make changes for next season. The play can be made more open by modifications in the rules, and that this has not been done is due to the fact that the committee has apparently been afraid of making the game uninteresting by radical changes.

We wish President Roosevelt as distinguished success in this last life-saving attempt as in his previous brilliant achievement, and we can assure him that the medical profession of the country will be with him in the enterprise.

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#### THE PUBLICITY OF HEALTH RECORDS.

There is much that might be said that is good of American progress in hygienic matters, but the criticisms in Dr. Fulton's address, published in this issue, are certainly called for. We in this country have never been strong in the matter of vital statistics; over a large portion of our territory the attempts at their collection are almost farcical and, even where they are at their best, there is, as he points out, much room for reform. It is the second point of his criticism, however,

that most calls for our attention here. The disreputable, and, we might say, criminal use of the health records for commercial purposes, as he shows, is appalling, and strongly suggests that even worse remains behind. The possibilities of blackmailing from a free access of everyone to these records are very apparent. Moreover, as the tendency to increase the number of notifiable diseases extends, and there is good reason for its doing so, the evil possibilities are greatly enhanced. There may be some excuse for allowing insurance companies access to such data, though we do not see that they have any special rights in the matter, but why nostrum venders, quacks, and the like, should be allowed to utilize them is beyond reasonable comprehension. Moreover, if these things are to be so, and the condition is generally understood, notification laws must necessarily fail. There is a striking inconsistency in a state whose legislation puts rigid restrictions around matters of medical secrecy and privilege and yet allows its mortality and health records to be at the command of everyone, or at least any one who can obtain the political favor of the privilege of their consultation. Of course, such records should be available to the proper parties, but this should be under such restrictions as would prevent any violation of their strictly confidential character. At present it appears, from Fulton's researches on the matter, that they are utilized largely for the profit of gross commercialism and political grafters. There is a good opportunity here for a strike for reform.

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#### DEPORTING NON-RESIDENT DEPENDENTS.

A considerable movement of dependent insane may be looked for in various states owing to the more or less far-reaching results of the operation of a new law in New York. The latter state is investigating the records and is sending away insane persons whose legal residence is in other states, which, therefore, should bear the expense of their care. Something of a sensation was caused in one state on the receipt of several such patients, and it has caused the authorities of that state to prepare to make a similar examination of records and a clearing of their own asylums. In certain states the dependent insane for whose care those states are not legally liable require the expenditure of thousands of dollars, and taxpayers have a right to object. We trust that the investigations will be conducted with great care and all unnecessary excitement of patients avoided. Sympathetic, tactful dealings will prevent the harm that might easily be done.

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#### MONEY AND MICROBES.

It is said that the public has been so far educated as to the dangers of microbic infection that the redemption bureau of the Treasury Department is overworked by the turning in of dirty currency and the demand for fresh bills. Perhaps the campaign for the Post check currency, which has disseminated so many warnings about dirty money, is in part responsible for this interest on the part of the public. We welcome it as we shall welcome the check currency—when the express companies' lobby is overthrown.



## MEDICAL PESSIMISM.

While man is mortal the practice of medicine will always be in one sense of the word a losing game. That fact, however, does not justify a pessimistic estimate of its usefulness and of its progress such as have recently been made by one or two more or less prominent foreign writers on the subject. The public generally has a sort of notion that diseases are treated by specific remedies and this is the basis of their faith in the prevalent quackery of all times. The fact that we do not have specifics for every disease is no justification for the statement that we can not intervene successfully in any disease, nor for the recent utterance of an English physician that we "can practically do nothing to prevent death from a virulent bacterial invasion or to bring about a cure." Every successful practitioner can honestly contradict this from his own experience. While the thoughtful and conscientious educated physician has no delusions as to his limitations, he does not, on the other hand, have any reason to feel that he is a humbug profiting by the delusions of others. The usefulness of the physician consists not merely in warding off death when actual severe illness has occurred—and this he can do in many cases—but also in shortening the non-fatal ailments and in mitigating the chronic and hopeless ones. If we consider preventive medicine alone the case is still better. There is hardly an epidemic disease dreaded in the past that has a tithe of its old terrors to the educated physician or sanitarian of to-day. The problems of disease are being more successfully studied at the present time than at any period in the past, not only by the laboratory and hospital workers, but more than ever before by those engaged in general and special practice. That much of this work is not directly fruitful need not be denied, but it is only by working over the great mass of ore that the real gold is extracted, and there has been no work so beneficial and promising, taking it as a whole, as that which has been done in the last twenty years and is still being continued. It is well to know our deficiencies, and confession is said to be good for the soul, but pessimism in medicine, like pessimism elsewhere, is morbid and not conducive to the good of the individual, the physician or the world.

## BIRTH INSURANCE.

In a number of European countries maternity insurance is a long-established fact. Italy has recently provided for government birth insurance. The recent unfavorable opinion of the Minnesota insurance commissioner is therefore of present interest. He ruled that "maternity does not present the characteristics of a thing which may properly be insured against," and refused the American Mothers' Birth Insurance Association permission to do business in the state. The *Chronicle* (insurance paper) thinks that this decision is not well founded in reason. Of course, there is no financial loss in maternity, but there is necessary and immediate expense to be met, and this is a proper subject for insurance. Maternity in a sense is voluntary, but only in part, and so, to at least an equal degree, are death, sickness, casualty and fire, all of which are recognized as insurable events.

## CENTENNIAL CELEBRATION OF A UNITED PROFESSION IN NEW YORK.

As will be noted in our News department, the New York State Medical Association, at its annual meeting this week, again endorsed the report of the committee on amalgamation with the Medical Society of the State of New York. As will be remembered, a year ago the report of the committee was adopted but it was afterward discovered that certain legal formalities had to be gone through with before the New York State Medical Association could give up its existence and merge into the society. The legal difficulties involved notifying every member of the association and giving him the right to vote on the proposition. The result, judging from a telegram received as we go to press, shows that the vote in favor of amalgamation was almost unanimous. The other legal formalities, as we understand it, will necessitate but little time, and it is now hoped that the next annual meeting of the Medical Society of the State of New York, to be held in Albany next January—which will be its hundredth meeting—will be a grand centennial celebration of a united profession of the Empire State. The congratulations of the physicians of the entire country are extended, we are sure, to the members of the association and of the society who have worked so diligently to bring about this union.

*Medical News*

## ALABAMA.

**Physician Fined.**—Dr. M. D. Welborn, Ezell Station, near Pratt City, who was arrested several days ago on the charge of selling cocain, was fined \$100 and costs October 3.

**Medical Colleges Opened.**—The Birmingham Medical College opened for its annual session October 3. Addresses were made by Drs. Russell M. W. Cunningham, Ensley; Dr. Edward H. Sholl, Dr. John C. Le Grande and others.—The medical department of the University of Alabama, Mobile, opened October 5.

**Personal.**—Dr. William T. Berry has been elected professor of orthopedic surgery in the Birmingham Medical College, a chair established this year.—Dr. Shirley Bragg, Montgomery, has been made president of the board of convict inspectors, and Dr. Nathaniel G. Clark, Ensley, physician inspector of convicts of the state.

**Alumni Organized.**—The Alumni Association of Birmingham Medical College met for organization October 3 and elected the following officers: President, Dr. Joseph H. Edwards, Wylam; vice-presidents, Drs. Ira C. Skinner, Selma, and Zachary B. Chamblee, North Birmingham, and secretary and treasurer, Dr. J. F. Hogan, Birmingham.

**Winter Hospital Staff.**—The official staff of the City Hospital of Mobile for the winter months announces as follows: Medicine—Drs. Henry A. Moody and Charles A. Mohr; surgery—Drs. Rhett Goode, William R. Jackson, Paul J. M. Acker and Perry J. Howard; obstetrics—Dr. Tucker H. Frazier; ophthalmology and laryngology—Drs. William H. Sanders and Ruffin A. Wright; neurology—Dr. Eugene D. Bondurant; gynecology—Dr. J. Buckner Killebrew, and resident physician, Dr. Ernest S. Feagin.

## CALIFORNIA.

**Denied Use of Mails.**—The Vacuum Medicine Company, San Francisco, has been denied the use of the mails by the post-office department.

**Sanatorium to Be Enlarged.**—A new building is to be erected for the Agnew Sanatorium, San Diego, four stories in height, to accommodate about 80 patients.

**Clinic Opened.**—A free medical and surgical clinic was opened at the Sisters' Hospital, Los Angeles, October 2, with Drs. Edward T. Dillon, Ernest A. Bryant and Joseph M. King in charge.



**College Opens.**—The opening exercises of the Medical College of the University of Southern California, Los Angeles, were held October 5. Dr. Lyman B. Stookey has been added to the faculty as professor of physiology and physiologic chemistry.

**Personal.**—Dr. H. Miller Robertson, Arlington, has returned from Europe.—Dr. James H. Glass has returned to his home in Paso Robles after an absence of about two years.—Dr. Walter S. Thorne and family, San Francisco, have returned from Europe.

**Medical Library Site Donated.**—Dr. Walter Jarvis Barlow has donated the site for a medical library building to be erected opposite the Medical College of the University of Southern California, Los Angeles. The estimated cost of the building is \$25,000.

**Hospital Cornerstone Laid.**—The cornerstone of the new German Hospital, San Francisco, was laid October 8 with elaborate ceremony. The new hospital, which adjoins the present structure, will be of steel, fireproof construction and will cost about \$400,000.

**New Hospital Required.**—The Sequoia Hospital, Eureka, erected only about two years ago, has been found to be inadequate to the needs of the locality. A site has been purchased for \$15,000, on which a hospital to cost from \$60,000 to \$75,000 will be erected.

**Farmers Victimized.**—A number of farmers living in the vicinity of Merced were recently made the victims of two men traveling under the guise of doctors, who offered to make examinations free of charge, and on doing so were appalled to find the patients in serious condition and requiring immediate care for which an advance fee was required. After receiving the fee the "doctors" did not return.

#### COLORADO.

**Personal.**—Dr. Fleming H. King, Boulder, was severely burned in an attempt to extinguish a fire in his office October 6.

**Health of Colorado Springs.**—During August 29 deaths were reported, equivalent to an annual death rate of 11.60 per 1,000. Of the 29 deaths 15 were due to tuberculosis.

**Colorado State Medical Society.**—The thirty-fifth annual meeting of this society was held in Colorado Springs, October 3-5. Dr. Frank Finney, La Junta, presided. The entertainments provided for the visiting members included a banquet October 3 for the members, a theater party for their ladies; on October 4 a smoker and vaudeville for both ladies and gentlemen, and a tea on the same evening for the ladies, given by Dr. Josephine L. Peavey. The papers presented were of unusually high grade. In the president's address he recommended the organization of a state propaganda for the consideration of tuberculosis that the people might be educated and the spread of the disease thereby prevented. The following officers were elected: President, Dr. Horace G. Wetherill, Denver; vice-presidents, Drs. E. T. Boyd, Leadville; Perry Jaffa, Trinidad, and Charles A. Ringle, Greeley; secretary, Dr. Melville Black, Denver (re-elected); treasurer, Dr. S. Edwin Solly, Colorado Springs; publication committee, Drs. Edward Jackson, J. M. Blaine and Josiah N. Hall, Denver; counselors, Drs. E. T. Boyd, Leadville, and Frank Finney, La Junta; delegate to American Medical Association, Dr. Hubert Work, Pueblo, and alternate, Dr. Heman R. Bull, Grand Junction. The session of 1906 will be held in Denver.

#### DELAWARE.

**Donation Day.**—October 5 was donation day for the Delaware Hospital, Wilmington, when donations of all kinds were received and the institution was kept open all day for inspection.

**State Hospital Overcrowded.**—At the meeting of the trustees of the Delaware State Hospital, Farnhurst, the report of the superintendent showed that there were 379 inmates, the largest number in the history of the institution. He stated that the institution was overcrowded and asked that the legislature be petitioned to enlarge the building.

**Examiners Nominated.**—The Delaware State Medical Society, at its annual meeting, presented the following names to the governor, from which two members of the state board of examiners are to be selected: Drs. George W. Marshall, Milford; Ezekiel W. Cooper, Camden; Francis L. Springer, Newport; L. August H. Bishop, Dover; Robert B. Hopkins, Milton; L. C. Carrow and Jacob C. Knowles, Seaford, and James A. Draper, Ralph P. Stubbs and Henry W. Briggs, Wilmington.

**State Society Meeting.**—The Delaware State Medical Society held its one hundred and sixteenth annual meeting at the

Delaware Hospital, Wilmington, October 10, the president, Dr. Alexander I. Lowber, in the chair. The address of welcome was made by William S. Ellis and the response by Dr. Willard Springer, Wilmington. In his annual address the president dwelt on the ravages of tuberculosis and the necessity of the establishment of a state sanatorium. The House of Delegates met for the first time in the history of the society. It is composed of ten members, six from New Castle County, two from Kent County and two from Sussex County. The following officers were elected: President, Dr. John Palmer, Jr., Wilmington; vice-presidents, Drs. G. Frank Jones, Georgetown, and Frank Verdin, Kenton; secretary, Dr. George W. K. Forrest, Wilmington; treasurer, Dr. William C. Pierce, Wilmington; delegate to the American Medical Association, Dr. Hiram R. Burton, Lewes, and Dr. Frank Belville, Delaware City, alternate; and counselors, Drs. Peter W. Tomlinson, Wilmington; James H. Wilson, Dover, and James Bryshaw, Sussex.

#### DISTRICT OF COLUMBIA.

**Physician Fined.**—Anthony Mandis, who advertised that he had medicine for the cure of epilepsy and was charged with being an unlicensed physician, was fined \$50 in the Washington police court September 29.

**Georgetown University Hospital.**—The reports from the committee in charge of the lawn fête for the benefit of the Georgetown University Hospital show that about \$1,500 will be realized. The hospital is in a flourishing condition and is doing excellent work.

**Medical and Surgical Society.**—The Medical and Surgical Society of the District of Columbia held its eighteenth annual meeting October 6 at the residence of the president, Dr. Presley C. Hunt, who in his address, reviewed the work of the society for the year just closed. Dr. Oscar A. M. McKimmie was elected president.

**Health of the District.**—The report of the health officer for the week ended October 7 shows the total number of deaths to have been 114, of which number 66 were white and 48 colored; number of births, 133 (white 100, colored 33), and stillbirths 11 (white 7, colored 4). At the close of the week there were under treatment 32 cases of diphtheria, 9 of scarlet fever, 240 of typhoid fever, and 1 of smallpox.

#### IDAHO.

**State Officers Elected.**—At the annual meeting of the Idaho State Medical Society, held in Boise, October 6 and 7, Dr. John B. Morris, Lewiston, was elected president; Dr. Erwin W. Kleinman, Shoshone, vice-president, and Dr. Ed. E. Maxey, Boise, secretary and treasurer (re-elected). The society will meet at Lewiston next year.

#### ILLINOIS.

**Physician Robbed.**—Dr. Samuel S. Salisbury, Tolono, was robbed of a watch by two holdup men October 1. Fortunately, the robbers failed to find his purse.

**"Cross-eye" Doctor Levants.**—"Dr." C. A. Lambert, who has advertised wonderful cures for cross-eyes, etc., in Coal City, is said to have left Morris suddenly, leaving unpaid accounts behind him.

**The Oak Park Hospital Trouble.**—The latest developments in the Oak Park Hospital Association proceedings are the withdrawal by Dr. J. W. Tope of his offer to purchase the assets of the association, the defeat of a resolution to abandon the association, and the unanimous adoption of a substitute amendment to consider the question on "hospital or no hospital." The association, therefore, is again facing the financial difficulties which have so long beset it.

**Personal.**—Dr. and Mrs. Charles W. Hall, Kewanee, have returned from a visit to Colorado.—Dr. Peter J. Reynolds, Dwight, was thrown from his buggy September 28, breaking his leg.—Dr. Josiah T. Kretsinger, Leaf River, has returned from a trip to the Pacific Coast.—Dr. Alpheus A. Bondurant, Cairo, who has been seriously ill, is reported to be convalescent.—Dr. Joseph Sheurich, Philo, was taken to the Burnham Hospital, Champaign, October 3, suffering from a bullet wound.—Dr. Albert C. Johnson, Sidell, is seriously ill at the home of his parents, near Horace.

#### Chicago.

**Personal.**—Dr. Plumer M. Woodworth has been appointed a trustee of the Illinois Northern Hospital for the Insane, Elgin.

**Medical Student Dies.**—Wesley C. Lowther, a student at the Northwestern University Medical College from West Virginia, was found dead in his bed October 8 from asphyxiation. The death is believed to be accidental.



**Increases Appropriation.**—The finance committee of the City Council has voted an additional appropriation of \$8,550 for the Health Department, which, as the lay press announces, "will be used for the following employees: One stenographer, six plumbing inspectors, two clerks, six meat and food inspectors, four horses and one buggy."

**The City's Deaths.**—For the week ended October 14 the mortality of the city was 477, 5 more than for the previous week and 53 more than for the corresponding week of 1904. This is equivalent to an annual death rate of 12.4. The principal causes of death were: Acute intestinal diseases, 69; consumption, 53; violence and suicide, 47; heart diseases and pneumonia, each 38; Bright's disease, 28; cancer, 24, and nervous diseases, 21.

**College Becomes Integral Part of University.**—The Northwestern University Medical School (Chicago Medical College), which previously has held only an affiliated connection with the Northwestern University, became an integral part of that institution by a vote of the board of trustees at its quarterly meeting, held October 10. The medical school turns over property to the university valued at \$353,000, which includes the college building at Dearborn and Twenty-fourth Streets.

**New Policlinic Hospital.**—The Chicago Policlinic has given to the Northern Trust Company a trust deed to its property to secure a bond issue of \$300,000 maturing in 1935 and bearing interest at 4 per cent. The property in the deed includes the new site of the hospital at Oak Street and La Salle Avenue and the present hospital on Chicago Avenue. The new hospital will be six stories in height with a frontage of 200 feet, of fireproof, steel construction, and will accommodate 150 patients.

#### INDIANA.

**Disease Closes Schools.**—The public schools of Petersburg were closed October 2 because of an epidemic of diphtheria. The schools of Alvord have also been closed for the same reason.

**Accident and Illness.**—Dr. Calvin Carter, Brookville, was struck in the face by the head of a sledge-hammer October 5, breaking his nose and causing other injuries. Dr. William Dederick, Warsaw, is seriously ill.

**College Transformed into Hospital.**—The Fort Wayne district of the Northern Indiana Methodist Conference has decided to purchase the Fort Wayne Medical College building and convert it into a deaconess' hospital.

**Found Guilty a Second Time.**—William Kluge, Indianapolis, who was fined \$50 a few months ago for practicing medicine without a license, was found guilty October 2 of a similar offense and was fined \$25 and costs.

**Convicted of Fraud.**—Dr. Charles Morehouse, who was convicted of conspiring to defraud Mrs. Martha McDonald of South Bend, was found guilty of conspiracy in committing a felony and sentenced to the Michigan City penitentiary for an indeterminate period of not less than two nor more than fourteen years, and to pay a fine of \$25.

**Continued Merger.**—On October 9 the Fort Wayne Medical College was merged into and became a part of the medical department of Purdue University. Under the new arrangement five members of the faculty will be continued in the faculty of the medical department, and Dr. Christian B. Stemen has been made vice-dean of the faculty.

**Personal.**—Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, who has been seriously ill with inflammatory rheumatism, has gone to Atlantic City in the hope of regaining his health. Dr. John S. Reagan has been appointed physician to the Indiana Boys' School, Plainfield, vice Dr. Amos Carter. Dr. Edwin M. Trook, Marion, has been appointed surgeon for the Kokomo, Marion & Western traction line.

#### KANSAS.

**South Kansas Medical Society.**—This society held its annual meeting at Wichita October 19-20.

**Diphtheria Closes Schools.**—The State Normal School and public schools of Hays City have been closed on account of the prevalence of diphtheria.

**New Hospital.**—The new hospital recently erected at Larned by Drs. Charles H. Ewing, William C. MacCurdy and Arthur W. H. Seiple, was opened to the public October 9.

**For Sanitary Railway Cars.**—The State Board of Health has authorized its secretary, Dr. S. Jay Crumbine, to cooperate with other states west of the Mississippi River in securing uniform legislation for railroad car sanitation.

**Hospital Directors Appointed.**—Drs. Josephus P. Stewart,

Benjamin F. Morgan, and Messrs. C. C. Stillman, Olsen and Alquist, have been appointed directors of the Clay Center Hospital, and the first-named was elected president of the board.

**Personal.**—Dr. Samuel W. Spitler, Wellington, has returned from New York. Dr. W. R. Palmer, Kansas City, has been appointed assistant in the clinical department of the German Hospital. Dr. Homer F. Parr, Wellington, has located in Carlsbad, N. M.

**August Diseases.**—During the month of August 87 cases of tuberculosis and 44 deaths were reported in Kansas; 264 cases of typhoid fever, with 33 deaths; 65 cases of diphtheria, with 9 deaths; 61 cases of scarlet fever, with 1 death; 12 cases of measles, with 1 death; and 99 cases of smallpox, with 1 death.

**A Good Meeting.**—The meeting of Sumner County Medical Society, Wellington, September 15, was of exceptional interest, 24 of the 32 members being present. Dr. Samuel W. Spitler, Wellington, presented a report of the American Medical Association meeting. Dr. Oliver J. Furst, Peabody, counselor of the district, was present, and Dr. Hoxie outlined the aims of the Kansas University for higher medical education.

#### KENTUCKY.

**Diphtheria Closes Schools.**—The public schools of Eminence, LaFayette and Hickman have been closed on account of the prevalence of diphtheria.

**Appeal for Hospital.**—The trustees of the Good Samaritan Hospital, Lexington, have issued an appeal for \$50,000 to erect a new building for the hospital, which is urgently required.

**Will Serve Without Pay.**—The names of twelve Frankfort physicians have been presented to the prison commissioners, each of whom agrees to serve as prison physician for a month without pay, or until the expiration of the term of office of the late Dr. Hugh L. Tobin, provided the salary is given to the widow of the deceased physician.

**State Medical Examiner Appointed.**—Prof. W. P. St. Clair, head of the department of Latin in the Male High School, Louisville, has been appointed state medical examiner by the State Board of Health under the law passed in 1904, requiring that those who entered the medical schools of Kentucky shall be required to have a preliminary education corresponding to that furnished by a first-class high school.

**Speers Hospital Report.**—The annual report of the Speers Memorial Hospital, Dayton, shows that during the fiscal year just ended 489 patients were cared for and 165 surgical operations were performed; 10 deaths occurred, but 6 of the patients were moribund when operated on. The following staff has been appointed: Gynecology, Dr. Magnus A. Tate, Covington; surgery, Dr. John L. Pythian, Newport; medicine, Dr. J. W. Youtsey, Newport; neurology, Dr. Willis W. Ranshaw, Covington; dermatology, Dr. William E. Truesdell, Newport; pediatrics, Dr. Joseph J. Bock, Newport; obstetrics, Dr. William W. Tarvin, Covington; and pathology, Dr. Claude Youtsey, Newport.

**Personal.**—Dr. Charles B. Schoolfield, Dayton, is critically ill. Dr. John D. Hamilton, Louisville, who has been seriously ill for a long time, is reported improving. Dr. Joseph B. Marvin and family, Louisville, sailed from London on the *Minnehaha* for New York, September 23. Dr. Clyde Vermillion and family, Russell, have moved to Idaho on account of the illness of the former. The Kentucky School of Medicine has elected Dr. Granville S. Hanes clinical professor of rectal diseases. Dr. Emilius M. McKee, Lexington, has been chosen superintendent of St. Vincent Hospital, St. Louis. Dr. Edward L. David, Louisville, who is about to move to Philadelphia, was the guest of honor at a banquet given by the subfaculty of the University of Louisville, October 2.

#### LOUISIANA.

**Personal.**—Dr. Felix A. La Rue, New Orleans, visited Emmitsburg, Md., October 6 to celebrate the silver jubilee of his graduation at Mt. St. Mary's College, in that town, in 1880.

**School of Tropical Medicine Proposed.**—The president of Tulane University announces the proposal to found a school of tropical medicine in connection with that institution. This, he thinks, would attract students not only from the South, but from Cuba, Mexico and Central America.

**Physician and Town Marshal Fight.**—In a desperate encounter between Dr. David B. Garland and town marshal W. J. Thaxton, Bernice, on October 3, the latter sustained two bullet wounds and six or eight knife wounds. Dr. Garland was stabbed near the heart and both are expected to die.



## MARYLAND.

**Personal.**—Dr. T. Rowe Price, Glyndon, Baltimore County, has gone to the Pacific coast.—Dr. T. Chalmers Peebles, Lutherville, has moved to Falmouth, Mass.

**Typhoid at Hagerstown.**—About 45 cases of typhoid fever have been reported in Hagerstown since June 1. Examination of the drinking water by the State Board of Health is said to have been negative.

## Baltimore.

**To Buy Portrait.**—A fund is being raised at the college hospital to procure a portrait of Prof. Thomas S. Latimer to be hung in the college library.

**Student Dies.**—Herbert E. Taber, a third-year student in the College of Physicians and Surgeons, Baltimore, died from typhoid fever, October 10, in Providence, R. I.

**Personal.**—Dr. Archibald W. Graham has been appointed assistant resident physician at Bayview Hospital, vice Dr. W. W. Riha, appointed assistant physician to Danvers (Mass.) Hospital for the Insane.

**Staff Changes.**—Dr. G. R. Holden has resigned as resident gynecologist, and Dr. A. M. Little as resident obstetrician at the Johns Hopkins Hospital. Their places have been supplied by Drs. Stephen Rushmore and F. C. Goldsborough, respectively. Dr. Holden will go to Jacksonville, Fla., to practice, and Dr. Little will become superintendent of the maternity connected with McGill University, Montreal, Canada.

## MASSACHUSETTS.

**Physician Fined.**—Dr. Louis H. Clark, Holyoke, was fined \$15, September 18, on the charge of violating the speed laws of the town of Leicester.

**Hospital Field Day.**—As the result of the hospital field day for the Milford Hospital, \$943.50 was realized and turned over to the treasurer of the institution.

**New Hospital for Cambridge.**—The new Emergency Hospital situated in the heart of the factory district in Cambridge, was opened October 1. Dr. George V. Buehler is in charge.

**Acquitted.**—Dr. Victor Bychower, Boston, charged with performing an illegal operation on Minnie Cohen, was discharged from custody, August 30, as the prosecution failed to sustain its case.

**Offers to Give Laboratory.**—Andrew Carnegie has offered to give Smith College, Northampton, one-half of \$125,000 required for a biologic laboratory on condition that friends of the college secure the remainder of the amount.

**Pleads Guilty.**—At the session of the District Court, August 7, at Ware, Dr. J. A. Dorval pleaded guilty to the charge of practicing medicine without a license, and was held to the criminal session of the Superior Court, December 18.

**Physicians Lose Suit.**—Drs. John M. French, Milford, and Arthur M. Rounds, Norton, who sued the United Order of the Golden Star for \$1,500, alleged to be due them for services as grand medical examiners, were non-suited October 4.

**Operating Building Presented.**—It is understood that A. C. Houghton will present to the North Adams Hospital an operating building separate from the other hospital structures and equipped in accordance with the demands of modern surgery.

**Sent to Prison.**—Dr. Charles R. Greeley, South Weymouth, charged with a statutory offense, was sentenced to the House of Correction for one year at Dedham, September 23.—Dr. Ovid M. Paulhaus, Haverhill, charged with committing an illegal operation which caused the death of Mrs. Arthur Goodman, pleaded guilty, and was sentenced to imprisonment for not less than six nor more than six and one-half years in the state prison, September 18.

**Dispensary Report.**—The one hundred and ninth annual meeting of the Boston Dispensary, held October 13, showed a record of its largest year; 101,280 patients were treated at the central and Roxbury offices; 21,858 visits were made at homes by 14 district physicians, each accompanied by a nurse from the Instructive District Nursing Association; 92,063 prescriptions were filled on orders from the medical staff. There are now 18 departments at the central office, and there is great need of more room. For this addition \$100,000 is needed, of which \$20,874 has been subscribed. The regular work of the institution is maintained by its income, but there is nothing available for enlargement.

**Personal.**—Dr. Charles Harrington, secretary of the State Board of Health, has sailed for Europe. He will present at the International Dairy Conference in Paris, Oc-

tober 16-19, the work which has been done by the board along those lines.—Dr. Charles H. Turner, Holyoke, has returned from England and will locate in Haverhill.—Dr. Louis L. Auger, Worcester, has returned from Europe.—Dr. John O'Shea has been appointed house surgeon at the Boston City Hospital.—Dr. John H. Lindsey, Fall River, has resigned as a member of the staff of the city hospital.—Dr. Edward H. Trowbridge, Worcester, has returned from a trip abroad.—Dr. Frank W. White, Boston, returned from Europe October 2.

**Charities Get Quarter of a Million.**—By the will of Charles Tidd Baker, late a prominent insurance broker of Boston, \$250,000 is devised to charities. Those largely medical are: Convalescents' Home for Children's Hospital, \$15,000; Boston Home for Incurables, \$10,000; Children's Hospital, Boston, \$10,000; Boston Floating Hospital, \$10,000; Hospital Cottages for Children, Baldwinsville, \$5,000; Boston Lying-in Hospital, \$5,000; Free Home for Consumptives, Dorchester, \$5,000; St. Luke's Convalescent Home, \$5,000; Massachusetts Infant Asylum, \$5,000; Willard Hospital, Bedford, \$5,000. All of these bequests are to be paid, however, only after the death of the testator's sister, who is to have the income of his estate during her lifetime.

**County Society Active.**—The Essex South District Medical Society celebrates its centennial year this year, as it was organized in Salem Nov. 4, 1805. The program for the centennial year is unusually interesting, and includes an illustrated lecture by Dr. George M. Gould, Philadelphia, on "The Struggle for Fresh Air and Light"; a centennial celebration at which Dr. Holyoke of Holyoke will read a paper on the life of his ancestor, Dr. Edward A. Holyoke, who was the founder and first president of the society, and also first president of the Massachusetts Medical Society. The president of the Massachusetts Medical Society will respond for the parent organization, and historical papers, each covering a period of a quarter of a century, will be presented by members of the society. Among other topics to be presented during the year are: "Tuberculosis; Its Treatment and Prevention," "Pure Foods" and "Facts and Fallacies Concerning Albuminuria."

## MICHIGAN.

**Hospitals Opened.**—The new addition to the Menominee River Hospital was opened October 2. The new building has accommodation for 20 patients and has also a well-equipped operating room.—The Northern Michigan Hospital, Calumet, reopened last week after having been closed for four months.

**Personal.**—Dr. Claudius B. Chapin, Benton Harbor, fractured his wrist October 2 while starting his automobile.—Dr. Charles C. Clancy, Port Huron, was thrown from his bicycle October 5 and sprained his left wrist.—Dr. John E. Clark, Detroit, has been made professor of medical jurisprudence in the Detroit College of Medicine.

**Fraud Order Issued.**—The postoffice department has issued a fraud order in the case of a Michigan concern which is alleged to have swindled numerous persons in Indiana and which was known under the names of the Adrian Medico-Surgical Institution, the Adrian Medical and Surgical Institution, and Dr. Durham's Remedy Company.

**Third Councilor District.**—The society for this district met at the Battle Creek Sanitarium October 18. The use of the operating rooms of the sanitarium was donated to the society for convenience in showing clinical cases. The clinic was held in the morning. In the afternoon the scientific session was held. Dr. David Inglis, Detroit, president of the state society, and Dr. A. P. Biddle, Detroit, secretary, were present. The Battle Creek Sanitarium tendered a vegetarian banquet to the members of the society and guests.

**Mortality of Michigan.**—The total number of deaths for September was 3,050, an increase of 253 over the preceding month. The death rate was 14.6 per 1,000, as compared with 12.9 for August. There were over 400 more deaths during September, 1905, than during September, 1904. There were 804 deaths of infants under 1 year, 257 deaths of children aged 1 to 4 years, and 789 deaths of persons over 65. Important causes of deaths were as follows: Tuberculosis of the lungs, 213; typhoid fever, 68; diphtheria, 22; scarlet fever, 4; measles, 3; whooping cough, 11; pneumonia, 65; diarrhea and enteritis of infants under 2 years, 527; cancer, 146; accidents and violence, 230. There was a slight increase in the mortality from typhoid fever and a very considerable increase in that from diarrhea of infants. There was only one death from smallpox during September and one death from tetanus.



## NEW YORK.

**Horses for Hospital.**—Mrs. Clarence H. Mackay, who presented the Nassau Hospital at Mincola, L. I., with a stable, stable equipment and an ambulance, has added a gift of a valuable team of horses.

**One Board Instead of Many.**—The New York State Medical Association unanimously adopted resolutions advocating the establishment of one state medical examining board instead of three or more, as at present exist.

**Charity Musicale.**—Mrs. Edwin Gould gave this entertainment at Ardsley-on-the-Hudson, on October 6, where \$1,000 was realized for the benefit of the Robin's Nest, a summer home for crippled children at Tarrytown, N. Y.

**Buffalo Personals.**—Dr. Edward R. McGuire returned from Europe.—Dr. Herman E. Huyd is at Aspinwall, Lenox, Mass.—Dr. Albert E. Wachnert has recovered from an attack of appendicitis.—Dr. Roswell Park has returned from Europe.

**Wants Coroners Abolished.**—Resolutions announcing the continuation of the coroners' offices, particularly in New York City, and asking for the abolition of the coroners' offices throughout the state were adopted by the New York State Medical Association at its meeting October 16.

**State Association Election.**—The election of officers of the New York State Medical Association resulted as follows: President, Dr. Allen Arthur Jones, Buffalo; vice-president, Dr. H. Ernest Schmidt, White Plains; secretary, Dr. Charles Ira Redfield, Middletown (re-elected), and treasurer, Dr. William G. Le Boutillier, New York City.

**Amalgamation Wins.**—At the meeting of the New York State Medical Association, October 17, Dr. W. R. Townsend moved and Dr. E. Eliot Harris seconded the resolution for amalgamation and for the continuation of the committee on conference with the Medical Society of the State of New York. The vote for amalgamation stood 1,517 to 2, with 295 not voting. The next step is for the committee to petition the court for an order amalgamating the association and the society, and this, it is hoped, will be carried through before January 1. It is confidently believed that the crowning feature of the centennial celebration of the state society may be its amalgamation with the state association and the long-deferred union of the medical profession of the state.

## New York City.

**Passengers Quarantined.**—Three steerage passengers aboard the *Slavonia* were sent to Hoffman's Island for observation. They are suspected of having typhoid fever.

**Ambulance Accident.**—A trolley car bound for Coney Island ran into a Flatbush Hospital ambulance, killing the horse and smashing the ambulance. The ambulance surgeon and the driver escaped injury. This is the ninth ambulance accident in Brooklyn in five months.

**Open Air Sanatorium.**—The State Board of Charities has been asked to approve of the incorporation of the Long Island Open Air Sanatorium of Brooklyn, formed for the purpose of furnishing hygienic treatment for consumptives and to encourage the control of tuberculosis on Long Island.

**Gift to Hospital.**—The sum of \$5,000 has been given to the Sydenham Hospital for the purpose of endowing three beds by the sons of M. Guggenheim.—Mrs. Isaac Guggenheim has given \$700 for improvements in the maternity ward.—The Lyric Theater has been offered for a benefit performance for this hospital on November 25.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended October 7, 381 cases of tuberculosis, with 168 deaths; 198 cases of diphtheria, with 19 deaths; 97 cases of typhoid fever, with 14 deaths; 58 cases of scarlet fever, with 1 death; 52 cases of measles, with 2 deaths, and 12 cases of cerebrospinal meningitis.

**Personal.**—Dr. Harvey W. Wiley, chief of the Bureau of Chemistry of the United States Department of Agriculture, addressed the Medical Association of Greater New York, on the evening of October 9, on the use of chemical preservatives and coloring matters in food products.—Dr. William K. Draper arrived home on the *Kroonland* October 10.—Dr. and Mrs. John A. Robinson sailed on the *Koenigen Luise* October 14.

**Smaller Freshman Class.**—The registration just closing in the Cornell University Medical College shows a decrease over the best of the previous years. The three advanced classes are somewhat larger than usual, but the first-year class, which hitherto has contained an average of about 130 stu-

dents, this year has less than 120. Medicine at present does not seem as attractive a calling as business, although 85 per cent. of the graduating class last year obtained hospital positions, and the hospital graduate has undoubtedly a better chance of success than others.

**Hospitals for the East Side.**—The State Board of Charities has pending before it applications from five parties who wish to incorporate hospitals to operate on the lower East Side. The board passed a resolution that, while there is apparent need for the extension of suitable hospital facilities in that district, the incorporation of so many would lead to confusion of effort and undesirable results. The proposed incorporators were advised to confer with each other with a view of extending the facilities of the institutions already in existence or of uniting in one hospital corporation.

**Water-Supply Report.**—The special commission on the water supply has reported to the Board of Aldermen. It proposes to tap the Catskill and at a cost of \$161,857,000 to build an aqueduct to this city capable of adding 500,000,000 gallons of water to the present daily supply. This would give the city enough water to care for all the increase probable until 1925. The lack of water in Brooklyn during the past summer was almost without precedent in the history of a large American city, and this commission has provided plans for the immediate relief for this locality by tapping some of the numerous underground streams of Long Island for temporary relief until the work of bringing water from the northern part of the state can be completed.

**New City Sanatorium.**—A tuberculosis hospital is being planned which is to be built in the central portion of Staten Island, where the city owns 130 acres of land. This location overlooks the Narrows and the Lower Bay and is the highest point on the Atlantic coast between Portland and the Gulf of Mexico. Dr. John F. Fitzgerald has inspected the tuberculosis sanitariums of New York and New England in order that all the newest ideas may be incorporated. The wards are to be arranged in the form of an arc in order to furnish the maximum sun exposures. The estimated cost of the work when completed is about \$2,000,000, and there will be accommodation for about 800 patients. There is no connection between this sanatorium and that undertaken by the Health Department for the treatment of incipient tuberculosis.

## OHIO.

**New Hospital Departments Opened.**—The Toledo Hospital opened a well-equipped x-ray room, an isolation hospital and a laboratory last week.

**Red Cross Badges for Toledo Physicians.**—The city clerk of Toledo is now issuing Red Cross badges marked "Toledo Physician," which gives physicians wearing them the right of way on the bridges of Toledo and access within fire and police lines.

**Banquet to Dr. Rosenwasser.**—A banquet was tendered Dr. Marcus Rosenwasser, Cleveland, October 5, on the occasion of his return from a year's study in Europe, by fifty medical men of the city. Dr. Rosenwasser will resume his connection with the College of Physicians and Surgeons as professor of gynecology.

**District Association Meets.**—The Tenth District Medical Association held its annual meeting at London, October 5. The following officers were elected: President, Dr. Albert J. Strain, London; vice-president, Drs. W. Stanley Samson, Lancaster, Jefferson B. Searce, Chillicothe, and Anson S. Beckwith, London; and secretary and treasurer, Dr. John H. J. Upham, Columbus. The next session of the association will be held in Lancaster.

**Hospital Notes.**—Charity Hospital, Cleveland, has entered on the celebration of its fortieth anniversary. During this time 26,000 cases have been handled, the greater proportion of which have been gratuitous. During the last year 1,700 patients were cared for.—On October 8 the corner stone of the addition to the Good Samaritan Hospital, Zanesville, was laid with elaborate ceremony. The cost of the new building will be about \$70,000.

**Medical Staff Organized.**—The board of the Ohio Soldiers' and Sailors' Home, Xenia, has created a consulting and visiting medical staff, which organized October 6 by the election of Dr. Clark M. Galloway, Xenia, as dean, and Dr. A. C. Messenger, Xenia, as secretary. The staff is made up as follows: Dr. Warren C. Hewitt, Xenia, resident physician; Drs. Frederick Foreheimer, Cincinnati, A. C. Messenger, Xenia, and Clark M. Galloway, Xenia, general medicine; Drs. George W. Crile, Cleveland, William J. Gillette, Toledo, L. E. Russell, Cincinnati, Robert C. Rind, Springfield, James F. Baldwin,



Columbus, Samuel S. Wilson, Xenia, Benjamin R. McClelland, Xenia, and Lawrence H. Brundage, Xenia, general and special surgery; Drs. Robert Sattler, Cincinnati, and Pearle R. Madden, Xenia, eye and ear; Dr. Andrew Timberman, Columbus, nose and throat; Dr. William T. Corlett, Cleveland, dermatology; and Dr. Henry C. Houston, Urbana, pediatrics.

**Personal.**—Dr. Minor M. Jacobs, Hamilton, has resigned as a member of the city board of health.—Dr. T. H. Brannan, Canal Dover, was stricken with paralysis October 3.—Dr. Frank Young, Lorain, has been appointed trustee of the State Children's Home, Oberlin.—Dr. Harrie B. Martin, Springfield, has been elected president of the Society of American Physicians of Vienna.—Dr. Alfred P. Scully, Cleveland, has returned from Germany.—Dr. and Mrs. Jerome B. Thomas, Dayton, have returned after five years in the Philippine Islands.—Dr. Herman S. Rhu, Marion, has gone to Texas for the benefit of his health.—Dr. M. E. Mowen has resigned as a member of the East Liverpool Board of Health to accept the position of city physician made vacant by the resignation of Dr. William J. Taylor.—Dr. John Maglott has been elected health officer of Mansfield, vice Dr. Reason S. Boles, deceased.

### PENNSYLVANIA.

**Typhoid Fever.**—Typhoid fever is still prevalent at Mantioke. The total number of cases reported up to October 11 were 371. Dr. Logan of the State Board of Health has been detailed to take charge of the typhoid fever epidemic at Archbald, where 39 cases had been reported up to October 10.

**Fines for Preserved Meat.**—The report of the Dairy and Food Commissioner for the month of September shows that the fines collected from violators of the pure-food laws aggregated \$7,000. Almost this entire amount came from the sellers of preserved or adulterated meats. These fines exceed by \$4,000 the total for any other month this year.

**Reading Relief Statement.**—The statement of the Philadelphia and Reading Relief Association for August shows an expenditure of \$22,238.20, of which \$11,300 was paid for deaths and \$10,938.20 for disability. The number of deaths was 19, of which 9 were from accidents and 10 from natural causes. One thousand one hundred and thirty-one new cases were reported.

### Philadelphia.

**Vital Statistics for September.**—The report of the Bureau of Vital Statistics for September shows that 1,566 deaths were reported, 2,487 births and 318 marriages.

**Hospital Report.**—The report of the Mt. Sinai Hospital for September shows that 63 patients were admitted to the wards and that 3,893 were treated in the various clinics.

**Large Classes at University.**—The total registration to date in the University of Pennsylvania aggregates 3,570. There are 570 students registered in the medical department as compared with 546 for the year of 1904-05.

**Personals.**—Dr. John L. Borsch has returned from a prolonged visit to Europe.—Dr. T. K. Hamilton, an ophthalmologist of Adelaide, South Australia, was the guest of Dr. L. Webster Fox last week.—Dr. and Mrs. J. William White have returned from Europe.

**Bacteriologic Laboratory Report.**—The mortality report of the Bacteriologic Laboratory of the Bureau of Health shows that 456 diphtheria cultures and 400 specimens from typhoid blood were examined; 808 specimens of milk were analyzed and 86 specimens of sputum were examined.

**September Medical Inspection.**—The report of the division of medical inspection for the month of September shows that 5,405 inspections were made excluding schools; 3,747 visits were made to the schools and 675 children were excluded from attendance on account of some illness. The inspectors ordered 407 fumigations, examined 8 patients for special diagnosis, collected 79 cultures for examination, administered 95 injections of antitoxin and performed 1,317 vaccinations.

**Health Report.**—The deaths from all causes for the week ended October 14 aggregated 368. This is a decrease of 36 from the previous week and a decrease of 46 from those reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 12; consumption, 39; cancer, 22; apoplexy, 18; heart disease, 40; acute respiratory disease, 33; enteritis (under 2 years), 22; appendicitis, 3; Bright's disease, 31; accidents, 15; and marasmus, 11. There were 171 cases of contagious diseases reported, with 12 deaths, as compared with 191 cases and 28 deaths in the previous week, showing a marked decrease. The city has now been entirely free from smallpox for eight months.

### WASHINGTON.

**Hospital Dedicated.**—The new hospital of the Northern Pacific Beneficial Association at Tacoma was formally dedicated August 27. The building complete cost \$100,000.

**Typhoid at Penitentiary.**—Typhoid fever is raging in the state penitentiary at Walla Walla, where 59 out of 755 prisoners are in the prison hospital. Before the epidemic appeared Dr. Yancey C. Blalock, the prison physician, repeatedly warned the warden of the danger, but nothing was done.

**Sanatoria to Be Built.**—Plans have been perfected for the erection of a health resort and sanatorium at Spring Beach, north of Seattle, to cost about \$300,000.—Dr. F. M. Rossiter, North Yakima, has just completed the erection of a sanatorium in that city, which will be opened to the public this week.

**Personal.**—Dr. and Mrs. Augustus W. Thornton, Ferndale, recently celebrated their fiftieth wedding anniversary.—Fire in the Hutton building, Coulee City, destroyed the office of Dr. N. R. Gregg.—Dr. Landstrom, who was recently operated on for appendicitis at Seattle, is rapidly recovering from the operation.

**Had No License.**—C. Henderson, Lind, who issued a death certificate signing himself as a physician, was fined \$50, September 1, for practicing medicine without a license.—“Dr.” Mollison, Farmington, who was arrested September 23 on the charge of practicing medicine without a license, pleaded guilty, and was fined \$50 and \$8 costs.

**Washington State Medical Association.**—The sixteenth annual meeting of this association was held in Tacoma, September 27-29, under the presidency of Dr. James R. Yocum, Tacoma. The program included symposia on arteriosclerosis, the early diagnosis of tuberculosis, the digestive and nutritive disorders of children and infants, the prevention of infectious diseases, the early diagnosis of malignant disease, colic, dyspepsia and indigestion in adults, and organization of the medical profession, with an address by Dr. J. N. McCormack, chairman of the committee on organization of the American Medical Association. The election of officers resulted as follows: Dr. George W. Libby, Spokane, president; Drs. Lemon R. Markley, Bellingham, and Luther M. Sims, Kalama, vice-presidents; Dr. Curtis H. Thompson, Seattle, secretary; Dr. A. DeY. Green, treasurer; Dr. N. Fred Essig, Spokane, delegate to the American Medical Association; and Dr. James R. Yocum, Tacoma, alternate. The judicial committee for the coming year is composed of Drs. Charles G. Brown, Spokane; William C. Cox, Everett; Elmer M. Brown, Tacoma; R. N. Gordon, Seattle; Wilson Johnston, Colfax, and Nathaniel J. Redpath, Olympia. During the discussion of the organization it was announced that the population of the state was 874,310, that there were 967 physicians in the state, but 374 of whom were members of the state association. The next meeting will be held in Spokane.

### WYOMING.

**Personal.**—Dr. Letitia Wiseman, Cheyenne, has become physician of Laramie County, succeeding Dr. William A. Wyman, whose term has expired.

**Doctor Pardoned.**—The State Board of Pardons on October 10, after a careful investigation of the case of Dr. Potts, Buffalo, now serving a term of twenty years for the murder of a man in a saloon at Big Horn, recommended that he be pardoned.

**Robbed and Restored.**—Dr. John H. Conway, Cheyenne, who had an envelope containing \$5,000 worth of stocks and securities stolen from his safe September 28, and also \$125 in cash, received an envelope the next day containing the non-negotiable stock and securities, but not the cash.

**Sheridan Physicians Threaten Boycott.**—The physicians of Sheridan have forwarded an ultimatum to the governor that unless he confines the work of the present medical director of the state hospital strictly to that institution, they will boycott the hospital and refuse to aid in its operation.

**New State Hospital Overcrowded.**—The new State Hospital at Sheridan, which was completed only four months ago at a cost of about \$25,000, is already unable to accommodate the large number of patients who desire to enter the institution. The state auditor will furnish increased accommodation by providing quarters for the nurses in another building.

### GENERAL.

**Tri-State at Memphis.**—The Tri-State Medical Association of Mississippi, Arkansas and Tennessee will hold its twenty-second annual meeting at Memphis, Tenn., in the Hotel Gayoso,



Nov. 21-23, 1905. Further information may be obtained from the secretary, Dr. Richmond McKinney, Memphis, Tenn.

**International Sanitary Conference.**—The second International Sanitary Conference of American Republics was held in Washington, D. C., beginning October 10. Delegates from twelve South American republics, from the Army and Navy and from the United States Health and Marine-Hospital Service were in attendance. Surgeon-General Walter Wyman presided. The address of welcome on behalf of the government was made by Mr. Root, the secretary of state. Mr. Taylor, assistant secretary of the treasury, also welcomed the delegates on behalf of the Public Health and Marine-Hospital Service. The response was made by Mr. Quesada, the Cuban minister. The present quarantine arrangements were criticised and some modifications suggested. It was proposed to translate the U. S. Pharmacopeia into Spanish. This is to be reported on at the next meeting, which will be held in Mexico City in 1907.

**Alvarenga Prize Award.**—The 1905 prize has been awarded to Dr. Chalmers Watson of Edinburgh, Scotland, for his essay, entitled "The Importance of Diet; an Experimental Study from a New Standpoint." This prize is given by the College of Physicians of Philadelphia, and consists, each year, of the income of the bequest of the late Señor Alvarenga, amounting to about \$180. The next award will be made July 14, 1906, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be on any subject in medicine, but can not have been published. They must be typewritten, and must be received by the secretary of the college on or before May 1, 1906. Each essay must be sent without signature, but marked with a motto and accompanied by a sealed envelope having on its outside the motto and within the name and address of the author.

**The Health of the Army.**—In his official report for the year ending June 30, 1905, Surgeon-General O'Reilly states that there were 79,586 "admissions to sick report," 406 deaths from all causes, and 1,377 discharges for disability. He states that by far the most important diseases affecting the efficiency of the Army have been venereal, that the control of these diseases lies in the hands of the civil authorities, and that one of the most important steps to that end would be the classing of these with other contagious and reportable diseases. Notwithstanding that a large proportion of the Army was serving in the tropics there was no death or admission to sick report from snakebite. The report states that it is impossible to make any just comparison with the statistics of other countries, as in the United States the admissions include all soldiers who are excused from any part of their military duties, while this is not the case with any other country; that portion of the Army serving outside of the geographical limits of the United States is also included, while this is not the case with any other country except Great Britain. Some countries have a low death rate because their sick are promptly discharged or retired and die out of service instead of on sick report. The very high proportion of alcoholism in the American Army as compared with the British army is partly due to the fact that in the latter service only admissions to hospital are counted. While the British have less than half the American admission rate for dysentery their death rate is practically the same. The figures for measles and mumps compare very unfavorably with other armies with the exception of the French. The comparatively high American death rate from tuberculosis is explained by the fact that in the United States Army tuberculosis patients are sent to a sanitarium and retained in the service for long periods, while in other armies they are discharged. The undue prevalence of typhoid fever is explained by Dr. O'Reilly by its undue prevalence in civil communities where the troops are stationed as a result of the general failure in American municipalities to purify water and sewage.

**Yellow Fever.**—During the past week there has been a still more marked diminution in the number of cases at New Orleans. Further improvement in Louisiana and Mississippi is following the low temperature and frost, which, on October 12, reached to within thirty-five miles of New Orleans. Quarantines are being relaxed. Baton Rouge has opened its doors to the world. All the shotgun quarantines were abandoned on October 15.—Dr. L. Szabary, reported last week as arrested on two charges of neglecting to report cases of yellow fever, was fined the limit provided by law, but he appealed his case.—One New Orleans newspaper maintains there has been no yellow fever in the city. It is said that last week one of its reporters died of the fever and another is down with it.—In all there have been eight cases at Baton Rouge.—Patterson, La., is still suffering severely.—In New

Orleans fumigation has ceased, and the emergency sanitary force has been discharged.—It is expected that by October 23 most of the quarantines will be raised.—The towns of Hamburg and Scranton, Miss., although infected, refused to take any steps against the epidemic and made it so unpleasant for the physicians who came to help them that the latter were forced to retire. The tales of the medieval ignorance of the people of these two towns are almost beyond belief.—It is reported that the authorities have gathered much sworn testimony of "grafting" on the part of local health officials throughout the yellow-fever zone. It is to be hoped that it will be used to secure exemplary punishment.—At Natchez there has been great trouble with people who would not permit fumigation and who obstructed all efforts at rational sanitation. A prominent citizen was tried for obstructing the health authorities, but the mayor set him free. Thereon the States Public Health and Marine-Hospital Service, met and decided on vigorous action. The city authorities then modified their attitude.—At Pensacola, Fla., the situation is improving, but it has been very bad. The British vice-consul died last week of yellow fever. Dr. H. H. Baulter, a dentist, wrote to the *Atlanta Journal* that there was no yellow fever in Pensacola. Fate overtook him, as he died of the fever on October 3. Nearly every section of Pensacola contains foci, but a vigorous fight against the infection has wrought improvement.—Arkansas has agreed to admit Florida oranges provided they come in screened cars.—Missouri has raised its quarantine, and St. Louis has ceased its inspection service.—The Illinois authorities, on October 14, suspended inspection at Thebes and Brookport, and it was announced that the Cairo quarantine would be raised October 17.—A fatal case of yellow fever occurred at Marion, Ind., the victim being a refugee from Louisiana.—A good deal of yellow fever is reported at Puerto Barrios, Guatemala.—In Mexico there is yellow fever at Tuxtepec, Vera Cruz, and Tezompa.—Up to the first of October it is figured that in New Orleans one person out of every 102 had had yellow fever and that one out of every 792 has died of it. The figurer went further and estimated that in a two days' visit President Roosevelt will run one chance in 3,890 of contracting the fever and one in 29,000 of dying of it.

#### CANADA.

**The Montreal League for the Prevention of Tuberculosis.**—This league has established a new home, Brehner Rest, at Ste. Agathe, fifty miles from Montreal, for patients in the pre-tuberculous stage. Dr. A. J. Richer, Montreal, is the physician in charge.

**Montreal's Mortality.**—Four thousand nine hundred and fifty-two persons died in Montreal in 1904 among the French-Canadian population; 2,855 were children under 5 years, 294 from 5 to 20 years, 1,348 from 20 to 70, and 145 over 70 years. There were 76 deaths in Montreal during the week ending October 7. Of this number 31 were of children under one year.

**Ontario Board of Health.**—Dr. Hodgetts, secretary of the Ontario Board of Health, has called a meeting of the board to discuss various plans for sewage disposal in connection with different towns in Ontario. The board is directing the attention of lumbering companies to the fact that a regulation of the department calling for medical men in all lumber camps must be complied with.

**Annual Meeting of the Winnipeg Medical Association.**—The annual meeting of the Winnipeg Medical Association was held in the medical library October 6, when the following officers were elected for the ensuing year: President, Dr. Gordon Bell; first vice-president, Dr. E. W. Montgomery; second vice-president, Dr. J. R. Davidson; secretary-treasurer, Dr. Charles Woollard; executive committee, Drs. Mary Crawford, Hugh MacKay, A. D. Carscallen and N. J. McLean.

**Personal.**—Dr. Bruce L. Riordan, Toronto, surgeon to the Grand Trunk Railway, has been appointed division surgeon of the middle, northern and southern divisions of that railway in Ontario.—Dr. D. King Smith, Toronto, has returned from a trip to England.—Dr. E. R. Frankish, Toronto, has gone to trip to England.—Dr. E. R. Frankish, Toronto, has gone to the hospitals of London and Dublin.—Dr. Coote of Quebec has reported to the government of the province of Quebec that trachoma is prevalent along the line of the Quebec & Lake St. John Railway.—Dr. G. W. Elliott of the immigration department of the Canadian government has just been appointed Canadian medical inspector at Ellis Island, New York.—On behalf of the practitioners of Winnipeg Dr. H. H. Chown re-



cently presented Dr. Chestnut of that city with a handsome cabinet of silver.

**Hospital News.**—During the week ending October 14 an additional \$22,000 was subscribed to the Toronto General Hospital. —Three hundred and seventy-five patients were treated in the Winnipeg General Hospital during the week ending October 7; of these 271 were men, 69 women and 35 children; 97 outpatients were also treated. —Dr. Charles Doherty, superintendent of the British Columbia Provincial Hospital, states that there were 353 inmates in that institution on September 1; that 11 were received during September, and that 1 died. There were 362 in the hospital on September 30, 1 being discharged on probation. —The Western Hospital, Montreal, recently received a bequest of \$2,000 from the late Mr. W. S. Evans. —Additional accommodation has been arranged for typhoid fever patients at the Winnipeg General Hospital. So far the death rate is low for the number of cases reported. —The new Alexandra Infectious Diseases Hospital in Montreal is nearing completion, but \$150,000 is yet needed to carry out the plans of the trustees successfully. One hundred and twelve beds will be required for the three wards, for diphtheria, scarlet fever and measles.

### FOREIGN.

**Nestor of Russian Pharmacists.**—Prof. J. Trapp, professor emeritus of pharmaceutics at the St. Petersburg Military Academy, celebrated his ninetieth birthday in September.

**Osler to Lecture.**—Dr. Osler, according to the *Medical Press*, has accepted the post of Thomas Young lecturer on medicine at St. George's Hospital, London, and will give a series of lectures and demonstrations at the hospital next spring on the diagnosis of abdominal tumors.

**Plague in Australia.**—A fatal case of bubonic plague occurred at Townsville on August 4. The patient, a boy aged 13, was employed in a chemist's shop and lived on board a coal hulk moored at the wharf. Several plague infected rats were found on the wharf. Two plague patients are under treatment at Cairns.

**Dengue in Cuba.**—Acting Assistant Surgeon Nuñez reports that the epidemic of dengue in Matanzas continues to spread. No prophylactic measures of any kind are being observed against its dissemination, in view of the fact that the disease is assuming a benign form and that no deaths have been reported. Some cases of dengue have been reported from Limonar near Matanzas.

**Care of School Children in England.**—The annual report of Dr. Davies, the medical officer of health in Bristol, states that there are 65,000 children in the schools in that city and that there is urgent need for their medical inspection. The London board of education has a medical officer and is preparing a scheme of inspection. Blackburn, Leicester and Liverpool are also moving in the matter, and Dr. Davies in his report states that if Bristol took some action it would not only be a wise measure from the viewpoint of public health, but would also prove a saving in taxes.

**Yellow Fever in Central America.**—It is reported that yellow fever, or a disease closely akin to it, has made disastrous progress during the last few months in the lowlands on the Atlantic slope. While it is difficult to get at the facts, there seem to have been several deaths in towns situated at some distance from each other. The situation is reported to be particularly deplorable at Zacapa and Gualan, on the Guatemala Northern Railroad. This railroad has been compelled to close construction camps nearest to the infected region; mail trains only are operated. Several deaths from yellow fever in the American colony have been reported.

**Petition to Legislature of Argentine Republic.**—A bill is now pending in the Argentine legislature which aims to protect the interests of the medical profession. The physicians and medical students throughout the land are intensely interested in the passage of the bill. A petition asking for immediate action on the bill and its acceptance, with such modifications as experience may suggest, is to be presented to the chairman of the house of deputies. The petition has been kept at the office of the *Semana Medica* at Buenos Ayres, and more than a thousand signatures had already been received by September 1, the date of the last issue of the *Semana* that has come to hand.

**Sanitation in Manchuria.**—According to *Public Health Reports*, there has been earnest and hearty co-operation in Niuchwang between the Japanese military administration and the consular body in providing strict quarantine regulations. In the enforcement of this, together with all regulations governing the native Chinese city, the military administrator and his staff have conducted all the executive functions and are

justly entitled to the credit, as under military occupation they would have been blamed if they had neglected to provide sanitary precautions and an epidemic had followed. Under Russian occupation, both cholera and plague infested Niuchwang at times, although the Russians, under a civil administration, also battled with uncleanness and initiated quarantine regulations. Although they were not successful, cholera having made its appearance in 1902 and bubonic plague in 1903, still the pioneer sanitary campaign of the Russians in the native city blazed the way, as it were, notwithstanding that the immediate beneficial results were uncertain. The loss from cholera in 1902 being only 1,013, and in the year 1903 from plague only 890, indicates that the precautions taken served to check the spread of the dreaded epidemics. It is believed by the port physician that Niuchwang will be fortunate enough to pass the season without the appearance of any epidemic. The whole Chinese district of Niuchwang is scoured and cleaned with the regularity of clockwork. Twenty Japanese, from the medical staff down, are specially detailed on the service. They employ sixty Chinese and as many Chinese carts. The district is divided into three sections. In each section every morning a physician sets out on his daily round from door to door. Two gendarmes go with him. It is his first duty to find out if any fresh cases of illness have appeared. He has to see at the same time that the premises are cleaned well, that filth and dirt are put in their right place, and that the refuse matter is gathered in the garbage box provided for the purpose. The cleaning force follows, with its train of twenty Chinese carts. A Chinese policeman takes the lead. Bell in hand, he keeps ringing the bell, as if the welfare of all Niuchwang depended on it. The people within hearing are reminded of the appearance of the procession. The contents of the garbage box must be emptied on the carts. This is paramountly positive. When the carts are loaded well, or have taken over what there was to receive, they start on a march out of the mud wall to the dumping ground, or rather dumping hollow. Earth is thrown over the heap to cover it up. Meantime the disinfecting force of seven has taken its turn. A medical expert is of the number. He has gone over the reports of the inquiry force for the day, and can tell what particular points await his call. He has marked out the day's round before he sets out. Disinfectants are liberally applied when necessary. The fresh cases of illness, if there be any, are examined and their nature is ascertained.

### LONDON LETTER.

#### Increase of Lunacy.

The fifty-ninth annual report of the commissioners in lunacy has just been issued and again shows an increase in the prevalence of lunacy in the population of England and Wales. The number certified as insane on Jan. 1, 1905, was 119,829, being an increase of 2,630 on the number for the previous year. This increase for 1904 may be compared with those of 3,235 for 1903, 3,251 for 1902, and 2,769 for 1901. The average annual increase in the ten years ending December, 1904, was 2,575, and in that of the five years ending on the same date, 2,644. The increase in 1904 thus exceeded the average annual increase in the ten years by only 55, and was less than that in the five years by 14. On Jan. 1, 1905, the total number of certified insane in England stood to the estimated population in the proportion of 1 to 285, or 35 per 10,000—an increase of 1.09 per cent. on the ratio for the same day of the previous year. In 1896 the ratio was 31.3, so that it has increased by 12 per cent. in the past nine years. The commissioners direct special attention to alcoholism as one of the causes of the increase of lunacy. In the five years 1899-1903 it was an assigned cause of insanity in 22.7 per cent. of the male admissions to asylums and in 9.4 per cent. of the female.

#### Scalp Isolation in Ringworm in School Children.

At the Congress of Public Health, recently held in London, Dr. David Walsh described an ingenious method of treating ringworm of the scalp which enabled the child to attend school—a thing which at present is impossible except in large cities where special schools for children suffering from ringworm are provided. The advantages of the method are great if the great loss of education which the intractable nature of the disease entails be considered. The scalp is first shaved, no matter whether there be one patch of ringworm or many; it is then rubbed with turpentine, washed with soap and water, and dressed with a germicide, such as a weak solution of formalin or sulphurous acid. It is then exposed to the x-rays for ten minutes, and finally it is painted with several coats of flexible collodion containing 10 per cent. of salicylic acid. The use of the x-rays is not essential; a mild irritant application may be substituted for it. In the next few days a fresh coat of collodion is applied, especially if there is any tendency of the



collodion cap to crack. If desired, the cap may be strengthened with a coating of rubber solution, with Unna's zinc-gelatin, with a thin layer of cotton wool, or with strips of rubber adhesive plaster. After a week or days the cap is forced up one-eighth of an inch by the growth of the hair. It can then be gently stripped off, bearing on its under surface the firmly adherent stumps of diseased and healthy hairs. If it can not be stripped off without causing much pain its removal may be rendered easier by inserting a pair of scissors and snipping some of the hairs. The ringworm hairs are twisted and irregular as they were on the scalp, and some of them are turned white, presumably from the action of the ether in the collodion. The process may be repeated as often as necessary. An objection to the treatment is that collodion is somewhat costly, but no doubt cheaper substitutes, such as rubber solution, may be found.

#### Scarlet Fever in London.

For some weeks the officials of the Metropolitan Asylums Board have been coping with one of the most serious outbreaks of scarlet fever which has occurred in London for some years. It is now thought that the outbreak has passed its maximum stage, though according to the last report over 100 patients have been removed from their homes in one day. There are now under treatment in the fever hospitals 4,228 cases. The disease is scarlet fever in 3,404, diphtheria in 685 and typhoid fever in 138. Scarlet fever is prevalent in all parts of the metropolis.

## Correspondence

### Medical Reciprocity.

DALLAS, TEXAS, Oct. 5, 1905.

*To the Editor:*—The student of European history, no doubt with an amused smile on his lips, has frequently read about the ridiculous and petty conditions that existed in Europe, especially in Germany, in bygone centuries. A number of small principalities and duchies existed then along the Rhine and in the German empire, and with incredible jealousy and hostility those petty monarchies watched over their prerogatives and rights and surrounded themselves with a barrier of tolls and taxes that made trade and travel only too difficult. The Napoleonic wars, the revolution of 1848 and the German-Austrian war of 1866 swept those little principalities away and in their stead we find a German nation, a united German empire. Before the emancipation of Alexander the Second, the Russian peasants were tied to the soil, to the place of their birth, and the Russian Jews, even at the present time, with certain exceptions, are kept within a certain district, the so-called "pale" of Russia. The American people are proud, and have a right to be proud, of their country, of the vast progress it has made and of the success of the doctrines promulgated by its founders. Every artisan or every mechanic, every tradesman, born in Alaska or Florida, whether he has worked in Maine or California, under the privileges granted him by the Constitution of this country, has a perfect right to leave his abode, to go wherever he pleases and to start his work again, without interference from any authority.

This rule, however, does not seem to hold good for the medical profession of the country. The restrictions placed by the different state boards have practically made the physician a slave to the place and state he happened to locate in. There is no denying that these restrictions were well meant and were made for the benefit of the people and for the benefit of the honorable and honest members of a noble profession. While they were drawn apparently to protect the public against the importunities of the quack and the itinerant vendor of medicine and to protect the better educated, better trained part of the profession from the vast army of ill-prepared, untrained graduates of third-rate colleges, these rules work untold hardships on a number of good, honorable members of the profession. It is a difficult matter for a physician to settle in a new locality when broken-down health, lack of congeniality, of scientific instruction and a number of other factors compel him to take this step and to commence work again in a strange community. At the outset he is confronted with the difficulty of an examination before a state board. The demands of active practice, the strenuous life the physician leads, the demands of his family and the financial part of his practice, in the course of years,

have made him forget the exact number of blood corpuscles to the square inch, or the exact origin of certain nerves or muscles, or the different effects of certain drugs which have become obsolete. Yet that very same man has, perhaps, lived and worked in a community for many years as a respected and beloved physician. He may have helped to build up a city and have been a useful member of society; in short, he may have been a good man in every respect. Still, should he decide or be compelled to change his place of abode, he is confronted at the outset with the insurmountable barrier of an examination before a state board.

The situation is extremely unfair. A physician in Germany can change his location from West Prussia to Bavaria without any trouble; a physician practicing in Ems in summer may practice in Italy or the Riviera during the winter\*; but let any physician, let us say from Mississippi, visit a summer resort in Colorado or Michigan and dare to prescribe for a friend or acquaintance, would not the state board swoop down on him and haul him into court? Ours is one country, with one language, and those measures of protection, originally well meant, are certainly an injustice to and a burden on many physicians.

Many progressive and enlightened members of the profession have already mentioned this anomalous condition in the medical press of this country, and the efforts of some state boards in accepting certificates from certain states as an exchange of courtesies, is, indeed, a step in the right direction, but there is still plenty of room for improvement. In my opinion, a physician who contemplates a visit to some health resort for a month or two should be allowed to practice there on a temporary license. A physician who is compelled to go to another state should be permitted to practice if he produces a properly signed certificate of his county and state society, like a church letter attesting his moral and professional qualifications.

William Osler, in his Farewell Address (*THE JOURNAL OF A. M. A.*, Aug. 9, 1905, page 366), says: "A few months ago a man who is registered in three states, an able, capable practitioner of twenty years' standing, a hard student in his profession, a physician who has had charge of some of the most important lives of this country, had to undergo another examination for license." What an anomaly! What a reflection on a united profession!

EMILE ARONSON, M.D.

### The Proportion of Night Labors.

DAVENPORT, IOWA, Oct. 14, 1905.

*To the Editor:*—In *THE JOURNAL* of this date you refer to White, who considers the idea that a majority of labors terminate at night as probably fallacious and suggests a further consideration of statistics.

In the *Medical News*, Sept. 12, 1891, Dr. G. W. H. Kemper recorded the statistics of 1,000 consecutive cases, 13 of which were twins, the hour of two births not recorded, leaving a total of 1,011 births. Dividing the day into six-hour periods beginning at midnight, there were in the first 291, in the second 267, in the third 222, and in the fourth 231 births, being an excess of 33 in favor of the night hours.

Of the 250 consecutive labors of which I have kept notes 81 terminated in the first quarter of the day, 68 in the second, 43 in the third and 58 in the fourth, being an excess of 28 in favor of the night hours.

In both series there is a decided maximum between midnight and 6 a. m., and I believe that it will be found that this generally holds good.

C. H. PRESTON.

### "The Mosquito Theory in Text-Books."

PHILADELPHIA, Oct. 16, 1905.

*To the Editor:*—The criticism of Dr. McCaw [*THE JOURNAL*, Oct. 7, 1905, p. 1100] is correct, and I am very much obliged to him for calling my attention to an obvious oversight, which escaped me in the revision, owing to the pressure of many duties. I wish also to thank Major Kean, surgeon, U. S. A., for noting the error to me simultaneously. The profession has been good enough to call for a new printing, which is in progress, and I have taken this opportunity to make the necessary correction.

J. H. MUSSER.

\* We feel sure that our correspondent is misinformed as to these statements.—EDITOR.



## Marriages

W. A. WEST, M.D., to Miss Marion Cottrell, at Richmond, Va., October 3.

RICHARD LEE GILL, M.D., to Miss Tillie Fehsenfeld, at Baltimore, October 11.

ROY H. ELLIOTT, M.D., to Miss Gertrude Vance, both of Connersville, Ind., October 18.

AUBREY POSEY, M.D., to Miss Katherine E. Howard, at Chapel Point, Md., October 5.

JOHN C. D. DAVIS, M.D., St. Michaels, Md., to Miss Bertha Beck, at Baltimore, October 6.

J. PHILIP GIBBS, M.D., to Miss Mary Brent McAshan, both of Houston, Texas, October 18.

EUGENE TOWNER SENSENEY, M.D., to Miss Miriam Coste, both of St. Louis, October 18.

GEORGE WILLIAM FOX, M.D., to Miss Marguerite Romadka, both of Milwaukee, October 18.

CHARLES E. PARKER, M.D., Sterling, Ill., to Miss Stella Geofroy of Rock Falls, Ill., October 5.

FREDERICK S. BOOTAY, M.D., New York City, to Miss Edna G. Cavalier, at Baltimore, October 4.

LANCELOT ELY, M.D., Flanders, N. J., to Miss Alice Louise Lawrence of Dover, N. J., October 10.

SAMUEL PATTEN AMES, M.D., to Miss Lotta Marie Smiley, both of New York City, September 30.

NEWELL SIMMONS FERRY, M.D., Memphis, Tenn., to Miss Caroline Taylor of St. Louis, October 14.

HOWARD PENNEL, M.D., Downingtown, Pa., to Miss Hannah S. Mellor of West Chester, Pa., October 11.

WILLIAM ALLEN TURNER, M.D., Newnan, Ga., to Miss Annie Kirk Dowdell of Opelika, Ala., October 18.

JOHN ALEXANDER ROBINSON, M.D., New York City, to Miss Grace A. Bergfels of Newark, N. J., October 12.

PERRY B. GOODWIN, M.D., Summum, Ill., to Miss Mabelle B. London of Bristol, Conn., at Astoria, Ill., October 3.

JOHN L. MYERS, M.D., Shepherdstown, W. Va., to Miss Nan-  
nie Van Metre of Berkeley County, W. Va., October 6.

## Deaths

Eugene P. Bernardy, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1868, of Philadelphia; for several years connected with the teaching staff of the University of Pennsylvania and at one time visiting obstetrician to the Philadelphia Hospital; a member of the Philadelphia County Medical and Philadelphia County Obstetrical Societies, and also of the Medical Society of the State of Pennsylvania and the American Medical Association, died in Atlantic City from Bright's disease, October 11, aged 58.

Frank Buller, M.D. Victoria University, Coburg, Ont., 1869; McGill University, Montreal, 1876, died October 11 at his home in Montreal, aged 61. For seventeen years he held the post of ophthalmic and aural surgeon to the Montreal General Hospital, but resigned a few years ago to accept the same position at the Royal Victoria Hospital. He was one of the most noted oculists of America, and his recent researches in conjunction with Dr. Casey A. Wood, Chicago, on the effects of wood alcohol will be remembered.

William P. Tonry, M.D. Baltimore Medical College, a mining and chemical expert, formerly connected with city and state boards of health, died at his home in Baltimore, October 3, from angina pectoris, aged 64. He was an A.B. of Boston College, and a Ph.D. of Georgetown University. For three years he was in the laboratory of the surgeon-general's office, United States Army, and for several years held the chair of chemistry in different colleges.

Alonzo Morris Buck, M.D. University of Georgetown Medical Department, Washington, D. C., 1866, hospital steward during the Civil War: since that time an employé of the War Department and at the time of his death chief clerk of the sanitary and disbursing division of the surgeon-general's office, died at his home in Hyattsville, Md., September 29, after an illness of several months, aged 79.

Decatur Curran Anderson, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1901, of Moss Point, Miss.; formerly representative of the Louisiana State Board of Health in Central America, who on the outbreak of yellow

low fever at Tallulah, La., volunteered his services, died from the disease September 27, aged 28. The local chapter of his fraternity passed resolutions of respect to his memory.

Molton E. Hornbeck, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1865, for forty years local surgeon for the Lehigh Valley Railroad; a member of the Lehigh Valley Medical Society and the Medical Society of the State of Pennsylvania, died at his home in Catasauqua, Pa., October 9, from cerebral hemorrhage, aged 63.

Ellery Channing Clark, M.D. University of Vermont, Burlington, 1860, surgeon of the Eighth New Hampshire Volunteer Infantry in the Civil War, several times wounded; who was examiner in the United States pension office, Washington, until 1902, when he retired, died at his home in Baltimore October 3, after a lingering illness, aged 69.

Carl Seiler, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1871, formerly of Philadelphia, for twenty years a member of the faculty of the university, died at his home in Reading, Pa., October 10, aged 56. He was a member of the State, Philadelphia County and Lackawanna County Medical Societies.

Joseph R. McOscar, M.D. Ohio Medical University, Columbus, 1896, of Waterville, Ohio, a member of the American Medical Association and the Northwestern Ohio Medical Association, died from acute mania at St. Elizabeth's Hospital for the Insane, Washington, D. C., October 6, after an illness of three weeks, aged 41.

Edgar S. Hooper, M.D. Rush Medical College, Chicago, 1895, a member of the American Medical Association, Wisconsin State Medical Society, Central Wisconsin Medical Society and Lafayette County Medical Society, died recently at his home in Darlington, Wis., after a long illness from tuberculosis, aged 36.

Reason S. Boles, M.D. University of Wooster Medical Department, Cleveland, Ohio, 1869, a pioneer physician of Richland County, Ohio, health officer of Mansfield, died at his home in that city October 3 from neuralgia of the heart, after an illness of less than forty-eight hours, aged 62.

Thomas Addison Jenkins, M.D. Bellevue Hospital Medical College, New York City, 1897, who has been residing in Denver for the last four years, died from consumption at the home of his brother in Brooklyn, N. Y., October 11, aged 33.

Joseph B. Jones, M.D. College of Physicians and Surgeons in the City of New York, 1855, at one time coroner of Kings County and health commissioner of Brooklyn, died at his home in Brooklyn, October 9, aged 77.

Eli Ayer Chase, M.D. Long Island College Hospital, Brooklyn, N. Y., 1872, while despondent from ill health, committed suicide by shooting himself through the head at his home in Brockton, Mass., October 3, aged 58.

Stephen Lett, M.D. Toronto University Medical Faculty, 1879, of Guelph, Ont., died October 11 in the Homewood Retreat, Guelph, an institution over which he presided ably several years ago, aged 58.

John A. McKenzie, M.D. College of Physicians and Surgeons, Boston, Mass., 1892, assistant superintendent of the Provincial Hospital for the Insane, Halifax, N. S., since 1893, died in Halifax, October 12.

James E. Baker, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1881, a retired practitioner of Lancaster, Pa., died at his home in that city, September 29, aged 52.

Wilson T. Bassett, M.D. Albany (N. Y.) Medical College, 1844, one of the most prominent practitioners of Otsego County, N. Y., died at his home in Cooperstown, October 3, aged 84.

Lawrence O. Wood, M.D. Cincinnati, 1899, of Madisonville, Ky., died at Deaconess Hospital, Louisville, October 15, following an operation for appendicitis, aged 35.

Samuel C. Allaband, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1865, died at his home in Philadelphia, September 21, aged 62.

Upton A. Sharretts, M.D. Pennsylvania, 1883, formerly of Frederick, Md., died at Colorado Springs, Colo., October 8, from hemorrhage of the lungs, aged 47.

James C. McCallister, M.D. Castleton (Vt.) Medical College, 1850, died recently at his home in Genoa, Ill., aged 90, and was buried September 27.

Morris Wiener, M.D. University of Berlin, Germany, 1839, author, editor and litterateur, died at his home in Baltimore, October 12, aged 94.



## Miscellany

**Fifty Annual Mineral Water Courses.**—Carlsbad has recently celebrated the silver jubilee visit of one of its guests, a Moravian manufacturer, who returns year after year to take a course of the mineral waters at this health resort. His first visit was in 1828, when he was brought there in his tenth year on account of a kidney affection. His fiftieth resort to the Carlsbad springs this year was greeted with much ceremony by the town authorities, and the mayor announced that one of the walks is to be named after him, the "Proskowetz promenade."

**Medical Ethics.**—The remedy for existing defects and evils in our ethical system does not depend on ironclad, written nor specific rules of conduct, nor on the strict observance of such principles of ethics generally accepted as proper and necessary. We have at the outset accepted the philosophic statement that a code of perfect personal conduct can never be made definite. This is easily accounted for by changing conditions, unusual exigencies and emergencies, the evolution of thought, action and ideas, and the kaleidoseopic nature of our daily lives. Character must be the foundation on which ethical action is to be built. Proper conduct among men and affairs must be left to the man, his tact, his judgment, his education and his experience. The ranks of the medical profession must be recruited from men of broad minds, of high ideals, of lofty purposes, of enlightened thought, of charitable tendencies and of honest intentions. This is the remedy for the defects in our ethical system and when this is accomplished, the medical profession will be what it should be: a common brotherhood working harmoniously for the common welfare of humanity; dispensing charity to all, rendering pain less poignant, suffering less acute, encouraging the depressed and the despairing, making the world better and brighter and life more worth the living.—Frankle, in *Denver Medical Times*.

**Danger of Excessive Water Drinking.**—In the *Blätter für Volksgesundheitspflege* of Berlin, Dr. K. Beerwald says that "there are few more positive feelings than that of thirst. While we may go for weeks without food, in a few days without drink men become desperate. This fact is easily comprehended when we consider that 63 per cent. of the body is water, and that we give out each day a large amount of fluid through the lungs, skin and excretions. However, we need to drink relatively very little fluid, as our food is to a large extent water, even dry bread being 40 per cent. water, while juicy fruit contains 80 per cent. On the hunt, mountain tour, or walk, those people have the most endurance who do not stop at every inn, who do not drink from every spring. And it is rather an indication of bodily weakness if these exercises produce excessive perspiration and extreme thirst. These two things are simultaneous, the one causes the other; the one who perspires a great deal drinks a great deal, and again, because he has drunk he perspires. Thus the body becomes a distilling apparatus, but it should be borne in mind that the work performed has a great deal to do with the causation of weakness and exhaustion. Excessive water drinking not only produces temporary disturbance, it also creates direct organic disorders; the heart and kidneys are particularly affected by the excess, and in these cases the vascular system is overcharged and the heart and kidneys overworked. Proof of such a condition is frequently seen in cases of slight injury. A man who suffers frequently from thirst bleeds easily, and we may well consider that excessive thirst is a sign that the amount of fluid in the body is not kept within bounds, and that this condition must be remedied by opposing the feeling of thirst. We do not mean, however, that on hot days it is not natural to have a more positive feeling of thirst than at other times. When the high temperature takes from the body its fluids we must supply their loss. But even in this case nature has supplied us with abundant fruits, and these should be the first things with which we seek to satisfy our thirst. If, however, one must drink, the best thing is water, or better still, water and lemon juice, or occasionally a glass of milk. We should never drink beer or alcoholic drinks, which only exhaust and tire. It is certainly not a blessing for the fatherland that beer has grown to be the national drink of the Germans."

**Professional Lawlessness.**—Let us admit that toward all sorts of notification required by law, physicians are more or less indifferent and exercise a discretion that is somewhat excessive and dangerous, even for men as wise and good as the best of them are. The law requires of physicians three sorts of notification—one relating to deaths, another to births, and a third to certain infectious diseases. Deaths are certified by physicians wherever the law forbids interment of a dead body before the fact and circumstances of death have been recorded. Where bodies may be buried without a permit, there deaths are not registered, and where burial permits are not required, there the people, including often the sanitary authorities, reject the advice of the medical profession, which has for 60 odd years maintained that the fundamental requirement of a sanitary administration is a complete and accurate account of current mortality. This is no defense of physicians. It is a charge of ignorance, wilful ignorance, against all the people of all but ten of the States comprising this Union. Physicians do not register births in the United States, though they know that a satisfactory statement of profit and loss in population cannot possibly be made without complete information as to the sources of damage and repair. Not one state, not one city, in this country can state a reliable birth-rate for any year, though hundreds of physicians regularly register the births occurring in their practice. Here again physicians are not defended, but the people of the United States, without distinction of locality, are charged with a remarkable lack of intelligence in conditioning more than a score of important privileges and immunities on the attained age of the citizen, without mentioning in any law the simple document upon which proof of age attained may rest.—*American Medicine*.

**Blunders in English.**—We sympathize with our contemporary, *American Medicine*, in the following complaint: The contributor who headed a paragraph, "A Case of Anthracosis," and reported a case of anthrax—well, his etymology was better than his pathology! There is scarcely a report or text-book published which does not use the words *ease* and *patient* as synonymous—"the case recovered, died," etc., and the trials of the editor with manuscripts which repeat that "the case had no temperature," etc., are hard to bear. In a text-book on nervous diseases the word is further abused in the expression, "the ease cured through stretching of the plantar," "the case was awakened by a rat running across the bed." The authors are not seldom most imperative that "my manuscript shall not be changed in any way"—at least for the better. In a much-used text-book a paragraph in large caps is entitled: "TO DISTINGUISH CHICKEN FROM SMALL-POX," and that sort of scientific, zoologic, or grammatic diagnosis reappears in most of our journals. Even this amusing nonsense is surpassed by another title in the same book, reading: "TO ELIMINATE THE KIDNEYS." In a well-known text-book, the author within half a page speaks of himself as "we," "I," "the author," "the writer." When he has to quote another, one can never know to whom the term, *the author*, or *the writer* (absurd in speaking of one's-self) refers. It is of course to be expected that this author should write:

"The sexual bladder."  
 "A sequela."  
 "Malformations is a congenital hernia, etc."  
 "Cerebellar gait exists."  
 "Diagnosis is between this disease and migraine."  
 "Hysterical joint is a rigid, tender joint."  
 "A hallucinatory expression of ants creeping over the body."  
 "Astasia-abasia is inability to stand or sit well in hysteria."  
 "Diagnosis should not be confounded with other diseases."  
 "Nerve-energy is, to my mind, but the most refined form of electricity."  
 "The physiological mechanism in somnambulism is out of kilter so to speak."  
 "Excision of the ganglion is to be had." "cure will be had, etc."  
 "Early adult life is a predisposing condition of neuralgia."  
 "Neuralgia is more frequent in the female sex."  
 "Insomnia is sometimes called sleeplessness and is given to those conditions of insufficient or restless sleep or to the entire absence of sleep for a long time."  
 "Headache is a condition of pain in the head."  
 "There is no department of neurology more neglected than a proper understanding, or at least, if appreciated, the neglect of sufficient advice to convalescents from serious disorders of the nervous system, and in this place we shall devote especial consideration to functional diseases, those so considered in the absence of accurate scientific data to throw the light of a definite pathology upon many cases of them."



## Pharmacology

### Which Is It, a "Proprietary" or a "Patent" Medicine?

On the opposite page is a photograph of a full-page advertisement from the *Standard*, one of the leading London dailies. The page of the *Standard* is larger than that of any American newspaper, the space occupied by the advertisement being 18 inches by 24 inches. We have an assortment of advertisements of Kutnow's powder clipped from English newspapers, showing, as our correspondent who sent them remarks, that this is one of the best advertised "patent" medicines in England. In this country it is one of the most widely advertised "proprietary" medicines, as will be noted by a reference to our medical journals. We had to reduce the advertisement to get it down to our page limit, and part of the matter is hard to read without a magnifying glass. We have a variety of literature that would make interesting reading, had we space for it; but that included in the advertisement is sufficient to show what a wonderful remedy, according to the manufacturers, is this Kutnow's powder. It will be noticed that the testimonials from physicians—four of the six, we are proud to notice, are Americans—are separated from those of the laity. This is wise, as the two do not mix well.

N. B.—We do not charge anything for inserting this advertisement.

### Protest Against Paid Writeups.

One of the most discouraging phases of the proprietary medicine question is the fact that there are so many physicians who are ready to write up proprietary preparations favorably—but never unfavorably—for other than purely scientific reasons. There can be no objection to a physician writing and publishing an article on an ethical, strictly non-secret proprietary preparation, provided it is done with absolutely honest motives. We regret to say, however, that there are few of such articles written—so few that when one is presented it is looked on with suspicion. This abuse and species of graft is more prevalent in this country than in any other for well-known reasons, but medical journalism in Germany—and France also, to but slightly less extent—seems to be seriously affected by the same curse. Certain medical journals, judging from their contents, are published solely for the purpose of exploiting proprietary articles, and many of our German exchanges seem to have joined in this species of graft. Hence, it is not surprising that there has developed an opposition among the physicians there, as is noticed in a recent number of the *Muenchener medicinische Wochenschrift*. This journal states, September 26, that a petition with numerous signatures is being circulated, to present to the medical chambers (Aerztekammer) throughout Prussia, the purpose of which is to abolish the fraudulent practice of paid medical testimonials to the products of manufacturing chemists. The editorial continues:

"This fraudulent practice is, as is generally known, a by-product of our luxuriantly flourishing drug industry. The surest way to introduce a new drug to physicians is to have it scientifically recommended in the medical press. As a recommendation of this kind can not be obtained for every new remedy, many of the manufacturing chemists—and some of the most reputable firms among them, unfortunately—accomplish their purpose by paying physicians to write up apparently scientific articles on their preparations. Sad to say, there are plenty of physicians who will do this; some among them make an actual business of it, as they offer their services as scientific propagandist for every new remedy that turns up. It would be highly commendable if the Medical Chambers would turn their attention to this scandal, even if for nothing more than to call the attention of physicians at large to it more than in the past. It may be difficult, however, to find a remedy for it, as it is seldom possible to prove that an author has written for pay. But, on the other hand, much would be gained if the reputable med-

ical press would be more critical of works devoted to the recommendation of new manufactured remedies. The articles of certain authors, well known to all attentive readers of the medical press, which appear again and again with recommendations of new remedies in the various journals, should be rejected by the editors of first-class medical publications and should not be mentioned in the abstracts of the current literature department. If the medical press becomes closed to such articles, the manufacturing chemists will have no further use for them and they will not care to pay for them."

The time is ripe to have this great evil taken up in the United States.

### Commercial Journalism.

The following is a copy of a letter to a firm which advertises a proprietary remedy from a monthly medical journal that is presumed to be published in the interests of physicians:

"Gentlemen:—We intend to establish a new department in our magazine. Its purpose will be to teach the successful application of drugs and other remedial agents. Our contributors will be invited to make use of this new department and we expect it to become of considerable interest and value to our subscribers. The name of this department will be 'Modern Therapeutics.' It will be conducted on a liberal and broad-gauge plan. It will follow our original department.

"Its value to the general practitioner will lie in its up-to-dateness and liberalism. The usefulness of an ethical pharmaceutical product with an established reputation could be dwelt on in this department with much propriety. The value and range of usefulness of ——— might be discussed in these columns with considerable interest to our subscribers and benefit to you. We could secure a high-grade original paper dealing with the indications for your preparation and its merit as a therapeutic agent. This paper would embrace about 1,000 words, would be prepared by a good writer and trained clinician and would be based on actual clinical knowledge of your product. We would have experimental work done along lines that would enable us to secure first-hand knowledge of your preparation's value.

"In view of the preparation and publication of the paper we propose, we feel sure you would be willing to place a page advertisement in our columns. But aside from this the ——— has sufficient merit to warrant your advertising patronage. The ——— is one of the best known medical magazines in the country and as an advertising medium takes rank with the best. It has been published for — years and has a circulation of 10,000 copies among the best men in all parts of the country. We shall allow you a discount of 35 per cent. from the attached card of rates.

"We should like to learn your views on this proposition, all the more so since it is somewhat out of the ordinary and has, we believe, considerable merit. Thanking you for your reply, we beg to remain,

Yours very truly,

"—————."

### A Good Answer.

CINCINNATI, Sept. 11, 1905.

Dear Doctor:—If you have a case of Bright's disease or diabetes that is giving you trouble, we desire to call your attention to two new diuretics prepared by the John J. Fulton Company, of San Francisco.

They come to us so highly recommended that we thought it our duty to place them in the hands of the profession of this city and vicinity.

They are free from narcotics or sedatives and are purely eliminative.

Exhaustive tests show that 87 per cent. of cases of chronic nephritis begin within twenty days (sometimes earlier) to show gradual subsidence of the albumin and casts and increasing specific gravity.

The modification of the diuretic used in diabetes mellitus seems equally effective, the results soon showing decrease in the specific gravity, sugar and thirst.

Should this interest you, call for a pamphlet, or we can mail you one giving reports of scientifically conducted tests in a large variety of cases. Yours respectfully,

A. FENNEL & SON, Sole Agents.

Sept. 19, 1905.

My Dear Mr. A. Fennel & Son, Druggists:—When we want any advice from you on how to cure Bright's disease, or diabetes mellitus, we will let you know.

GEO. B. ORR.

P. S.—I might add that I am getting tired of this thing of having the patent medicine men telling members of the regular profession how to practice medicine.—Cincinnati Lanect-Clinic, Sept. 23, 1905.

1. Of the Americans, Dr. A. A. O'Neill, is a graduate of Jefferson Medical College, 1890. He is a member of the Chicago Medical Society. Dr. Edward E. Koehler is a graduate of the Niagara University, Buffalo, 1894. Dr. William R. Jones is professor of chemistry and toxicology in University Medical College, Richmond, Va., and graduated from the University of Virginia in 1892.



PRESCRIBED FOR MEMBERS OF THE ROYAL FAMILY.

## KUTNOW'S POWDER

## DR. CHARLES LOW

WRITER:  
"Hampden House, St. Pancras, N.W.,  
10th March, 1905."

"Gentlemen—I desire to give you my best thanks for the bottle of Kutnow's Powder you kindly sent me, and beg to say it has worked admirably in a case of enlarged Liver with vomiting and Constipation. So much so that I feel the result that I shall have no hesitation in prescribing it in all similar cases. If my statement is of any value you are at liberty to use it in any way you might think proper.—I remain, yours very truly,  
"CHARLES LOW,  
"M.R.C.S., L.S.A. Eng., &c."

## DR. J. BOND SULLIVAN

WRITER:  
"Knock, Ennis, co. Clare, Ireland.  
"Sir—Having recently got from you a sample bottle of Kutnow's Powder... from which I personally derived much benefit, will you now kindly send me a larger supply... as I really feel unsatisfied without it myself? I have recommended it to several lady patients, who approve of it greatly. An aged clergyman to whom I recommended Kutnow's Powder tells me he finds it both effective and agreeable.—Yours faithfully,  
"J. BOND SULLIVAN,  
"M.D., M.R.C.S. Eng., &c."

## DR. A. A. O'NEILL

WRITER:  
"Columbia Hospital, Chicago.  
"It gives me pleasure to state with what satisfaction I have used Kutnow's Powder in my practice, and I think if I can emphasize its merits I will do the profession at large a benefit. I find that it is one of the best neutralizers, and at the same time a gentle laxative and gastric sedative, which overcomes the most distressing symptoms so often remembered by patients with so much dread. Given in small freshly-made doses every few minutes, it soon controls the gastric distress, keeps up gentle peristalsis and laxity, the importance of which surgeons appreciate.  
"A. A. O'NEILL, M.D."

## DR. E. KOEHLER

WRITER:  
"696, Broadway, Buffalo, New York.  
"Dear Sirs—I am pleased to say that I have used in my own family, and also have prescribed in my practice, Kutnow's Powder in cases of chronic and very obstinate constipation, with most beneficial results. I also prescribed it successfully for gall-stones, lithemia, and uric acid diathesis, and can heartily endorse its merits in every way. Its pleasant taste makes it especially valuable for women and children.—I remain, dear Sirs, yours faithfully,  
"EDWARD E. KOEHLER, M.D."

## DR. W. A. RUST

WRITER:  
"254, Commonwealth Avenue, Boston.  
"You may be pleased to learn that the sample bottles of Kutnow's Powder sent me some time since have done good service. I gave one of them to a gentleman, who informs me that he would not be without it in his house, as it has given him greater relief than anything he has ever before tried for indigestion, with much flatulency and colic pains, which have afflicted him for a long time past. I am fully satisfied that your preparation is superior to anything of the kind with which I am acquainted.  
"WM. A. RUST, M.D."

## PROF. W. R. JONES, M.D.,

WRITER:  
"I am constantly prescribing Kutnow's Powder, with invariably good results. I also use it myself in order to regulate the inactivity of the digestive and excretory organs. It is especially beneficial in stimulating a sluggish liver, prevailing biliousness and dyspepsia, and permanently removing the baneful effects of chronic constipation.  
"W. R. JONES, M.D."  
(Professor of Natural Chemistry and Toxicology, University College, Virginia.)

## CLEANSE YOUR SYSTEM, FREE OF CHARGE!

THE PARAMOUNT IMPORTANCE of maintaining our physical and mental capacities up to full concert pitch is obvious. This work-a-day world admits no inefficiency to success, only those who can throw themselves heart and soul into their business attain their object. If we would maintain the standard of energy and vim required of us, we must keep the internal machinery in perfect working order. Everything depends upon the efficient working of the digestive and excretory organs, and as long as these go with clock-like regularity we enjoy immunity from the attacks of disease, and thus preserve our faculties for the duties of our business and the enjoyment of life.

Kutnow's Powder is a delightfully refreshing health-regulator, pleasant to take, and infallible in keeping the system clean, clear, wholesome, and efficient. Its reputation has been acquired by merit, and has been enhanced by the recognition and endorsement of the most distinguished members of the medical profession in all parts of the world. The medical profession prescribes Kutnow's Powder, knowing that besides being agreeable to a delicate and sensitive stomach it never by any chance causes the slightest griping or pain of any kind.

There is no remedy before the British people which can show such a splendid record of distinguished testimony, the medical, the scientific, the artistic, and the commercial worlds have forwarded their unsolicited endorsements of this remedy for derangements of the Liver, Stomach, Kidneys, and Bowels. Letters of approval from dignitaries of the Church, the Army, the Navy, and the Legal profession have been sent in praise of Kutnow's Powder. You can now test the merits of this remedy absolutely free of charge!

## FILL IN THE APPLICATION FORM BELOW.

## RISK OF KIDNEY DISEASE.

THE STRESS OF BUSINESS, the exhausting competition, the perpetual excitement, and our artificial tastes and desires have a strong tendency to reduce our energy and to make us old before our time. But our artificial life has a more serious effect still; we make uric acid, and unfortunately we do not get rid of it as fast as we make it. Some of it stays in the system to be re-absorbed by the blood, circulated to the tissues to set up mischief in the form of Gout, Rheumatism, Sciatica, and Lumbago. The fact is, we are too busy nowadays to look after our kidneys. Kutnow's Powder is a splendid preventive, and by its regular use you can prevent the ravages of serious disease. You cannot possibly do better than follow Professor Lawson Tait's example. Directly you wake take your dose of Kutnow's Powder; this will effectively flush your kidneys and wash out the bladder, getting rid of all poisonous uric acid. In getting rid of uric acid you are conferring the greatest possible benefit upon the nervous system. In taking Kutnow's Powder you are safeguarding yourself against mental depression, insomnia, languor, brain-fag, and loss of physical and mental energy.

## Fac-simile Package of the



## Genuine Kutnow's Powder.

## RISK OF SLUGGISH LIVER.

PROFESSOR I. R. BUCHANAN says: "Every organ has its mental and corporeal, its psychological and physiological, functions—both usually manifested together—either capable of assuming the predominance." The human frame may be compared to a watch, of which the heart is the mainspring, the stomach and bowels the works, and what we put into them the key by which the machine is to be wound up. But, as in a watch, the human machine requires a regulator, something to control speed whose action, on the quantity and quality of what we eat and drink, by digestion, will set the pace of the pulse. This wonderful regulator of the digestive organs is the Liver; its influence is paramount for good or evil; if active and vigorous all goes well, but if sluggish and disordered, then innumerable troubles quickly follow. A torpid liver induces a gloomy view of life, makes one irritable and a victim to nervous worry and anxiety. If you would lengthen and strengthen the line of your life, you must control the action of your liver and regulate it by means of that infallible remedy, Kutnow's Powder. You can test it free of cost.

## HOW TO DETECT FRAUDULENT IMITATIONS!

Kutnow's Powder can be had of all Chemists and Medicine Vendors at 2s. 9d. per bottle, or will be sent direct from Kutnow's London Offices to any address in the United Kingdom for 3s., post-paid. There is an ever-growing demand for Kutnow's Powder, and a corresponding increase of fraudulent imitations. Unfortunately, there are to be found, in business, parasites who feed on the credulity of the innocent purchaser by preferentially urging the sale of some concoction of their own in lieu of the genuine Kutnow's Powder. Beware, then, of these fraudulent imitations, which injure your health and bear the same value as a forged Bank note does to a genuine one. On analysis these substituted articles have been proved to be absolutely worthless and often injurious. You have the remedy, however, in your own hands. You can demand Kutnow's Powder, and examine the package, which should correspond with the illustration above. Bear in mind that to be genuine every package must have the fac-simile signature, "S. Kutnow and Co., Ltd.," and the registered trade-mark, "Hirschsprung, or Deer Leap," or the green carton in which the bottle is packed, and also on the greenish tinted label on the bottle. This signature and trade-mark should be seen in order to

## OBTAIN THE GENUINE KUTNOW'S POWDER!



Purify Your Blood—Gratis!

TO OBTAIN KUTNOW'S POWDER GRATIS  
SIGN THIS FORM  
(WRITE DISTINCTLY.)

NAME.....  
ADDRESS.....  
"The Standard," 853, BROADWAY, N.Y.C.  
This Form, posted in an open envelope, requires only 1d. stamp to be affixed. Send it to S. Kutnow and Co., Ltd., 41, Farringdon Road, London, E.C.



SOLE PROPRIETORS: S. KUTNOW & CO., Ltd., 41, Farringdon Road, London, E.C.  
PROPRIETORS IN U.S.A.: KUTNOW BROS., LTD., 853, BROADWAY, NEW YORK.

## A FAMOUS ROYAL ACADEMICIAN

WRITER:  
"1, Abbey Road, St. John's Wood, N.W.,  
1 April 5, 1905."

"I have used Kutnow's Powder for the last five years, and it has added to the pleasure of my life. I take a tablespoonful every morning when I rise, and find it a most refreshing drink. I have never needed to increase the dose, and it has acted perfectly in assisting Nature all this time. I take it in London, I take it with me to the Highlands, I take it in the Continent. I am now strong and healthy, and give you my experience, which may be useful.  
"JOHN MACWHIRTER, R.A."

## JOHN STRANGE WINTER

WRITER:  
"Mrs. Arthur Stannard,  
the popular authoress, in writing to advise a friend, said:

"I can quite understand your being anxious about yourself, if what you tell me is exact. I have been suffering from much the same thing myself, but the use of Kutnow's Powder has apparently quite cured me. I have recommended it to a great many friends lately. It does, indeed, seem hard when a doctor orders a course at an expensive foreign Spa to one who can scarcely keep himself in bed and butter here; yet what is a doctor to do? Mercifully, when the Spa is the place ordered Kutnow's Powder brings it within reach of all, in a medicinal sense. It ought to be known all over the world."

## CAPTAIN R. BARCLAY

WRITER:  
"Kirsteen, Cisbury-road, Brighton."

"Gentlemen—You kindly forwarded me a bottle of Kutnow's Powder a short time ago. I am very unwilling to testify that things have worked wonders, but really I cannot speak too highly of it. I have suffered for years from constipation and liver troubles. Your Powder has done all that I claimed, and more than that. It has given me comfort. Its action is sure and gentle, and at the same time certain, without any distressing effects. It would be a boon to many who suffer in the same manner.  
"R. BARCLAY (Capt.)"

## REV. CHAS. E. WINGCOTT

WRITER:  
"Incumbent of St. Philip's Church,  
Aldington, Lancs."

"Gentlemen—About three years ago I was confined to my bed for a short time with a very acute attack of liver complaint. After other medicines had failed to take any effect, I was recommended by my doctor to try Kutnow's Powder, and I am glad to say that after taking two bottles I was completely cured, and my health has been better ever since. I have since recommended your excellent preparation to quite a number of sufferers, who testify of similar results. I shall be pleased to allow you to make whatever use you like of my testimony.  
"(Rev.) CHAS. E. WINGCOTT."

## NURSE CROSS

WRITER:  
"2, Percy-road, Wrexham."

"Sir—Some five years ago I had an acute attack of nephritis (inflammation of the kidney), and my doctor advised Harnage waters. After trying them for some time with very little result, the doctor suggested giving Kutnow's Powder a trial, with such excellent results that in a short time I felt very much better. I continued taking it regularly every other day for two years, and consider it worked an entire cure. Many of my patients have tried it with excellent results. I think the wonderful good done in such cases should be widely known for the benefit of other sufferers.  
"MARGARET CROSS (Nurse)"

## MR. LOUIS BECKE,

the Australian Novelist,

writing to Messrs. Kutnow and Co. from the Continent for a supply of Kutnow's Powder for a friend suffering from liver complaint, says: "I regard your preparation as an invaluable one, especially in cases of congested liver and malarial fever. From my own experience I may mention that I honestly believe that Kutnow's Powder saved my life last year in the West Indies, where I was suffering at sea from both complaints, and medical attendance was not obtainable."



## Queries and Minor Notes

### INSTITUTIONS FOR STAMMERERS.

DR. H. C. J. inquires for institutions for the training of stammerers.

### MEDICAL DEFENSE COMPANIES.

CHICAGO, Ill., Oct. 16, 1905.

*To the Editor:*—Kindly inform me whether you consider the companies insuring practitioners of medicine against suits for alleged malpractice reliable. Also, give me names of some which you can recommend.

H. D. W.

ANSWER.—There are many companies insuring to physicians defense malpractice suits, and it is becoming very common with physicians—and surgeons especially—to be insured in such companies. There are two advertising in THE JOURNAL, both of which we consider reliable, viz., The Physician's Defense Co., Fort Wayne, Ind., and The Fidelity and Casualty Co., New York, N. Y. The former is strictly a physician's defense company, the latter conducts a physician's defense department in connection with other insurance business.

### LIFE INSURANCE POLICIES AND THE RECENT EXPOSURES OF DISHONESTY.

MULBERRY GROVE, ILL., Oct. 16, 1905.

*To the Editor:*—In view of recent exposures regarding the old life insurance companies what do you think of the endowment policy as an investment for physicians? I have two policies in the New York Life, one for \$2,500, on which four premiums have been paid, and one for \$1,000, on which three premiums have been paid. Would you advise me to continue the policies? I think this question of vital importance to physicians, and a statement from THE JOURNAL would evidently prove of interest.

E. A. GLASGOW.

ANSWER.—It is generally understood by those who ought to know that there is nothing whatever in the recent life insurance exposures that show the least indication that the companies will be unable to meet their contracts. It is agreed that the assets, reserves and guarantee funds are intact. To surrender a policy, therefore, and to start over again at the higher rate of a later age would be unwise. The relative value of endowment policy, life policy, or other forms of insurance contract is a matter of the personal needs and tastes of the individual. With a large family of dependents and relatively small income, the discriminating buyer of insurance chooses a life policy because securing the most protection for the least annual expenditure. The endowment is excellent for the man with no dependents or with dependents provided for or who wishes a personal return in old age from his insurance.

## State Boards of Registration

### COMING EXAMINATIONS.

State Board of Health of Kentucky, Louisville, October 24, Secretary, J. N. McCormack, Bowling Green.

Nebraska State Board of Health, State House, Lincoln, November 8-9. Secretary, George H. Brash, Beatrice.

Board of Registration of Medicine, in Maine City Building, Portland, November 14. Secretary Wm. J. Maybury, Saco.

Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.

Board of Registration in Medicine of Massachusetts, State House, Boston, November 14-15. Secretary, E. B. Harvey, Boston.

State Board of Health of West Virginia, Clarksburg, November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.

**Massachusetts September Report.**—Dr. E. B. Harvey, secretary of the Board of Registration in Medicine of Massachusetts, reports the written and oral examination held at Boston, Sept. 12-13, 1905. The number of subjects examined in was 9; total number of questions asked, 60; percentage required to pass, 70. The total number of candidates examined was 95, of whom 65 passed, including 7 non-graduates, and 30 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per Cent.
University of Vermont, (1893) 76; (1898) 71, 81; (1903) 71; (1905) 72, 73, 75, 76.		Grad.	
Baltimore Med. Coll. ....	(1903) 72; (1905) 71, 72		
College of P. and S. Boston ....	(1905) 70, 70, 78		
University of Naples ....	(1897) 74		
University of Boston ....	(1904) 76, 76; (1905) 74		
Maryland Med. Coll. ....	(1905) 70		
Jefferson Med. Coll. ....	(1892) 79; (1904) 74; (1905) 75, 77		
Woman's Med. Coll. of Pennsylvania ....	(1904) 79, 89		
Tufts Med. Coll. ....	(1905) 70, 73, 74, 75, 79, 82, 83		
Dartmouth Med. Coll. ....	(1905) 74, 76		
Harvard Univ. ....	(1904) 79, 80; (1905) 71, 75, 76, 78, 82, 83, 83.		
Yale Med. Coll. ....	(1905) 78		
McGill University ....	(1899) 81; (1904) 78		

College of P. & S., New York.....	(1905) 78
Western Pennsylvania Med. Coll.....	(1905) 72
College of P. and S., Baltimore .....	(1904) 76; (1905) 75
Shaw University .....	(1904) 78
Albertus University, Canada .....	(1904) 73.5
University of Michigan .....	(1900) 83
University of Pennsylvania .....	(1904) 81; (1905) 76
Bowdoin Med. Coll. ....	(1867) 70
Queen's University, Canada.....	(1905) 76
Cleveland Homeo. Med. Coll. ....	(1900) 78

## The Public Service

### Army Changes.

Changes of stations and duties of medical officers, U. S. Army, week ending October 14, 1905.

Devereux, John R., asst.-surgeon, granted leave of absence for 20 days, about October 1.

Carter, Edward C., surgeon, leave of absence extended ten days. McCaw, Walter D., surgeon, detailed to represent the Medical Department of the Army at International Sanitary Convention of American Republics, Washington, Oct. 9, 1905.

Eddie, Guy L., surgeon, returned to duty, attending surgeon's office, Washington, D. C., Oct. 2, from duty with the Secretary of War in the Philippine Islands.

Reilly, John J., asst.-surgeon, leave of absence granted for six months on surgeon's certificate of disability.

Wilson, Compton, asst.-surgeon, leave of absence extended four-teen days.

Crabtree, George H., asst.-surgeon, relieved from present duties and ordered to duty with Isthmian Canal Commission.

Bispham, William N., asst.-surgeon, granted leave of absence for three months, about November 1.

Munson, Edward L., asst.-surgeon, ordered to Washington, D. C., for examination for promotion.

Ebert, Rudolph G., surgeon, Raymond, Thos. U., surgeon, relieved from present duties in time to sail from San Francisco, Cal., Jan. 5, 1906, for duty in the Philippines Division.

Roberts, William, asst.-surgeon, order for duty in the Philippines Division revoked.

Hathaway, Levy M., asst.-surg., ordered to Fort Thomas, Ky., for duty.

McCaw, Walter D., surgeon, appointed member of board to investigate various systems of personal identification now in use.

Crampton, Louis W., deputy surgeon general, ordered from St. Louis Mo., to Grand Haven, Mich., and return, on medical supply business.

Vaughan, Milton, contract surgeon, left Fort Crook, Neb., for his home, Little Rock, Ark., for annulment of contract.

Kelly, John P., contract surgeon, relieved from duty at Fort Riley, Kans., and ordered to Presidio of Monterey, Cal., for duty.

Shellenberger, James E., contract surgeon, ordered to Fort Brown, Tex., for temporary duty.

Koyle, Fred T., contract surgeon, ordered to Fort Ringgold, Tex., for temporary duty.

Thorp, Charles W., contract surgeon, left Plattsburg Barracks, N. Y., for proper station, Fort Ethan Allen, Vt.

Lauderdale, Clarence E., dental surgeon, returned to Fort Sam Houston, Tex., from leave of absence.

White, J. Samuel, contract surgeon, returned to Fort Snelling, Minn., from duty with troops on practice march.

Kennedy, James S., contract surgeon, granted leave of absence for one month.

Sievers, Robert E., contract surgeon, returned from Fort Yellowstone, Wyo., to his proper station, Fort Harrison, Mont.

Wing, Franklin F., dental surgeon, ordered from Fort Riley, Kansas, to Fort Des Moines, Ia., for one month, and then to Jefferson Barracks, Mo.

Waddell, Ralph W., dental surgeon, ordered from Fort D. A. Russell, Wyo., to Fort Mackenzie, Wyo., for ten days and then to Fort Crook, Neb.

Dade, Waller H., contract surgeon, left Fort Duchesne, Utah, on ten days' hunting leave.

Koyle, Fred T., contract surgeon, returned to duty at Fort Bliss, Texas, from leave of absence.

White, J., Samuel, contract surgeon, granted leave of absence for two months.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 11:

Geddings, H. D., asst. surgeon-general, re-detailed for duty in the Bureau, effective September 25.

Ballhache, P. H., surgeon, granted leave of absence for six days from October 8, under paragraph 189 of the regulations.

Magruder, G. M., surgeon, granted extension of leave of absence for one month from September 26, on account of sickness.

Young, G. B., P. A. surgeon, granted leave of absence for two days.

McMullen, John, P. A. surgeon, to proceed from Gulfport to Jackson, Miss., and report to P. A. Surgeon G. B. Young for special temporary duty.

Berry, T. D., P. A. surgeon, relieved from duty at Gulfport, Miss., and directed to proceed to New Orleans, and report to Surgeon J. H. White for special temporary duty.

Glover, M. W., P. A. surgeon, relieved from duty at Victoria, B. C., and directed to proceed to Vancouver, B. C., for duty.

Stimson, A. M., asst.-surgeon, granted leave of absence for seven days from October 4, under paragraph 191 of the regulations.

Rodman, J. C., acting asst.-surgeon, granted leave of absence for seven days from October 12.

Scott, E. B., pharmacist, granted leave of absence for five days from October 4, under paragraph 210 of the regulations.

Ryder, L. W., pharmacist, granted leave of absence for seven days from October 16.

### RESIGNATION.

W. H. Keen, pharmacist, resigned to take effect October 5.



## Medical Organization

### MEDICAL ORGANIZATION IN MINNESOTA.

By J. N. McCormack, M.D.

Chairman of the Committee on Organization of the American Medical Association.

BOWLING GREEN, KY.

The two weeks' itinerary planned for me in Minnesota by Dr. McDavitt, the efficient and popular secretary of the Minnesota State Medical Association, enabled me to meet representative physicians of every district and of almost every county, to hear their opinions of the plans for and possibilities of a real organization of the profession by means of a universal system of live county societies, and to discuss with them the professional conditions and needs of each locality, and furnished a most interesting and instructive field for study while on the ground, and much food for reflection since.

Two meetings were called for St. Paul, one especially for the profession of that city and one a week later for the joint benefit of it and of the seventh councilor district. Neither was well attended, and I got the impression in these meetings and from other sources that a singular apathy has fallen on the profession there, for a long time considered one of the strongest and most virile in the Northwest. The meetings at Minneapolis, Duluth, St. Cloud, Fergus Falls, Wadena, Mankato, Redwood Falls and Rochester were all well attended and representative, and were fully alive to the problems involved in this reform movement when the plans for bringing it all about and the benefits which it would bring to both the profession and public were explained to them. In fact, I have been in no section where there was greater avidity to learn the latest and most practical plans for improvement in scientific, legislative and business work or more intelligent enthusiasm manifested in putting them into operation. Along with these impressions I got that of high personal and professional standards, especially in the younger men, and in the newer sections of the state. The fees, too, were more than double those of many of the eastern and middle states, and the schedules were adhered to more uniformly.

As Minnesota is not yet an organized state in the modern sense, having only begun its real work a little more than two years ago, and having now but two-fifths of the eligible physicians in the membership, a study of the influences which had operated to produce these favorable conditions had many fascinations for me, especially in the light of my observations in other states and sections. An inquiry into their medical history soon convinced me that they were traceable primarily to intelligent and, at the outset at least, well enforced legislation regulating the practice of medicine, secured in 1887, mainly through the personal efforts of Drs. Perry H. Millard, Franklin Staples and James B. McGaughey. As a result of such legislation this was one of the first states to require a three years' graded course of study, and the standards were soon put so high that students from Minnesota attended only the best medical schools, and it naturally came about that few outsiders presented themselves for examination who did not come from similar institutions. This gave a high caste to the profession, and the state, being a new one, with little overcrowding, with the bulk of the profession made up of young and middle-aged men who had been subjected to high tests of qualification, and with the better compensation which was evident on every hand, it was easy to understand why the lack of organization for a long time did not result so disastrously as in the older states, or even in the newer ones in which the laws were less perfect or had been so administered as to have less elevating and protective value.

As an evidence of the correctness of these estimates of causes and effects, in recent years, coincident with the phenomenal increase of wealth and population, and especially of the urban development, vigilance in the enforcement of the law relaxed, with the result that quackery in every form and variety on the outside, and commercialism in the shape of contract practice and commissions on the inside, have made rapid and dangerous inroads on the profession. As if to emphasize the futility of high standards on the statute books for permanent protection without such an organization as will support and enforce them, the quack interests, finding the profession without the power of practical co-operation, have been able to dictate legislation to such an extent as greatly to strengthen their own hands and to discourage the friends and supporters of scientific medicine. The physicians were disposed to blame everybody but themselves for their defeats, but the history of it was but a repetition of the old story of the routing of the well-meaning, divided and tactless hosts of a great profession by the small but compact, well-disciplined and unscrupulous

forces of quackery. With such an organization in every county as would make possible a union of all of the forces which should be at the constant command of the profession for the proper protection of its own and the public interests, including the State Board of Medical Examiners, the State Board of Health and the medical schools, under well selected and tactful leadership, all necessary legislation ought to be obtained within the next few years. To my mind it is especially important here, and in other states where it has not already been done, to have incorporated in the medical law a provision for the examination of the adherents of new or unusual systems of healing, now in existence or which may hereafter be discovered, that they may be taken care of without special legislation, and before they gain a sympathetic and noisy following. With this should go a plain, strong and practical revoking clause for dishonest professional claims and conduct, criminal abortions and addiction to the liquor or drug habit, which should be operated mainly in an educational and preventive way after ridding the state of the present crop of advertising charlatans. It is easy to see, however, that each year of delay in getting together and securing such legislation will greatly increase both the difficulties and the dangers.

As might have been expected, with such a personnel as I have described making up the bulk of its profession, Minnesota was one of the first states to attempt reorganization under the new plan. Through haste and misapprehension this attempt was abortive, the council and house of delegates features being left out entirely and a year lost. When this mistake was corrected, as a temporary and doubtful expedient, district societies, covering large areas and meeting at long intervals, were substituted for county societies over most of the state. Dr. Fullerton, chairman of the council, took the field actively, and although handicapped with such an imperfect system, greatly increased both the membership and interest and laid the foundation on which the complete organization can be built. I urged that county societies be formed within these districts in every county containing as many as four or five physicians, retaining the district organizations for a comparison of methods of work in the county societies composing them at an annual meeting held midway between the meetings of the state society. I am more and more convinced every day that a real organization of the profession in this country is only possible through the agency of county societies, and that the difficulties are less and the benefits greater and more easily obtained in small than in large counties. If doctors can only rid themselves of the delusion that numbers, noise, long papers and sonorous discussions are essential for a successful medical society, and can realize that they are organized to bring physicians together so frequently and in such a way that their differences will naturally harmonize themselves, and after that, for scientific improvement and for working out the various and important business and legislative problems so important to them, it will be easy to organize the profession in almost an ideal way.

No state which I have visited is more susceptible of such a complete organization than Minnesota, but nearly everything remains to be done. Unfortunately, few of the councilors have realized the importance and responsibilities of their positions as organizers and peacemakers, and have attempted to perform the little work they have undertaken by correspondence. The state society has generously proposed to pay them for their time and for all expenses incurred, and each of them should visit every county in his district by appointment once or twice before the next annual meeting, notifying all physicians of the time and place by personal letters, and securing the active co-operation of the leaders of the profession in each county in working up the meeting. It is only by such close personal work that effective organization can be accomplished, but it will be worth all that it costs many times over, and if the medical colleges will heed the request of the Portland session of the House of Delegates and give their future classes a practical course of instructions along business, ethical, legislative and other co-operative lines, it will never have to be done over again and the reform will be permanent. At the close of several of the meetings committees were appointed to formulate plans for the postgraduate courses and for carrying out other features of the practical work suggested by me. At Rochester, under the leadership of Dr. Mayo, arrangements were promptly made for such a scientific course in their society. With the facilities they have for carrying it on, a postgraduate course can be made of inestimable value to the local members, and, what is even far more important, it can and will be so conducted as to make it such an object lesson to the numerous visitors to that great medical center as will carry its benefits in time to every section of the country.



The work in Minnesota was very laborious and exacting on account of the widely separated meeting places, but it was relieved and made pleasant by the evident appreciation of the altruistic purposes of the American Medical Association in sending me to assist them and by a hospitality and cordiality which was as constant as it was delightful. I go next to North Dakota, and then on to Montana, Washington, Idaho, Oregon, California, Texas and Oklahoma, filling appointments which have already been made for me by the associations of those states, meeting and discussing local conditions and methods for improving, with the profession of some city, district or county almost every day, and reaching home in time for the Christmas holidays.

#### California.

**SOLANO COUNTY MEDICAL SOCIETY.**—This society effected permanent organization on the standard plan at Vallejo August 31. Dr. H. O. Miller, Vallejo, presided, and Dr. Philip Mills Jones, San Francisco, secretary of the Medical Society of the State of California, addressed the meeting on the benefits of organization and detailed the plans and work of the state society and the affiliated county societies.

#### North Dakota.

**CASS COUNTY MEDICAL SOCIETY.**—A number of the members of the Cass County Medical Society and physicians of Moorhead, Minn., met at Fargo September 19, when Dr. J. N. McCormack, Bowling Green, Ky., delivered an address on "Organization."

#### Ohio.

**HURON COUNTY MEDICAL SOCIETY.**—With the aid of Dr. William E. Lower, Cleveland, councilor for the fifth district, this society was organized at Norwalk September 5. Dr. Thomas C. Martin, Cleveland, spoke on "The Advantages of Organization," and Dr. Clyde E. Ford of Cleveland on the "State Medical Journal." Dr. Daniel W. Loney, Norwalk, was elected president; Dr. Morton W. Bland, Bellevue, vice-president, and Dr. John A. Sipher, Norwalk, secretary and treasurer.

## Society Proceedings

### COMING MEETINGS.

Medical Society of Virginia, Norfolk, October 24-27.  
Hawaiian Territorial Medical Society, Honolulu, November 4.  
American Academy of Medicine, Chicago, November 9-10.

### AMERICAN PUBLIC HEALTH ASSOCIATION.

*Proceedings of the Twenty-third Annual Meeting, held in Boston, Sept. 25-29, 1905.*

(Concluded from page 1190.)

#### Further Experiments with Vaccine Virus.

Dr. W. F. ELGIN, Glenolden, Pa., said that winter vaccine may be expected to remain active for 125 days. This period shortens as the weather gets warmer. A temperature of about 70 degrees hastens the destruction of virus, so that summer vaccine can only be expected to remain active for a short time.

Glycerinate virus immediately placed in cold storage not only remains active for a long period, but when removed after a storage of several months will stand practically the same conditions as to change of temperature as that noted in control virus removed from the animal at the time the stored virus is taken from cold storage. This will allow of the preparation of vaccine during the cold weather, and its storage for summer distribution; so that vaccine plants may close down during the extreme heat.

The virus contained in capillary tubes remains active practically as long as the same virus in bulk, while a slight deterioration is noted in the glycerinated vaccine on points.

The life of vaccine taken from the deeper skin layers, or that part of the vesicle remaining after the normal or usual vaccine tissue has been removed, is very nearly if not quite the same as that of the normal virus; while the bacteria are decidedly fewer in number and more restricted in character.

No sure method has been universally accepted which will secure both purity and potency in virus prepared for general distribution. Many laboratories, particularly those under state control in this country and abroad, have practically given up bacteriologic control as a routine procedure. It is a question

how far we are justified in clearing vaccine of bacteria at the expense of its potency.

#### Danger of Tuberculosis Dissemination by Railway Travel Is Exaggerated.

Dr. CHARLES P. DUDLEY, Altoona, Pa., stated that during the past few years the railroads have been called sharply to account for remissness in sanitary matters. He discussed the extent to which this criticism is justified, for example, as to the spread of tuberculosis. It is obvious that if the spread of tuberculosis is largely due to contact of the healthy with those who are affected, the railroads, under present conditions, can hardly be held responsible, since there is no means by which ticket agents or conductors can be sure as to diagnosis, and to refuse transportation on an erroneous diagnosis would lead to serious trouble. If, on the other hand, the spread of tuberculosis is largely due to pulverized, dried sputum, the railroads may fairly be regarded as responsible, and may be required to take greater precautions. Careful studies seem to indicate that the dangers of infection from dried sputum on cars have been greatly magnified. As items pointing in this direction may be mentioned: First, the length of time of passengers on cars is small at the longest, while prolonged exposure seems to be agreed on as a marked characteristic in the acquisition of this disease; second, tuberculous sputum is extremely difficult to dry; third, even though artificially dried it is extremely difficult to pulverize; fourth, though artificially dried and pulverized, it is heavy, and does not readily remain suspended in the air; and, fifth, cars from their construction, afford very great advantages to the access of sunlight and air, which are more or less fatal to this form of disease germ. Furthermore, if cars are such a menace as has been supposed, it would seem that employees of the sleeping-car companies and of the railroad companies, whose occupation requires that they spend much time on the cars, would be largely affected. The statistics gathered at the last census, as reported by Dr. George M. Sternberg in his book, "Infection and Immunity," show that railroad men are less affected by tuberculosis than the average of persons of the whole country. Furthermore, information from the Pullman Company does not show that the colored porters who are supposed to be predisposed to tuberculosis, and who spend a large portion of their lives on sleeping cars, are more affected than others. The records of the Pennsylvania Railroad, in connection with its relief department, show that passenger conductors and brakemen are not as frequently affected with tuberculosis as are the freight conductors and brakemen. Again, bacteriologic examinations of the air from cars known to have transported tuberculous patients, the results of which have been recently published by Dr. J. J. Kinyoun, do not indicate any alarming prevalence of tubercle bacilli in these cars. Finally, experiments made for the purpose, as to the behavior of tuberculous sputum on carpets and plush, show that analogous material is less likely to become dry and to be pulverized and disseminated in the air, than if this material is on a hard, non-absorbent surface.

#### Car Sanitation.

Dr. HENRY M. BRACKEN, Minneapolis, said that to advance car sanitation it is not only necessary to improve the methods of car construction, but to instruct railway employees in the proper care of cars. Special duties should be imposed on them as to ventilation, car cleanliness, etc. Their instructors should be medical men connected with railway companies and familiar with sanitary problems. He pointed out the dangers from spitting on the floors or furnishings of cars. He discussed car cleaning, and said more attention should be given to this subject. The drinking water for railway cars should be of unquestionable quality, distilled or equally pure, and should be kept out of reach of passengers, except as drawn from the faucet, should be stored in well-cleaned cans or coils, and iced with well-selected ice that has been handled in a cleanly manner. He advocated improvement in the toilet rooms of the day coaches.

#### The Restriction of Contagious Diseases in Cities.

Dr. CHARLES V. CHAPIN, Superintendent of Public Health, Providence, R. I., said that modern municipal sanitary practice was first based on the filth theory of disease. During the



last twenty-five years it has been largely determined by the recognition of the contagiousness of the infectious diseases. Further practice will be modified by specific knowledge as to the etiology of each disease. The chief sanitary discovery of recent years is that unrecognized foci of infection are the principal factors in the spread of contagious disease. This is bound to modify present methods, rendering them less burdensome. Stringent measures can not stamp out disease. All that can be hoped for is to limit extension from the recognized cases. This can be done substantially as well by moderate means. No restriction of personal liberty is advisable in influenza, pneumonia, typhoid fever or cerebrospinal meningitis. In measles and whooping cough there should be some restriction of school attendance and the occasional closure of school. In scarlet fever and diphtheria the patient should be isolated for three or four weeks and other children in the family kept from school. Wage-earners should rarely be interfered with. The use of cultures to terminate isolation in diphtheria as ordinarily practiced is illogical. Hospital facilities are needed only for the poor. Official disinfection does more harm than good. When the above diseases appear for the first time in small places, or rather when rarer diseases appear in large cities, the most energetic measures are called for.

#### Modification of Present Port Inspection.

DR. A. H. DOTY, health officer, New York, pointed out the necessity for a change in the present method of quarantine inspection, which will insure a more thorough examination of passengers and crews. There should be closer observation for the detection of mild or ambulant cases. This type is commonly the cause of outbreaks, the origin of which are unknown, and which are frequently improperly attributed to infection by cargoes, clothing, etc. While five days may be regarded as the maximum period of incubation of yellow fever, the fact that a person has been five days away from an infected area should not permit him to pass quarantine without having his temperature taken and the use of other means to detect the presence of mild cases. This should also be applied to the examination of those held to complete the period of incubation of other diseases. Furthermore, the possibility of occasional cases having a longer period of incubation than that generally accepted must be remembered.

#### Communicability of Cerebrospinal Meningitis and the Means of Controlling Its Spread.

DRS. WILLIAM H. PARK AND CHARLES BOLDUAN, New York City, stated that out of fifteen hundred cases in New York City, two hundred were in direct contact with other cases, and many showed evidence of infection from other cases. These two hundred represented eighty-eight families. Bacteriologic examinations revealed that about half the cases of meningitis had abundant meningococci in the nasal cavity during the first two weeks of the disease, and that the nasal cavities of five attendants were badly infected. The conclusion is drawn that the meningococci are spread by the discharges from the nose and mouth of the sick and those in immediate contact with them.

#### Method of Securing More Uniform Instruction and Co-operation in Health Work.

There was a symposium on this subject. PROF. F. C. ROBINSON, Brunswick, Maine, and PROF. W. T. SEDGWICK, Boston, discussed educational co-operation with the general public in public health work. PROF. H. C. ERNST, Boston and DR. J. D. ADAMI, Montreal, spoke of graduate and under-graduate instruction in hygiene in universities and medical colleges. MR. W. D. FROST, Madison, discussed the teaching of hygiene in the public schools. DR. S. H. DURGIN, Boston, pointed out the present regulations and laws as to the qualifications and methods of appointment of executive and technical health officers, while DR. H. D. PEASE, Albany, emphasized the importance of sanitary conferences and schools of instruction for health officers.

#### The Collection and Preservation of Samples of Sewage for Analysis.

MR. STEPHEN D. GAGE and MR. GEORGE O. ADAMS, Massachusetts, stated that in collecting samples of sewage and

the effluents of sewage filters for analysis, more representative samples would be obtained if each sample is the average of a number of small samples taken at short intervals. The preservative used must prevent chemical changes. Two preservatives which best fulfill these conditions are chloroform and carbon bisulphid. Both destroy the bacteria and prevent all bacteriolytic decomposition; both are sparingly soluble in water, and being heavier than water they do not evaporate rapidly, requiring small amounts to be used in each sample. Both are comparatively inexpensive, and neither interferes with any of the usual analytical methods.

DR. HAMILTON WRIGHT, beri-beri research commissioner of the London School of Tropical Medicine, read a paper on beri-beri.

#### Methods of Bacteriologic Examination of Milk.

DR. FRANCIS H. SLACK, Boston, described the apparatus and methods in use at the Boston Board of Health Laboratory for collecting, plating, incubating and counting; also for direct examination of milk sediments and the microscopic estimate of the number of bacteria present, together with pus and streptococci determination. The methods of examination described are recommended as a system which has been reasonably successful in practice for city laboratory work, where quick reports are needed, as well as the accurate examination of large numbers of samples.

#### Problems and Difficulties of Bacteriologic Diagnosis.

MR. BERT R. RICKARDS, Boston, discussed some of the everyday problems and difficulties met with in making bacteriologic diagnoses. Each disease discussed was considered, first, in relation to any special points connected with the preparation of the specimen submitted; second, in regard to those problems which have to do with accuracy in diagnosis; and, third, with reference to results and their relation to the clinical aspect of the case.

#### Longevity of Bacillus Typhosus in Surface Waters and Sewage.

PROF. H. L. RUSSELL AND MR. C. A. FULLER, Madison, Wis., reported that from their experimental work it appears that in relatively pure water of a surface character the typhoid bacillus is capable of retaining its vitality for about eight days. The results of their experiments confirm and extend on a broader basis the data obtained in the investigations made on the Chicago Drainage Canal. They have been carried out under sufficiently diverse conditions to warrant the belief that the typhoid organism in natural sewage does not live as long as it will in relatively pure water.

#### MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

*Thirty-first Annual Meeting, held at Indianapolis, Oct. 10-12, 1905.*

The President, DR. BRANSFORD LEWIS, St. Louis, in the Chair.

Addresses of welcome were delivered by Mayor John W. Holtzmann on behalf of Indianapolis, and by Dr. W. N. Wishard on behalf of the local profession, which were responded to by Dr. H. O. Walker, Detroit.

The scientific work was divided into two sections, medical and surgical.

#### Nostrum Exposures Commended.

The following preamble and resolution were unanimously adopted by the surgical section:

*Whereas*, The medical profession keenly realizes the great and increasing public evil, moral, mental and physical, arising out of the support given by the public press to the so-called patent medicine interests, leading to the pernicious practices of self-drugging, narcotic habituation, and alcoholic excess; be it  
*Resolved*, That the Mississippi Valley Medical Association commends and frankly endorses the attitude adopted by *Collier's Weekly* and the *Ladies' Home Journal* in giving publicity in the articles by Samuel Hopkins Adams, Norman Hapgood, and Edward Bok, respectively, to the truthful exposure of the nefarious practices and unscrupulous methods of the so-called patent medicine concerns.

#### Officers.

The following officers were elected for the ensuing year: President, Dr. J. Henry Carstens, Detroit; vice-presidents, Dr. Joseph Rilus Eastman, Indianapolis, and H. H. Grant,



Louisville, Ky.; secretary, Dr. Henry Enos Tuley, Louisville, Ky. (re-elected); treasurer, Dr. S. C. Stanton, Chicago (re-elected).

Hot Springs, Ark., was selected as the place for holding the next annual meeting.

#### Surgical Dressing.

DR. CARL E. BLACK, Jacksonville, Ill., presented a preliminary report on the technic of the after-dressing of surgical cases. He pointed out briefly the principal elements necessary for the proper dressing of a wound, whether it be a surgical or an accidental wound. While the technic differs somewhat in different kinds of tumors, the fundamental principles are the same in all. Certain modifications must always be made to suit the individual case. Septic wounds should be so dressed that there is no opportunity for a further mixture of infection in the wound, nor any opportunity for the infectious material from the wound to in any way be scattered where it can come in contact with other wounds. These two points should always be kept prominently in mind by those undertaking the dressing of wounds.

#### DISCUSSION.

DR. O. H. ELBRECHT, St. Louis, said that the use of a standard size of dressings, tapes, etc., would lessen confusion on the part of the surgeon in going from one hospital to another to operate.

DR. MILES F. PORTER, Fort Wayne, Ind., said that the keynote of success in the management of surgical cases is system and simplicity. One should attempt to do away with the necessity of dressing wounds until they have healed in all cases where this is possible. There should be no stitches to remove in the ordinary aseptic wound, no matter where it is located, and in the ordinary treatment of septic cases the rule, as it prevails, makes necessary a great deal more subsequent dressing than is called for. The redressing of a wound should be looked on as an evil to be avoided, if possible.

#### Curettage in Septic Cases.

DR. C. E. RUTH, Keokuk, Iowa, reported in detail four cases of puerperal sepsis which illustrated the dangers of curettage.

#### DISCUSSION.

DR. O. H. ELBRECHT thinks that many deaths are due to the curette being used in cases of septic uteri. It is just as criminal, in his opinion, to introduce a curette into a septic or infected uterus as it is a sound or curette for the purpose of producing criminal abortion. He mentioned a case in which a physician curetted a uterus contrary to his advice, and the next day the patient died. He mentioned two other cases of sapremia which terminated fatally from what he believes to be a curettement of the uterus.

DR. H. O. WALKER, Detroit, strongly condemned the indiscriminate use of intrauterine curettes and irrigators. Many deaths are undoubtedly due to their improper use.

DR. JOHN YOUNG BROWN said that the curette has an important function to fulfill. Where there are decomposing membranes or fragments of retained placenta the uterus should be cleaned out.

DR. HANNAH M. GRAHAM, Indianapolis, uses an applicator, around which cotton is wrapped, saturated with carbolic acid, and the debris left in the uterus is swabbed out. It is her practice, too, to use a fenestrated catheter as a drainage tube, through which peroxid of hydrogen is injected every two or three hours, by herself or the nurse, and she has had good success by this method.

DR. A. M. HAYDEN, Evansville, Ind., thinks that a physician called to see a patient whose uterus contains a broken-down fetus or fragments of placenta, and who fails to clean out the uterus is criminally negligent. He advocates placental forceps for removing debris without disturbing Nature's protection.

DR. THOMAS B. NOBLE, Indianapolis, defended the uterine curette. It is an instrument for prevention as well as cure. The proper way is to interpret the pathology that one has to contend with, remembering that the curette is a means to an end. If a woman is suffering from high temperature, rapid pulse, prostration, due to septic material in the uterus, which can be removed by mechanical means, the physician does her

an injustice if he leaves her uterus alone, simply trusting to Nature to take care of it.

DR. G. FRANK LYDSTON, Chicago, said if one is called to see a woman who is suffering from general sapremia, who is in such a condition that it is evident dissolution is not far away if something is not done, if the history is such that material has been left in the uterus, and she is having a temperature of 105 degrees, he would certainly not treat such a woman surgically or provide drainage by way of the vagina, but would remove the septic material from the uterus. If this is not done the case is doomed, and many women in such a condition recover under proper intrauterine treatment.

DR. RUTH called attention to the failure to differentiate between the varieties of infection that one has to deal with. There is no danger from a careful curettement in a case of putrescent uterus in which a septicemia is not added to the intoxication of sapremia.

#### Artificial Hyperemia in Surgery.

DR. ALEXANDER C. WIENER, Chicago, pointed out the indications for the Bier method in surgery, as follows: 1. Subacute mild inflammations of joints and soft tissues are rapidly relieved. 2. Acute purulent inflammations of soft tissues either on the extremities or the head can be relieved by this method. 3. Acute and subacute inflammation of joints and purulent arthritis; gonorrheal infections of joints, etc. In these cases the elastic bandage has to be applied in such a manner as to produce energetic venous stasis, without causing pain to the sufferer. In acute inflammations comparatively light constriction produces extensive hyperemia. This conclusively shows that the arterial blood is not diminished, but slackened. Cases were cited in which excellent results were obtained by the Bier method.

#### Surgery of the Gallbladder and Its Ducts.

DR. H. O. WALKER, Detroit, related his experience with 185 cases on which he has operated. He quoted from a former paper written by him several years ago, adding that what he said then still obtains to-day. First, jaundice, which heretofore has been regarded as almost pathognomonic of the presence of gallstones, is present in only about 20 per cent. of all stone cases. Second, that pain in the region of the gall bladder does not by any means indicate the presence of gallstones, but is as often the result of a kinking of the cystic duct from lesions the result of one or more attacks of cholecystitis combined with pericholecystitis. Third, the passage of stones in the feces is not as common as was formerly supposed, for colics are rarely successful in passing a stone from the gall bladder. Fourth, empyema of the gall bladder is not always determined by palpation, for frequent attacks of cholecystitis tend to diminish the size of the gall-bladder. Fifth, tumors of the gall bladder without pain or jaundice indicate a simple dropsy, while a painful, distended gall bladder indicates empyema, and when accompanied by jaundice indicates constriction of the choledochus. Sixth, a hard, nodular, painful tumor of the gall bladder, with or without jaundice, is almost certain evidence of carcinoma. Seventh, obstruction of the choledochus, accompanied with inflammation and jaundice, quickly disappears after the passage of the stones into the papilla of the duodenum.

Cholelithiasis is of greater frequency than is supposed. Approximately every tenth individual has concretions in the gall bladder, yet only about one in twenty ever complains of their presence, so that quiet stones need no treatment. It is only the cholecystitis and cholangitis which make manifest the irritable presence of gallstones without demanding treatment, both medicinal and surgical.

The conditions that require operative intervention are: 1. An acute sero-purulent cholecystitis, and accompanying pericholecystitis. 2. Persistent and frequent pains due to adhesions between the gall bladder, intestines, stomach and omentum. 3. Chronic obstruction of the common duct. 4. Chronic empyema of the gall bladder and its accompanying accidents.

Cholecystectomy is undoubtedly advisable where the gall bladder has been subject to frequent attacks of inflammation, and where chronic septic conditions exist.

(To be continued.)



**MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.***Annual Meeting, held in Scranton, Sept. 26-28, 1905.**(Continued from page 1189.)***Acquired Hydrocephalus with Atrophic Bone Changes, Exophthalmus and Polyuria.**

DR. THOMAS W. KAY, Scranton, exhibited a boy of 7 years who three years ago had scarlatina. Three years later there was vertigo and enlargement of the superior cervical and sub-maxillary gland, with subsequent loss of the teeth and softening of the bones of the head. Exophthalmos appeared eighteen months ago, and at present the eyes are too prominent for the use of glasses and have to be protected by a handkerchief. The lower jaw has lost its bone salts and the chin has disappeared. As much as 27 ounces of urine are passed at a time.

**Adaptation of the Public to the Prevention of Tuberculosis.**

DR. HOWARD S. ANDERS, Philadelphia, said that there is greatly needed a general adaptation, especially by officialdom, representative bodies, landlordism and various big corporations, to the doctrine that no conditions are socially or morally permissible which foster the propagation of tuberculosis. Adaptation also calls for the avoidance of the extremist, the alarmist, and the irrational antagonist, and between these, the fatalist. The sanatorium movement was emphasized as the most far-reaching and efficient means of attacking the tuberculosis menace. Much, he said, might be accomplished for the public health were the street dirt removed at night and the dust during the day kept down by sprinkling. He advocated the installment of a cabinet officer at Washington at the head of a department of public health.

**Diagnosis of Incipient Pulmonary Tuberculosis.**

DR. GEORGE W. NORRIS, Philadelphia, said that the diagnosis could not be based on any one symptom or physical sign, but must be made in the light of the whole complex. Careful consideration of the anamnesis is of the greatest importance. Before beginning the examination of the chest the patient should be instructed to breathe properly, and enlargement of the bronchial or cervical lymph nodes should always be looked for. Rapid pulse or slight evening rise of temperature, if persistent or inexplicable on other grounds, he regards as suggestive, especially if associated with loss of weight, diminished capacity for work, or cough. With the occurrence of any two of the last named symptoms for a protracted period, the physician should show cause why a diagnosis of tuberculosis should not be given. In the event of uncertainty the patient should be treated as if he had the disease.

**Sanatorium Treatment of Tuberculosis.**

DR. GEORGE B. KALB, Erie, made a plea for the early diagnosis of tuberculosis, and urged that dependence be not put on the microscopic examination of sputum. He favored the establishment of three classes of institutions: 1, For incipient cases; 2, for advanced cases; 3, for far advanced cases.

**Outdoor Life versus Confinement in the Treatment of Bone Tuberculosis.**

DR. H. AUGUSTUS WILSON, Philadelphia, detailed the results obtained at Atlantic City, Coney Island, Wellesley Hills, Blue Ridge Summit, Toronto and elsewhere. He has found that osseous tuberculosis does not demand the varied atmospheric conditions necessary in the treatment of phthisis; that sleeping in tents or shacks with the temperature almost at zero F. has not been injurious; that various operative and corrective measures require consideration in connection with outdoor life; that there has been general improvement in the health and strength, and that no condition has been found too serious for betterment.

DR. M. P. RAVENEL, Philadelphia, thought it the physician's duty to instruct his patients, his clergyman and his legislator in the truths concerning tuberculosis. Unless an early diagnosis is made and the patient becomes a non-bacillary expectorating individual, the disease in a community can never be eradicated. This education he believed as important as a cure. In treatment he would direct attention chiefly to rest, circulation and digestion. In the forced feeding of patients he warned against the danger of unclean milk.

DR. CHARLES A. E. CODMAN, Philadelphia, in giving milk and eggs has the yolks and whites beaten separately and then the whites poured on the yolks, with the addition of sugar, salt or a flavoring.

DR. GUTHRIE, Wilkesbarre, believed that local deposits of tuberculosis should, if possible, be subjected to surgical procedure.

DR. NORRIS said that in the wards of the Phipps Institute in Philadelphia the routine treatment for hemorrhage is to put the patient to bed, apply an ice-bag to the chest, give a hypodermic injection of morphia, and assure the patient that there is no immediate danger. Ergot is never given.

DR. RAVENEL varies the treatment for hemorrhage with the condition of the patient's blood pressure. He gives nitroglycerin as indicated.

**Address in Otology.**

DR. MICHAEL V. BALL, Warren, gave a brief summary of the accomplishments of otology in the last four years.

**Present Treatment of Squint.**

..DR. WILLIAM CAMPBELL POSEY, Philadelphia, said that all children were more or less predisposed to squint, dependent primarily on vicious optical conditions. The vision in the squinting eye rapidly deteriorates. Treatment was outlined as follows: 1, The improvement of the vision in the defective eye; 2, neutralization of the farsightedness and the lessening of the accommodative effort; and, 3, the strengthening of the nervous and muscular mechanism which controls the movements of the eyes, and the cultivation of the desire for binocular vision. Attempts to improve the vision should be inaugurated promptly, since improvement can not be secured in subjects over 6 years of age. He would prescribe glasses at the early age of 2 or 3 years, and at a later age the vision may be further improved by the use of the amblyoscope, a modified form of stereoscope. In certain cases he was hopeful of improvement only by tenotomy. The amblyoscopic exercises should be continued for a year or more subsequent to operation.

DR. S. D. RISLEY, Philadelphia, believes binocular vision to be a matter of experience; for example, an infant will reach out for an object, but its hands will never go directly toward the desired object until by experience it has learned where the object is and how to find it. This he mentioned as a species of muscular sense acquired by experience. In binocular vision, in like manner, the infant has to learn to use both eyes at the same time and converge on the object. He believed that anatomic anomalies account for the fact that one child readily acquires binocular vision while another child secures it only with the aid of optical appliances.

**Herpes Zoster Ophthalmicus.**

DR. EDWARD STIEREN, Pittsburg, stated that his observation of six cases of the ophthalmic variety of the disease included two showing a wide disparity in the eruptive process and ocular involvement, and that the two might be considered classical illustrations of the extremes of herpetic eruption following the course of the fifth nerve. One patient suffered an enucleation, while in the other case a bleb observed on the limbus disappeared, leaving a decided scar and a slight patch of congestion which persisted for several months. In all his cases Dr. Stieren has been able to trace a history of exposure to cold or dampness after some unusual exercise with consequent fatigue in individuals of otherwise sedentary habits.

DR. ZENTMAYER, Philadelphia, cited a case complicated by the occurrence of ocular motor palsy and corneal ulcer in which the ulcer recovered promptly, but in which the palsy was of several years' duration.

DR. STIEREN thought the disease seemed to run a self-limited course and that there was a certain amount of immunity given a patient who had had the disease. Rather against the hypothesis that the disease is an acute infectious disease was the fact that seldom, if ever, is more than one case found in a household.

**The Mastoid Operation.**

DR. EDWARD B. DENCH, New York City, believed that in 99 per cent. of mastoiditis the disease is secondary to an inflammation of the middle ear. The most characteristic symptom,



in his opinion, is tenderness on firm pressure over the mastoid process. He regards the prognosis as excellent. He has had but twenty deaths in 489 operations, and in none was death due to mastoid involvement. He described the operation in detail. The second incision, which extends horizontally backward from the middle of the curvilinear one, has rarely been necessary in his practice. Three possibilities of accident were enumerated: 1, Failure on the part of the operator to find the mastoid antrum; 2, injury to the lateral sinus; 3, injury to the facial nerve. Emphasis was placed on the fact that even in those cases perforating simultaneously through the internal table of the mastoid, operative technic should be the same as in a case which had not perforated the cortex. He allows the cavities to fill up by granulation.

#### Mastoiditis—Its Importance in General Practice.

DR. S. MACCUEEN SMITH, Philadelphia, gave a brief outline of the historical aspect of mastoiditis and then directed attention especially to its relation to general practice. A physical sign of the greatest diagnostic importance, he said, was the ominous bulging or drooping of the superior and posterior wall of the external auditory canal. The most urgent measure in the treatment of mastoiditis arising from acute tympanic disease he considers to be the early and free incision of the membrana tympani, especially when complicating infectious disease—that is, opening of the drum head during the stage of hyperemia and before the stage of pus formation has been reached. In the after treatment the canal is dried with a cotton wrapped probe and an impalpable powder is dusted on the walls of the canal.

#### DISCUSSION.

DR. TAYLOR, Wilkesbarre, referred to the infrequent employment of the backward incision by Dr. Dench, his own experience having been contrary to this. He believed it important to enlarge the field of operation for thorough investigation of the mastoid. He was glad that Dr. Smith referred to the pernicious idea held by some that a child would outgrow a "running ear," and the conception that it was dangerous to stop a discharge of the ear.

DR. KATE W. BALDWIN, Philadelphia, said that in all cases of septic conditions of the nose and throat the teeth should be examined, and cited a case of a person aged 38 with an unerupted wisdom tooth which had caused mastoid abscess.

DR. J. H. MCKEE, Philadelphia, referring to the importance of examining the ear when cerebral symptoms were suspected, thought it far better to adopt the plan of Dr. Morse in the Boston City Hospital of making the examination of the ear a part of the routine examination of the child. Many obscure cases are cleared up in this manner. He said he had yet to see a case of pneumonia, middle ear disease or of typhoid in a child with middle ear disease in which there was not sufficient adenoid tissue to be considered pathologic. The importance of lumbar puncture in the presence of cerebellar complications of middle ear disease should also be remembered.

#### A Plea for Early Diagnosis and Immediate Local Treatment in Disease of the Accessory Sinuses of the Nose.

DR. W. G. B. HARLAND, Philadelphia, called attention to the important part played by the middle turbinate in preventing free drainage, and cited cases showing how quickly relief followed active local treatment. Neuralgic pains of the face, puffiness of the cheek and mucopurulent discharge should always suggest sinus inflammation; in other cases pain, post-nasal discharge, or the subjective perception of odor might be the only symptoms. He advocated rest in bed and hot moist applications, calomel and salts, phenacetin, quinin and atropin in acute conditions. Locally, reduction of turbinates with cocain, 4 per cent., and adrenalin, 1 to 5,000; nasal wash, removal of part or whole of middle turbinate, washing of antrum through inferior meatus or alveolus. The more threatening conditions could be referred to specialists; milder cases are treated with opiates and antineuralgics. All cases should receive active local treatment.

DR. PYFER, Norristown, said that the general practitioner did not realize that in every case of cold the sinuses were involved, and that the degree of headache confirmed the amount of sinus involvement. If sinus involvement is suspected, in

addition to the internal medication, he would prescribe the use of a spray of adrenalin and cocain followed by an alkaline solution.

DR. RANDALL, Philadelphia, spoke against prescribing cocain. He uses it sparingly and prescribes it never. In the antrum cases, the pain being so habitually about the first and second molar, the nasal and sinus involvement is apt to be overlooked.

(To be continued.)

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Toxemia of Pregnancy.

McIlwraith, in the *Canadian Practitioner*, recommends the following treatment for these patients, based on the theory that the condition is due to toxemia and that elimination is the curative treatment.

1. If the patient be conscious, he gives calomel grains 5 at once, washed down with saturated solution of magnesium sulphate, 2 ounces. The patient is then anesthetized and given an injection of sterile normal saline, one pint beneath each breast, and at the same time the nurse gives an enema consisting of:

R. Magnes. sulph. ....	3i	30
Glycerini .....	3ii	60
Aquæ .....	3iii	90

This is given as high up in the bowel as possible. As the patient comes out of the anesthetic a hypodermic of morphin sulphate grain  $\frac{1}{2}$  (.03) is given. Chloral grains 30 (2.) per rectum, and morphin sulphate grain  $\frac{1}{4}$  (.06) hypodermically are given alternately at two-hour intervals, as may be required, for convulsions or threatening symptoms. Not more than three grains of morphin should be given in twenty-four hours.

2. If the patient be unconscious, treatment is the same, except that the medicine can not be given by the mouth. This is as far as the treatment can be systematized, but varying conditions may lead the physician to change the treatment in each case. It has been noted on several occasions that the convulsions ceased and the other symptoms disappeared before the bowels started to move; this, the author thinks, is due to serum, and with it toxin, having been withdrawn from the general circulation into the bowel, and remaining there owing to failure of peristalsis. The glycerin enema usually excites peristalsis.

In addition to morphin and chloral, veratrum viride may prove of value in cases in which the pulse is full and of high tension given in doses of from 5 to 10 minims hypodermically t i d. (Nicholson, in the *British Medical Journal*, recommends thyroid extract to combat the pulse tension.) If all these methods fail delivery must be accomplished. The patient may do well for a few days without food, but water is necessary, and may be given by the bowel if the woman is unconscious. Of the use of chloroform to control convulsions the author states, "if a patient is having a series of convulsions, chloroform may be given to break the series, while elimination measures are being taken, but this should be its sole function. Its prolonged administration is exceedingly dangerous."

#### Chronic Diarrhea.

Wilcox, in *American Medicine*, outlines the treatment of this condition as follows:

The therapeutics of this disease depends on its cause, since it is actually only a symptom. The author classifies the causes, each one of which is again subdivided into mechanical, nervous and hemic.

#### MECHANICAL.

The treatment of mechanical diarrheas is based on removing the cause of irritation. The dyspeptic form of mechanical irritation is best treated by a full dose of castor oil, which



will remove both the undigested food and the products of fermentation which cause the increased peristalsis. If there be proteid indigestion the process can be checked by resorcin, .39 gm. (6 gr.) four times daily, to which 1.25 c.c. (20 m.) of tincture of nux vomica should be added, if there is diminished motor function of the stomach. After a few days the faulty digestion may be corrected by three drops of strong nitrohydrochloric acid or 10 drops of dilute hydrochloric acid, with 3 mg. (1/20 gr.) of strychnin sulphate, given in the midst of each meal. Pepsin may be serviceable.

As a rule in amylaceous indigestion there is constipation. Occasionally there is diarrhea which, if present, is best corrected by thorough mastication of starchy foods, and limitation of fluids with their ingestion. The author discountenances the use of sodium bicarbonate in all gastric and most intestinal indigestion and recommends the use of magnesia ponderosa in 10 gr. (.65 gm.) doses after meals..

#### NERVOUS.

When diarrhea is caused by emotion attention must be given to the mental instability. The associated symptoms are often marked and require special attention. Permanent cure can come only from moral suasion accompanied by removal of all sources of mental irritation. Temporarily this symptom is checked by the following prescription:

R. Ammonii bromidi.....gr. xv      1  
Spiritus ammonii aromat.....3i      4

M. Sig.: Give at one dose.

The neurotic forms due to hysteria, neurasthenia, migraine, and the climacteric, require careful treatment, based on the underlying cause. The best results are obtained from the persistent use of the bromids, preferably strontium bromid (free from barium salts) .4 gm. (60 to 90 gr.) daily. After three days this may be diminished in quantity, and the solution of potassium arsenite commenced. Three drops are given thrice daily, and the dose is increased one drop a day until slight untoward symptoms supervene.

The reflex diarrheas from cold are almost invariably relieved by the daily use of a morning cold bath. The tub bath should commence with the temperature of 88 F., and be taken cooler by a degree or so each morning until 68 F. or even 58 F. is reached. A five-minute bath followed by brisk rubbing with a turkish towel results in a vigorous reaction, and the morning bath soon becomes not only a therapeutic necessity, but a luxury as well. In addition, an abdominal bandage made of flannel should be constantly warm.

#### HEMIC.

Of the hemic diarrheas the uremic is perhaps the most striking. In this form opium is emphatically contraindicated. The proper method of dealing with this condition is the administration of a high intestinal irrigation with normal saline, in quantity a gallon, of the temperature of from 112 to 116 F., through a rectal tube inserted at least twelve inches; the reservoir should be elevated about three feet. If chronic nephritis is predominating the sodium chlorid should be replaced by sodium bicarbonate. Intestinal irrigation will free the intestine from irritating contents, will enable the kidneys to perform their function more properly, and will also stimulate the heart.

Malarial diarrhea is best treated by arsenic, methylene blue, or the following combination:

R. Ext. ergotæ.....gr. ii      13  
Berberin sulph.....gr. i      06  
Piperin .....gr. ss      03

M. Ft. capsule No. i. Sig.: One such capsule four times a day.

By far the best diet in chronic diarrhea is milk. This should be given between meals and at bedtime and must not be taken cold. For the meals, tea, poached eggs on toast, rare grilled or broiled steak or lamb chops, fresh chopped beef, with 2 c.c. (30 m.) of hydrochloric acid to each 60 gm. (2 oz.) meat soups, with thoroughly boiled rice, toast instead of bread, soft-boiled eggs, with half a bottle of Burgundy of good vintage, will take the patient well toward the time when a regular mixed diet may be resumed. To be avoided are fruits, raw or sour, cooked and sweetened succulent vegetables, foods leaving much residue and sugar.

Of improper methods of treatment may be cited opium.

This is only admissible when the alimentary canal has been thoroughly emptied, to check excessive peristalsis. It should be given hypodermatically as morphin, in substantial doses, and not repeated. Astringents, as experience has taught us, when introduced into the alimentary canal, do not astringe; they are even likely to irritate.

#### Syphilis.

Kilbane, in the *Medical Record*, recommends the hypodermic use of the salicylates of mercury in the treatment of every case of syphilis in which the administration of mercury is indicated for a period of time. The author states that he has given it a very considerable trial, both in dispensary work and in private practice, and claims for it many advantages. He further states that as a rule the patient makes no objection to this method of treatment if its advantages are clearly explained, and complains little of pain after the first two or three treatments. The author recommends the following technic:

The dose to begin with is usually three-fourths of a grain (.04). The interval between treatments is four days. The dose and the length of the intervals between the treatments are gradually increased until the patient is taking one and one-half grains (.09) weekly. The full dose of a 10 per cent. preparation, therefore, is 15 minims. If the patient has been taking mercury in some other manner a larger dose may be used at the start. In some cases a dose larger than a grain and a half may be used to combat special symptoms, but in these cases the more frequent use of a soluble salt of mercury will probably give better results. Potassium iodid can be administered by mouth at the same time.

An ordinary hypodermic syringe does very well. The needle should be at least one and a quarter inches in length and about 18 caliber. Needles of smaller caliber are impracticable because the mercury will clog in them. It is essential that the needle be very sharp. In private practice he has found it advisable to sterilize the needle immediately after use, and to keep needle, syringe and forceps for handling in an alkaline strongly antiseptic solution ready for immediate use when required. The gluteal region is the usual site of injection, alternating from side to side. The muscles of the back or the calf of the leg may be used if desired. The buttock is cleaned, as is usual for hypodermic injection.

The patient's leg is placed so as to relax the gluteal muscles, and he is instructed not to jump when the injection is made. The syringe is filled with mercury, the needle is attached and air bubbles excluded. The needle is entered firmly and quickly into the muscles as far as the guard, care being taken to avoid injuring the periosteum. The relations of the anatomic structures in the vicinity should be borne in mind. The mercury is then driven very gently and slowly into the muscles, the needle quickly withdrawn, and the part massaged with a vigorous rotary motion for one minute. This massage prevents any hemorrhage from the puncture hole and lessens very materially the probability of any soreness or lameness following.

### Medicolegal

**Free Pasteur Treatment for Needy Persons.**—No. 68 of the Laws of Pennsylvania of 1905 provides that in each and every county of the state it shall be the duty of the proper officers of the several poor-districts, in such counties, to provide all needy persons, in their said several districts, who may be bitten by dogs suffering from hydrophobia or rabies, with the proper medical attention to prevent the development of the disease in the person or persons so bitten, which medical attention may include the treatment known as the Pasteur treatment.

**To Secure Purer Fruit Syrups.**—No. 217 of the Laws of Pennsylvania of 1905 provides that any person, firm or corporate body who shall, by himself, herself or themselves, or by his, her or their agents or servants, manufacture, sell, ship, consign, offer for sale or expose for sale, or have in possession with intent to sell, any fruit syrup which contains formal-



dehyd, sulphurous acid or sulphites, borie acid or borates, salicylic acid or salicylates, saccharin, dulein, gluein, betanaphthol, abrastol, asapol, fluorids, fluborates, fluosilicates or other fluorin compounds; also any coal-tar dyes, sulphate of copper, or any other coloring-matter injurious to health, or any preservatives or their compounds injurious to health, shall be deemed guilty of a misdemeanor, etc.

**To Have State Hospital for the Criminal Insane.**—No. 247 of the Laws of Pennsylvania of 1905 provides for a commission of six persons to select a site and build an institution for the treatment and care of the criminal insane of the state. The tract of land selected shall be suitable for the purpose of the hospital, the land to be good arable land, well adapted to the preservation of the health, the occupation and maintenance of the inmates of the hospital, with an adequate supply of good water, and large facilities for drainage from the hospital buildings. The buildings shall be of the best design for the construction of such institution, and without expensive architectural adornment or unduly large or costly administrative accommodations. The board of trustees shall appoint a competent and skillful physician, of special training and experience in the treatment and care of the insane, who shall be superintendent, and shall have charge, supervision and direction of the hospital, both professionally and otherwise, his salary to be fixed by the board of trustees. Whenever the hospital shall have sufficient accommodations for the proper care of a larger number of insane patients than have been committed to it, the committee on lunacy of the state board of charities shall have authority to transfer to it from any other state hospital for the insane, giving the preference in all cases to those patients having known criminal tendencies.

**Rules and Regulations to Be Made by Health Departments.**—No. 165 of the Laws of Pennsylvania of 1905 provides that all departments of health of the cities of the first class of that commonwealth shall have full power, and shall make, immediately after this act shall become a law, such rules and regulations, which, in their judgment, may be proper and necessary, for the protection of the public health, and amend or alter the same, from the diseases known as cholera, yellow, malarial, typhoid, typhus, scarlet, puerperal and relapsing fevers, smallpox (variola or varioloid), chicken-pox (varicella), diphtheria and membranous croup, cerebrospinal meningitis, measles, mumps, whooping-cough, tuberculosis (in any of its diverse forms), pneumonia, erysipelas, plague (bubonic), trachoma, leprosy, tetanus, glanders, hydrophobia (rabies) and anthrax. That said rules and regulations shall cover and include: (a) The reports to be made by physicians or other persons, in attendance on any person afflicted with any of the said diseases, to said health authorities. (b) The quarantining and disinfecting of persons and premises, and the placarding of notices. (c) The treatment or disposal of infected bedding, clothing or other articles. (d) The care and burial of the bodies of persons who may have died from any of the said diseases, fixing the limit of time for burial, the methods to be used, the attendance of persons, and the style of advertising the funeral. (e) The disinfection of conveyances used in the burial of persons who may have died from said diseases, or which may have been used by a person afflicted with any of said diseases, or person who may have been in contact with the same. (f) The admission and attendance of persons at public or private schools, hospitals and asylums, or any other public or private educational or charitable institutions, and the compulsory vaccination and revaccination of inmates thereof, and of persons attending the same, or employed therein as physicians, teachers, nurses, or in any other capacity. All rules and regulations and all changes and amendments, when adopted, shall be printed and distributed for public use; copies of the same shall be filed with the state board of health. Copies shall be prepared and furnished to every educational institution, public or private, and to every physician and undertaker, within the jurisdiction of the health authorities promulgating the same.

**Health Provisions in Labor Law.**—No. 226 of the Laws of Pennsylvania of 1905 provides, among other things, that no

child under 14 years of age shall be employed in any establishment. No minor under 16, and no female, shall be employed in any establishment for a longer period than sixty hours in any one week, nor for a longer period than twelve hours in any one day. Every person, firm or corporation employing girls or adult women, in any establishment, shall provide suitable seats for their use, and shall permit such use when the employees are not necessarily engaged in active duties. Every person, firm or corporation employing males and females in the same establishment, shall provide for such employees suitable and proper wash and dressing-rooms, and water-closets for males and females; and the water-closets, wash and dressing-rooms used by females shall not adjoin those used by males, but shall be built entirely away from them, and shall be properly screened and ventilated; and all water-closets shall at all times be kept in a clean and sanitary condition. Exhaust fans of sufficient power, or other sufficient devices, shall be provided for the purpose of carrying off poisonous fumes and gases, and dust from emery-wheels, grindstones and other machinery creating dust. The owner, agent, lessee or other person having charge or managerial control of any establishment shall provide or cause to be provided not less than 250 cubic feet of air space for each and every person in every work-room in said establishment, where persons are employed, and shall provide that all work-rooms, hall and stairways in said establishment be kept in a clean and sanitary condition and properly lighted. No person, firm or corporation engaged in the manufacture or sale of clothing or other wearing apparel, cigars or cigarettes, shall contract for the manufacture of same where to be made in any kitchen, living room or bed room in any tenement or dwelling-house, except where the persons contracting to make any of said articles are members of the family residing in such house, and shall have furnished a certificate from the board of health of the city or town that the house is free from any infectious or contagious disease. All persons, firms and corporations engaged in the manufacture or baking of bread, cakes, crackers, pastry, pretzels or macaroni, for public sale, shall keep their room or rooms for baking, mixing, storing or sale of flour or other grain products separate and apart from any sleeping room, water-closet, urinal, defective drain or sewer pipe, and shall not permit the harboring of any domestic animal therein. The floors of all baking, mixing, storing and salesrooms shall be kept clean and tightly joined and free from crevices, and the walls and ceilings shall be painted, kalsomined or whitewashed as often as twice in each year, and oftener if, in the opinion of the chief factory inspector or his deputy, the safety of the employees or the public shall require.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

October 7.

- 1 \*Apparently Distinct and Hitherto Undescribed Type of Parasite in Pernicious Malaria. H. M. Smith, San Francisco.
- 2 Study of Relationship Between the Arterial Hypertension and the Indicanuria in Nephritis. H. A. Houghton, Bayside, L. I., New York.
- 3 \*Peripheral Phlebosclerosis. C. F. Martin and J. C. Meakins, Montreal.
- 4 Insomnia and Its Treatment. (To be continued.) J. S. Christison, Chicago.
- 5 Cervical Rib with Resulting Gangrene of the Fingers. W. W. Babcock, Philadelphia.
- 6 \*After-Treatment of Pulmonary Tuberculosis. J. A. Wilder, Denver, Colo.
- 7 \*The State and Federal Public Health Services. J. S. Fulton, Baltimore.

1. **New Type of Parasite in Pernicious Malaria.**—Smith reports the finding in the blood of 119 cases of malaria of a parasite so peculiar and distinct from any previously described as to render it probable that this form is a distinct type of the parasite of pernicious malaria. The parasites are small hyaline discs of an oval spindle form, non-pigmented and lying in the protoplasm of the red blood corpuscles. They have a very sharply defined outline, are highly refractive, and in the center



of each form is a small round dot of hemoglobin. Their short diameters vary from  $1/5$  to  $1/10$  the diameter of the red blood corpuscle, their long diameters being about twice as great. On account of their spindle shape, he designates them "spindle forms." They have no ameboid motion, but move by revolving on their long axis and by swinging around on their short axis, using one end as a fixed point. This motion is the most peculiar characteristic of the parasite. They stain with great difficulty and then only the periphery to a slight extent. No development of any nature has been observed in these parasites, and no forms besides these "spindle forms" were ever discovered in the blood before death or in the blood and organs after death in the four fatal cases.

**3. Phlebosclerosis.**—Martin and Meakins find that this condition exists commonly quite apart from diseased arteries and that it is extremely common in peripheral veins, especially those of the lower extremities. Their findings and conclusions may be epitomized thus: (1) Peripheral sclerosis is very common, existing in nearly 60 per cent. of patients examined by them in hospital. (2) It is much more common in young people than is generally supposed, especially in the saphena veins. (3) It is frequently present without any arteriosclerosis. (4) Sections show no signs of marked inflammation or degeneration. Proliferation and hypertrophy of intima and media are the chief pathologic pictures. (5) The usual causes of arteriosclerosis are absent. (6) The condition is allied to a process of functional hyperplasia rather than to chronic inflammation and is not associated, as a rule, with injury, though with prolonged strain from movement, posture and changed blood tension.

**6. After-treatment of Pulmonary Tuberculosis.**—Wilder emphasizes the great tendency toward relapse and chronicity of tuberculous ulceration in the lungs as well as in other parts, e. g., the skin and bones, and thinks there is a tendency at the present time to take too optimistic a view of its curability. The disease is practically always more or less advanced from the pathologic standpoint before it is recognized clinically. Although some patients have such good resistance that they recover in spite of unfavorable surroundings and methods of living, the majority require a continuous life for years rather than months under the most favorable hygienic and meteorologic conditions before there is assurance that their lesions are permanently healed. Placing the patient under proper conditions for a short time often causes the disease to become quiescent, but this is only the first step in the cure of a disease that, on account of the nature and severity of the pathologic lesions, is essentially of long duration. In an analysis of 100 cases of pulmonary tuberculosis that have been at least quiescent for from one to ten years, the average period of quiescence being three years nine months, he finds that at the present time 87 are either quiescent or cured and able to work. Twenty-five of the 100 cases have at some time relapsed. Thirteen of these patients have relapsed and recovered, eight have relapsed and died, and four are at present chronic invalids. One patient died from cancer of the stomach without relapse of his pulmonary trouble. Of these cases 67 were originally classified as incipient and 33 as moderately advanced or advanced. The period of quiescence before working or returning home varies from no time to 36 months, the average being eight months.

**7. State and Federal Public Health Services.**—Fulton discusses the probable influence on state boards of health of the federal law under which the U. S. Public Health and Marine-Hospital Service is now organized. This law, he thinks, will serve the purpose which medical men have long had in mind in advancing a national board of health. Powers and privileges not heretofore accorded to other departments of state government are by this act of Congress conferred on state boards of health. Each year the surgeon-general must call a conference of state boards of health, and he must call an extraordinary conference whenever any five state boards of health unite in a request to the U. S. Public Health Service. The most serviceable feature of the new law is the annual conference, as the orderly and steady progress, which may be made from year to year by concerted efforts, is vastly better than the reforms brought about by the drastic methods of the extraordinary or

emergency conference. By co-operation with the federal bureau it is possible to bring a majority of state boards up to good standards of efficiency and to advance the standards steadily. Hitherto there have been no standards. It is the real function of the annual conference to wipe out the spectacle of confusion and discord, of high and constant efficiency in one state, alternating worth and worthlessness in another state, and unvarying inefficiency in a third state. The tendency to exempt boards of health from political spoliation is growing stronger in this country. The people begin to learn that the hygienist is a highly specialized man of science. Boards of health are less commonly regarded as useful only in times of emergency. They have found their routine, and their daily tasks interest the public. The people themselves are now active in some of the problems of special hygiene, and the official hygienist must prove his professional fitness in the company of enthusiastic amateurs. The people demand the suppression of tuberculosis, and the enthusiasm of the voluntary associations now engaged in the American movement against tuberculosis is alarming, because it brings the hygienist into intimate relations with the sociologists, who have a body of useful knowledge about the disease and certain new ideas about its prophylaxis. These new allies will certainly discover our poverty in recorded data, in which they are strong, and can not fail to note the delinquency of boards of health. Strengthened by such co-operation, the forward movement of American hygiene is definitely assured. The kind and degree of success desired may not be fully attained, but the awakening of the people to the possibilities of preventive medicine means, in official life at least, the crack of doom for amateur sanitarians.

#### Medical Record, New York.

October 7.

- 8 \*Choice of Method in Operating on the Hypertrophied Prostate. W. Meyer, New York.
- 9 Importance of Differentiation in the Use of Electric Modalities. A. D. Rockwell, New York.
- 10 \*Anatomy and Associated Pathologic Conditions of the Rectum and Colon, with Mechanical Methods of Treatment. F. B. Turck, Chicago.
- 11 \*Case of Combined Extrauterine and Intrauterine Pregnancy. H. T. Miller, Springfield, Ohio.
- 12 \*Asthenopia Due to Latent Hyperphoria. G. De. W. Hallet, New York.

**8. Choice of Operation for Hypertrophied Prostate.**—Meyer advocates the use of the three methods in general use, perineal and suprapubic prostatectomy and galvano-caustic prostatectomy, according as each method fits the case to be treated. Meyer has performed Bottini's operation on fifty-nine patients, perineal prostatectomy nine times, and the suprapubic operation twenty-two times. The only deaths by the perineal method were from the anesthetic in one case, and in a patient almost moribund at the time of operation. Of the twenty-two suprapubic operations, seventeen patients with benign hypertrophy are living, two died of causes not due to the operation; three with cancerous hypertrophy died of causes due to the nature of the disease. Meyer believes that it is possible to cut the grooves with the galvanocautery both deep and wide; that a median lobe is a contraindication to the Bottini operation, if it is possible to do an enucleation; the cystoscope is of value in explaining the conditions at the neck; Bottini's operation, even when done twice, does not prevent a prostatectomy, should that become necessary; but, being a purely intravesical operation, it has many failures, and sometimes entails tedious after-treatment. If radical operation is refused it should be done. There is little choice between the perineal and suprapubic routes. In the perineal operation there is a rapid return to normal control of the urine, and leakage over the abdomen is not present. The suprapubic operation can be done in less time. Cystoscopy should always be performed before Bottini's operation, as the hypertrophy may be entirely intravesical. In advanced carcinoma Bottini's operation is to be preferred, since all the cancerous metastases can not be removed. A gland palpable by rectum and rising not far from the sphincter muscle can best be attacked from below; when higher up and projecting into the bladder it should be operated on from above. When soft and composed of small lobes, it should be operated on from below; when complicated by a large calculus, from above. The preservation of sexual power is important, and the suprapubic method retains it in the largest number of cases.



10. **Treatment of Atony of Rectum and Colon.**—Turek advises the use of massage and stimulation of the atonic intestine by the use of small rubber bags inserted in the rectum and sigmoid flexure and inflated with air. The inflation can be used steadily for the desired amount of time, or the bag may be alternately relaxed and inflated again, thus producing a kind of massage of the intestine. The abdominal circulation is also an important factor in atony of the intestine, and massage by inflation stimulates the circulation. Drugs, surgery, general gymnastics, and the various mechanical methods of treatment have all failed in curing atony. The injection of air confined in the rubber bag places the amount of distension to be used under the operator's control. It may be made intermittent. Hemorrhoids, ulcers, proctitis, all are benefited, as well as prolapse of the bowel, and various associated uterine conditions.

11. **Combined Extrauterine and Intrauterine Pregnancy.**—Miller's patient, aged 40, one year ago developed symptoms which indicated an extrauterine pregnancy. On opening the abdomen a cyst-like tumor having a pedicle containing the right Fallopian tube was removed. The cavity of the sac was distended with dark-colored blood and contained the remnants of a placenta and degenerated fetus. The size of the uterus gave rise to the suspicion of an intrauterine pregnancy, which was verified on the second day after the operation by the spontaneous expulsion of a perfectly formed four months' fetus. The patient made an uneventful recovery.

12. **Asthenopia Due to Latent Hyperphoria.**—Hallett describes a case of severe and agonizing neuralgic headache which was permanently relieved after correction of prisms by the existing hyperphoria. The headache, which had persisted for fifteen years, refused to yield to all other treatment, and at times was severe enough to confine the patient to a dark room for several days.

#### Medical News, New York.

October 7.

- 13 \*Consideration of Late Hereditary Syphilis. R. R. Campbell, Chicago.
14. \*Preliminary Report on the Spirochete of Syphilis. A. Fanoni, New York.
- 15 \*Sanatorium Provision with Industrial Opportunities for Indigent Consumptives. H. M. King and H. B. Neagle, Liberty, N. Y.
- 16 \*Ultimate Results After the Bloodless Reposition of the Congenital Hip-Joint Dislocation. F. Mueller, Chicago.
- 17 Spinal Hemorrhage, Some of Its General Phases. W. Brown, Brooklyn, N. Y.
- 18 Vesical Fistula. H. H. Purinton, Lewiston, Maine.

13. **Late Hereditary Syphilis.**—Campbell discusses the question whether or not hereditary syphilis can manifest itself for the first time some years after birth by the presence of such late lesions as occur in the acquired form, and with the total absence of the triad symptoms, Hutchinson's teeth, interstitial keratitis and a particular form of deafness known as labyrinthine or central deafness.

14. **Spirochaeta of Syphilis.**—Fanoni examined material obtained from five cases of primary and secondary syphilis, including chancres, condylomata papules and mucous patches, and found the spirochete of syphilis in all.

15. **Sanatorium Provision with Industrial Opportunities.**—King and Neagle show that every attempt to organize even moderately large numbers of phthisical patients into self-supporting communities has been uniformly unsuccessful. As the result of personal experience and inquiries made, they conclude that a sanatorium should be on a sound financial basis, independent of its earning capacity, before entering industrial fields. It can not safely rely on financial returns from its industrial features, since the latter are fully as apt to increase as to decrease the expense of administration. If industrial features are introduced, as wide a range of occupations as possible should be at command in order to meet individual requirements in both sexes, and suitable provisions should be made for permitting very light work and short hours to start with in all cases. No patient should be permitted to do work of any kind until sufficient time has elapsed after his admission to establish his physical ability. Medical supervision should be unremitting throughout the patient's sanatorium residence, and allowance in time limit of residence should be made for the relapses which inevitably occur whenever any great number of consumptives is employed.

16. **Bloodless Reposition of Congenital Hip-joint Dislocation.**—Mueller publishes the results obtained by Lorenz in 33 cases of congenital hip-joint dislocation by means of bloodless reposition to show that it is the best method of treatment of congenital dislocation of the hip and that Lorenz's promise of 50 per cent. anatomic cures is not too optimistic.

#### Boston Medical and Surgical Journal.

October 5.

- 19 \*Papilloma of the Larynx in Children. J. P. Clark, Boston.
- 20 \*Muscle Transference, with the Report of Two Cases. E. H. Bradford, Boston.
- 21 Vertigo of Aural Causation. C. J. Blake, Boston.
- 22 Ménière Symptom-Complex. W. A. Lecompte, Boston.
- 23 \*Ununited Fracture of the Humerus Treated by the Bolt Method—Failure of Union—Subsequent Successful Wiring. H. W. Jones, St. Louis, Mo.

19. **Papilloma of Larynx in Children.**—According to Clark, papilloma of the larynx in children is a very serious condition. The best method of treatment in all cases is tracheotomy and non-interference with the growth. If, under this treatment, it still persists after an age when the child can be treated as an adult, it has probably lost its activity of reproduction and attempts at its removal may be made. Clark cites 14 cases, 9 boys and 5 girls. One case dated from birth. In another case the symptoms began at the age of 3 months. Five other patients were 2 years old or under when they first showed evidence of laryngeal trouble. Of the remainder, one was 3 years old, one 4, two 5, one 6 and two 8 years old when the first symptoms appeared. The time elapsing between the appearance of the first symptoms and application for treatment varied from four months to four years and nine months. In the majority this period was from one to three years. In one case the symptoms began to appear after an attack of measles, in one after whooping cough and in one after grippe. Treatment without previous tracheotomy was attempted in 4 cases. One of these patients died under the operation, one was lost sight of, one operation was successful, and one patient, after several successful operations, required tracheotomy for a sudden attack of dyspnea during an operation. Preliminary tracheotomy was done in the 10 remaining cases. Of these latter, 4 patients died; 3 of bronchopneumonia, and one of suffocation after a difficult second tracheotomy. One of those dying of bronchopneumonia had bronchitis at the time of the operation, which was necessitated on account of severe dyspnea, and one died so long after tracheotomy (eight months) that death can not be directly attributed to that operation. One patient who died of suffocation after a very difficult second tracheotomy necessitated by the recurrence of the growth, illustrates the importance of not removing the tube until there is no vestige of papilloma or until the child is old enough to be treated as an adult.

20. **Muscle Transference.**—Bradford cites six cases in support of the contention that silk suture can be made to serve as a tendon mechanically, and may also be the basis of the organization of new strong fibrous tissue, thus creating a new tendon. It is necessary, however, that the muscle which is to be cut should not be left in a relaxed condition. If a strong muscle is inserted into a weak muscle it is essential not only that the insertion should be strong, but that the tendon into which the insertion is made should be so disorganized by paralysis as to become stretched when subjected to use. The transferred muscle should be attached in such a way that its contraction can be functionally effective, and it should be inserted into such a point as will render its contractions efficient.

23. **Treatment of Ununited Fractures.**—Although not advocating the abolition of the mortise joint as unsurgical, Jones believes that if union of bone occurs by simply apposing bone ends, much time and labor is wasted by carefully mortising bones together, especially as the latter proceeding is open to two risks—breaking of the wires during application of the dressings, and subsequent necrosis from pressure or tension. Jones considers the employment of a steel or silver bolt undesirable.

#### New York Medical Journal.

October 7.

- 24 Introductory Address to the Course of Study Delivered Before the Medical School of McGill University, Montreal, September 19, 1905. A. Jacobi, New York.



- 25 Midtarsal Valgus, or Knock Ankle. E. H. Bradford, Boston.
- 26 Principles in Surgical Diagnosis. J. D. Bryant, New York.
- 27 True Nature of Functional Nervous Diseases. W. H. Thomson, New York.
- 28 Shock and Hemorrhage as Causes of Death Following Abdominal Operations. C. C. Barrows, New York.
- 29 Practical Value of Some Old Remedies—Scopolamin Hydrobromid. J. V. Shoemaker, Philadelphia.
- 30 \*Preliminary Notice of a Modification of the Guaiac Test for Blood. I. S. Wile, New York.

30. **Modification of Guaiac Test for Blood.**—Wile describes his test as follows: To equal parts of chloroform and turpentine tincture of guaiac (U. S. P.) is added, a drop at a time, until slight milkiness appears. To one or two cubic centimeters of this reagent the suspected solution is added and the mixture is thoroughly shaken. In the presence of blood the chloroform-turpentine-guaiac solution becomes blue. The color takes a few seconds to manifest itself, but gradually deepens until all the hemoglobin has entered into the reaction. The color then gradually becomes lighter and slowly disappears. This chloroform modification gives a clearly cut reaction, and is more delicate than the simple peroxid of hydrogen and guaiac reaction. The solution, if kept in an amber-colored container, will keep for several days without losing its power to give the reaction. Instead of using tincture of guaiac, a 10 per cent. solution of resin of guaiac in glacial acetic acid may be substituted.

#### Lancet-Clinic, Cincinnati.

October 7.

- 31 \*Diagnosis and Operation for Gallstones. W. D. Haggard, Nashville, Tenn.
- 32 Whooping Cough. N. I. Fraid, Williamstown, Ky.
- 33 \*Syphilitic Manifestations in the Nose and Pharynx. P. T. Vaughan, Hot Springs, Ark.
- 34 Chronic Interstitial Nephritis. R. A. Bate, Louisville.
- 35 X-Ray in the Treatment of Fractures. D. Eve, Nashville, Tenn.

31.—See abstract in THE JOURNAL, Oct. 31, 1903, page 1106.

33. Id.—Oct. 24, 1903, p. 1041.

#### St. Louis Medical Review.

October 7.

- 36 Conservative Treatment of Various Diseased Conditions of the Stomach and Intestines. C. A. L. Reed, Cincinnati.

#### Journal of Association of Military Surgeons of the United States, Carlisle, Pa.

September.

- 38 Sanitary Study of Culebra as a Naval Base. H. E. Ames, U. S. N.
- 39 Military Medical Education. J. V. R. Hoff, U. S. A.
- 40 Acute Rheumatic Fever as Treated by the O'Connor Surgical Treatment for Acute Articular Rheumatism. J. B. Dennis, U. S. N.
- 42 Perforating Gunshot Wounds of the Stomach. C. B. Mittelstaedt, U. S. A.
- 43 Tropical Dysentery. A. T. Short, Manila, P. I., U. S. A.

October.

- 44 \*Observations on the Treatment of Fractures. J. P. Warbasse, New York.
- 45 Relations of the Medical Department to the Health of Armies. H. G. Hathaway, R. A. M. C.
- 46 First Aid to the Wounded in Naval Battles. J. Redondo, Madrid, Spain.
- 47 Chest Wound by a Krag Rifle at Fifty Yards. G. H. Halberstadt, Pottsville, Pa.
- 48 Construction and Equipment of Military Hospitals for Contagious Diseases. J. Simonin, U. S. N.
- 49 Clinical Aspect of Cavite Fever. R. C. Persons, U. S. N.
- 50 Medical Officer in Campaign. P. J. H. Farrell, Chicago.
- 51 Case of Stokes-Adams Disease. J. Brew, Nashville, Tenn.
- 52 An Hour with Dr. Thomas Trotter, Physician to the Fleet. J. M. Browne, U. S. N.

44. **Treatment of Fractures.**—Warbasse says that the first and most important thing in the treatment of a fracture is that the surgeon should have a mental picture before him of the conditions of the bone which he is treating. He believes that the old methods of diagnosis are still the best, and that there is no short cut to the acquirement of skill. Practice and experience are still the best teachers. He deplores the fact that the young practitioners are blunting their diagnostic senses by a too great dependence on the *x*-rays, which in most cases, Warbasse thinks, should be used not to make the diagnosis, but to confirm it. If this were done, surgeons would be better equipped for work in places where the *x*-rays is not available. He calls attention to the diagnostic significance of crepitus, the importance of which, he thinks, is often overrated, while local tenderness and pain are apt to be overlooked. There are certain obstacles which may prevent the easy and satisfactory reduction of a fracture, and of these the chief are muscular

contraction and pain, both of which are overcome by general anesthesia. Warbasse condemns the method of correcting displacements by tiring out contracted muscles by making continuous extension against their contractile force, and states that, in his opinion, immediate and complete reduction is the proper procedure. The surgeon should not rest until the fractured bone is in the position in which he wishes it to heal. He believes that fomentations of lead, opium or other similar preparations have little or no place in the treatment of fractures. The best treatment is the correction of the deformity. When a point of bone lies close to the skin and threatens to perforate it a compressing pad should be placed not over the threatening point, but over the bone a short distance away. If a fracture involves a joint or is in close proximity to the tendon sheaths, another element of importance is introduced. If the joint is kept immobilized too long, the plastic material becomes adherent to the opposite bone surface. The amount of this plastic substance is dependent on the degree of traumatism; in other words, on the degree of separation and mobility of the fragments. Motion of the joint immediately after the injury increases the amount of exudate. Too prolonged immobilization of the joint threatens ankylosis. After from ten days to two weeks, when traumatic reaction has subsided, passive motion should be instituted. Warbasse believes that more harm is done by the anxiety to secure firm bony union than by the too early employment of passive motion. In dressing a fracture of the lower extremity, he states that the patient should be laid on a flat, unyielding surface and should not be allowed to watch the operation. He describes, in detail, the usual method of applying a plaster cast, and says that ordinarily too much bandage is applied. In applying a cast the important thing is that the inside be free from irregularities and that the pressure be even throughout. A properly applied cast gives a sense of comfort and support. A cast that is not comfortable should not be left on. Warbasse concludes his article by stating that the methods we now have at our command for accurately determining the condition of broken bones and for the correction of displacements and the relief of complications places modern surgery in a position to be satisfied with nothing but good results in the treatment of fractures.

#### Journal Michigan State Medical Society, Detroit.

September.

- 53 \*Venereal Prophylaxis. A. E. Carrier, Detroit.
- 54 Compound Fractures with Crushing of the Soft Parts. W. T. Dodge, Big Rapids.
- 55 \*New Method for the Withdrawal of Pleural Effusions. W. M. Donald and R. E. Mercer, Detroit.
- 56 Ruptured Tubal Pregnancy, with Postoperative Obstruction of the Bowels. W. K. West, Calumet.
- 57 Abdominal Versus Vaginal Section for Intra-abdominal Conditions. W. Bishop, Bay City.

53. **Venereal Prophylaxis.**—Carrier calls attention to the importance of preventing the spreading of venereal diseases, and states that marriage of individuals suffering from any venereal affection should be prohibited by law. He concludes his article with the following statements: Venereal diseases exist in every community to such an extent that an imperative demand is made for prophylaxis. While legal restrictions are of immense value, their enforcement at the present time is impossible. The laws regarding the issuing of the marriage license should take account of venereal diseases. Venereal diseases should be regarded as contagious and reportable to health boards. Hospital accommodation should be furnished for those suffering from venereal diseases. Efforts for the present should be along the line of education in the family, in the schools, and by literature and lectures to the public. Medical pessimism in this matter of prophylaxis must be eliminated.

55. **Method for the Withdrawal of Pleural Effusions.**—Donald and Mercer have devised an apparatus for the removal of pleural effusions. The apparatus is very simple. It consists of two wide-mouthed bottles, stoppered by either rubber or cork, through which are inserted tubes of metal or glass which connect with an ordinary fountain syringe tube. The bottles for accurate work may be graduated so that the amount of fluid withdrawn and the amount of air reinserted can be measured. A bottle has three tubes running through the cork; one extending nearly to the bottom is connected to a similar one in



bottle B with a rubber tube about four feet in length; the other two extend just through the cork, one of them being connected to a short glass tube filled with sterile absorbent cotton, and the other with a tube leading to the needle. Bottle B has two tubes; one, as in bottle A, reaching nearly to the bottom, and the other, a short one, may be used to withdraw the overflow, or by the attachment of an aspirator pump to obtain greater suction pressure on the other bottle, that is, on the fluid which is being aspirated. This, however, is rarely necessary. All the pressure that is desired can be secured by lowering the second bottle and so increasing the syphon pressure. The bulb is convenient when filling bottles, but must be detached when the instrument is used. The tubes leading to the needle and air filter and between A and B are controlled by wire clips. Clips from fountain syringes, a couple of large empty tablet bottles, three or four glass medicine tubes, some rubber syringe tubing, and an old antitoxin syringe constitute the paraphernalia necessary for the manufacture of this apparatus by a physician himself. The rubber corks make more perfect joints, and so constitute a more perfect apparatus, but the authors have used the other and more simple form of apparatus and have found it to work satisfactorily. The following directions for use are given: Fill both bottles slightly more than half full of sterile water; insert the tubes until the water fills bottle A with the three tubes and flows from the aspirating needle, then close clip on that tube and lower bottle B, open clip on air filter, and leave it open until bottle A is about two-thirds full of filtered air, then close clip on air tube, and the apparatus is ready for use. Insert the needle in the selected spot on the affected side, open clip on the needle tube, and the pleuritic fluid will immediately flow into bottle A and over into bottle B. When about eight ounces, or 250 c.c., have been withdrawn, raise bottle B and the water will flow back into bottle A, forcing the filtered air in it through the needle into the pleural cavity. By repeating the process, opening the air filter, and refilling bottle A as necessary, the fluid can be withdrawn and replaced by an equal measured quantity of filtered or sterilized air. If it is desired, the cotton in the tube can be impregnated with formaldehyd and the pleural cavity can be filled up with this form of air. As formaldehyd is decidedly irritating in its qualities, only a very small quantity of the medicament must be introduced. Bottle B can be emptied as filled by shutting off the flow from bottle A and pouring out the fluid contained in it; or it can be allowed to run out through the overflow tube on B into another bottle or vessel. It is considered hardly necessary to replace the fluid with an exactly equal amount of sterilized air, although a liberal amount should be introduced in order to procure a thorough emptying of the pleural cavity. After that has been done, the operator can use his own discretion as to whether he will allow the air to remain in the pleural cavity or will withdraw a small portion of it. The advantages of the operation can be summed up as follows: 1. All the fluid can be withdrawn at once. 2. There is no pain and no distress, except from the introduction of the needle, through the whole operation. 3. The lung is splinted by the cushion of sterilized air and is permitted to expand only very slowly. 4. The air pressure prevents the leaking of fluid through the cells back into the pleural cavity and the reaccumulation of the fluid there. 5. The apparatus can be improvised by any physician or can be manufactured at a very low figure by any instrument manufacturer. 6. It is believed to be especially adapted to cases of old effusion in which the withdrawal has been postponed for a long time, and cases in which there is a tendency toward the reaccumulation of the fluid.

#### St. Paul Medical Journal.

September.

- 58 Difficulties of Exact Diagnosis Encountered in Cases of Intra-abdominal Tumors. C. O. Thienhaus, Milwaukee, Wis.
- 59 Perinephritic Abscesses in Children. G. R. Curran, Mankato.
- 60 Considerations on Eye Strain and the Neurologists. E. J. Brown, Minneapolis.
- 61 Strangulated Hernia. H. Holte, Crookston.
- 62 Notes on Empyema. F. G. Lawrence, Stillwater.
- 63 Bladder Exstrophy. R. C. Dugan, Eyota.
- 64 \*Present State of Our Knowledge Concerning the Therapeutic Value of the X-Ray. B. Foster, St. Paul.
- 65 \*Carbolic Acid in Modern Surgery. J. C. Stewart, Minneapolis.
- 66 Preventable Deformities. E. S. Geist, Minneapolis.

October.

- 67 \*Medical Organization. W. W. Taylor, Kalispell, Mont.
- 68 \*Pneumonia Complicating Surgical Operations. J. L. Rothrock, St. Paul.
- 69 Diaphragmatic Hernia. W. A. Dennis, St. Paul.
- 70 Dysmenorrhea. E. A. Hensel, Alexandria, Minn.
- 71 Syphilis of the Liver and Its Operative Treatment. A. MacLaren, St. Paul.
- 72 \*State Board of Medical Examiners—A Criticism. A. Sweeney, St. Paul.
- 73 Case of Typhoid, with Comment on the Relational Pathology of the Disease. H. A. Tomlinson, St. Peter.
- 74 Tubercular Kidney Disease. M. C. Millet, Rochester.

64. **Therapeutic Value of X-Ray.**—Foster details his experience with the *x*-ray in the treatment of tuberculosis of the skin and of glands, acne, sycosis, eczema, pruritus, psoriasis, and exophthalmic goiter. He is of the opinion that deep-seated malignant disease should never be treated by the *x*-ray until the resources of surgery have either been exhausted or refused by the patient. Patients suffering from inoperable malignant disease should be given the benefits of *x*-ray treatment because it usually is followed by improvement, with the possibility of cure.

65. **Carbolic Acid in Surgery.**—Stewart calls attention to the uses of carbolic acid, i. e., the liquidified crystals, in the cure of hydrocele and other cystic processes by the injection of small amounts of the pure acid without the use of alcohol. The acid is also of service in various chronic serous inflammations of the bursa and tendon sheaths. Its use as a sterilizing agent for instruments and septic wounds is also referred to. Stewart says that in all acute suppurative processes the course of the disease may be shortened and extension averted by free incision, followed by the application of carbolic acid and alcohol. In all tubercular softenings the use of carbolic acid and alcohol after evacuation of a cavity permits of the closure of the cavity without establishing drainage, thus expediting healing. Many other uses of the acid are mentioned by Stewart in the hope that the profession will again give to this remedy the place it deserves as a therapeutic agent.

67. **Medical Organization.**—As evils demanding the organization of the medical profession Taylor mentions patent medicines, quacks, the various sects and fads and healers of all sort, the existence of too many cheap, superficial, ill-equipped diploma mills, called colleges, which are yearly turning out hordes of graduates who are not properly qualified, the so-called contract or club practice, and the encroachments of other organizations. All these evils, he considers, may be eradicated by a perfect organization. The objects to be gained by organization are: 1. To protect the public from all those who profess or advertise to treat or to cure mental or physical infirmities, or to sell remedies for those conditions, and are not properly qualified to do so. 2. To secure uniform legislation to keep the field properly belonging to the medical profession free from intruders. 3. To secure high uniform standards for the regulation of practice in the various states, and to see that these laws are enforced. 4. To check evil tendencies and pernicious practices among physicians. 5. To elevate the requirements of medical education so that the numerous small, poorly equipped and inefficient medical schools shall be wiped out. 6. To stimulate and to foster a desire for scientific research and medical advancement in the profession. 7. To promote and to establish public health relations. 8. To promote a professional, fraternal and friendly feeling among physicians by more intimate contact, frequent meetings and social intercourse. 9. To increase revenues and to establish resources for the needs of professional advancement. The history of medical organization and the condition of the Montana State Association are also discussed, as well as the duties and functions of state organizations. Taylor feels that state societies do not stand close enough to the county societies and other affiliated societies, and suggests ways and means for accomplishing the desired results.

68. **Pneumonia Complicating Surgical Operations.**—Rothrock reviews the literature relating to this condition and cites cases. He states that as preventive measure, it should be a fixed rule that no patient who has at the time an acute coryza, tonsillitis or bronchitis should be given an anesthetic, except in case of absolute necessity. Not only is it desirable under such circumstances to avoid the irritant effect of the



vapor of the anesthetic, but under such conditions there is likely to be an increased virulence of the micro-organisms in the air passages. Ether should be given in the least possible concentration, and, to avoid aspiration of the secretions of the mouth, the patient's head should be kept low and turned to one side, in order to allow the secretions to flow out of the mouth. Previous to the administration of the anesthetic the mouth should receive attention and the teeth should be carefully cleansed, after which an antiseptic mouth wash should be liberally used. The stomach should be empty, and in case of operation on that organ, lavage should precede the operation. If necessary to use chloroform in the presence of gas or lamp light, the room should be well ventilated. In case of weak circulation, it is very desirable to prevent hypostatic congestion. Such patients should have their position frequently changed, and as soon as possible should be raised to the half-sitting posture. The importance of meteorism as a factor in hypostatic congestion should not be lost sight of. Distention of the stomach embarrasses the heart's action by pressure and also encroaches upon the lower lobes of the lungs, preventing their full expansion. It should be relieved by re-establishment of intestinal peristalsis as early as possible after the first twenty-four hours following the operation. Following Czerny's suggestion, the patient should be urged to expand the lungs fully, even though the effort is painful, to further aid in the prevention of hypostasis.

72. See abstract in *THE JOURNAL*, July 29, 1905, p. 350.

#### Chicago Medical Recorder.

September.

- 75 Vaginal Cesarean Section. J. B. De Lee, Chicago.
- 76 Skiagraphic Revelations in Rachitic Deformities of the Legs. W. Blanchard, Chicago.
- 77 \*The Bartlett (Boston) Machine for the Reduction of Congenital Dislocations at the Hip. J. Ridlon, Chicago.
- 78 \*An Attempt to Utilize the Electric Conductivity of the Urine for Clinical Purposes. G. Kolischer and L. E. Schmidt, Chicago.
- 79 Testing the Electric Conductivity of Fluids, with Special Reference to Urine. B. C. Corbin, Chicago.
- 80 Meningitis. J. W. Van Derslice, Chicago.
- 81 Fibroid Tumors of the Uterus; Their Surgical Treatment. F. H. Martin, Chicago.
- 82 Case of Aortic Insufficiency. R. M. Ladova, Chicago.

77. Congenital Dislocation of the Hip.—Ridlon discusses the use of the Bartlett machine for the reduction of congenital dislocations of the hip. The machine consists of an iron framework bolted to a table. The patient's hips rest on the framework, with an adjustable saddle between the legs for fixative counter traction. Below (back of) each hip are strong pins, or pegs, and at each side of the hips are similar pins or pegs made adjustable by set screws; to these pins or pegs may be attached a device giving motion in abduction, adduction, flexion, extension and rotation, that carries a long traction rod. The traction is made by the conventional windlass device below the foot acting on a strap that has been passed around a padded boot on the patient's ankle. The device for motion in all directions at the hip is the original and interesting part of the machine. Bartlett calls it an "eccentric cam." A solid cylinder, with a hole near its periphery, is passed on over the pin or peg; this by a removable wrench gives an eccentric movement to press the head of the femur inward, or add to the downward pull. Around the cylinder passes a collar; this gives abduction or adduction. Attached to the collar is a hinge joint, giving flexion and extension. From this joint passes a pin that plugs into the end of the extension bar, giving rotation motion. Above the first cylinder, when placed on the pin at the side of the hip, is a second solid cylinder set in the same eccentric manner as the first and surrounded by a collar carrying the "deflector," which is worked by a handle. With the wrench on the cylinder and the handle on the deflector pressure can be made downward, inward or upward (forward), or in all directions at the same time against the greater trochanter and neck of the femur. Ridlon believes that this machine is a good and useful appliance, but the fact that it is patented and the terms demanded by the inventor, prohibit its extensive use. The use of the machine on patients who have relapsed into dorsal, anterior, supracotyloid, subspinous, or any possible position does not seem to give as satisfactory results

as when used in virgin cases. It is, like all other operative procedures, more difficult when one has tried and failed by some other method, and in patients who have been partially operated on and in those who have been allowed to relapse through lack of proper after treatment.

78.—See abstract in *THE JOURNAL*, May 6, 1905, page 1483.

#### Pennsylvania Medical Journal, Athens, Pa.

September.

- 83 Medical Organization Helpful in Promoting the Social Status of the Physician. C. McIntire, Easton.
- 84 \*Remarks on Physical Diagnosis. 1. Transmanual Auscultation. 2. Uinar Palpation. D. Riesman, Philadelphia.
- 85 \*Overlapping the Aponeuroses in the Closure of Wounds of the Abdominal Wall. C. P. Noble, Philadelphia.
- 86 \*Diagnosis and Treatment of Appendicitis. H. D. Beyea, Philadelphia.
- 87 One Hundred Consecutive Abdominal Sections in Hospital Practice Without Mortality. F. F. Simpson, Pittsburg.
- 88 Changes in the County Society. A. B. Hirsh, Philadelphia.
- 89 Diagnostic Value of Glycogenic Degeneration of Leucocytes. J. H. Bennett, York.
- 90 Diagnosis of Gallstone Disease. J. D. Singley, Pittsburg.

84.—See abstract in *THE JOURNAL*, Oct. 22, 1904, page 1249.

85. Id.—Oct. 29, 1904, page 1330.

86. Appendicitis.—Beyea directs attention to the value of routine abdominal auscultation as a means of determining the absence or presence of peritoneal infection in acute appendicitis, and also describes a method of abdominal drainage applicable in certain suppurative cases, and a modification of the operative technic which facilitates the operation, shortens its duration, and lessens the danger of peritoneal infection. He says that if the clinician will auscultate, preferably with the thickness of a towel separating the naked ear from the abdominal wall, over the healthy abdomen of several individuals, he will note, occurring at irregular intervals of two, five or ten seconds, the characteristic normal, soft, small, peristaltic sounds. With practice, and subjected to a greater or less variation recognized within the normal, his ear will become more and more familiar with the normal sounds until a distinct degree of accuracy is obtained. With the extent and intensity of peritoneal infection the sounds will occur at longer intervals, of from a half minute to a minute or longer, and their character will be changed from a soft murmur to a more pronounced gaseous sound or the sound of fluid or gas suddenly passing an obstruction. In the case where general peritonitis is present, no sound will be heard or only a single sound after a long interval. When the peritonitis is localized to an area the frequency of sounds, in most cases, is generally diminished, particularly over the affected area. Beyea recommends the special form of rubber covered gauze Mikulicz abdominal drain for application in certain of the cases of periappendicular suppuration devised by Dr. Charles B. Penrose. It is composed of a gauze bag six or seven inches in length and from an inch to an inch and a half in diameter when distended. Attached to the closed end of the bag is a silk ligature. Within the bag are placed side by side three or four gauze wicks, each composed of a few layers of gauze folded into a wick. The gauze bag is covered by an envelope of very thin rubber, the rubber bag being a condom, the closed end of which has been cut off. The gauze bag containing the wicks of gauze should extend a short distance beyond the rubber envelope as is shown in the illustration. The gauze portion of the drain is sterilized with the dressings, the rubber envelope by boiling in water. The ligature is attached for the purpose of assisting in the removal of the drain, traction being made on that portion in contact with the area to be drained. The gauze wicks should be placed rather loosely in, just filling, the bag. Beyea's modification of Dawbarn's technic is carried out by employing a specially made hemostatic forceps. The instrument is of the general shape of the small-sized Kelly curved hemostatic forceps. The biting or contact surfaces of the blades are made with two shallow furrows and elevations, corrugations, running lengthwise. The forceps are further made so that when closed, fixed at the first notch, the last half-inch is perfectly round and gradually tapers to a small blunt point. The technic is identical with that described by Dawbarn up to the point of removing the appendix, i. e., the mesoappendix is ligated and cut to the wall of the appendix, and the purse-



string suture is introduced through the walls of the cecum and is made ready to be tied. The curved forceps described are then made to grasp the appendix at a point about a half-inch from its base. The appendix is then cut away flush with the upper surface of the forceps. Then, catching the near-by peritoneal surface of the cecum with rat-toothed forceps, the grasp of the curved forceps is loosened, but still grasping the center of the stump (closing the opening into the cecum), it is turned to an angle parallel with the opening in the appendix. With the forceps in this position the stump end is inverted into the cecum, the instrument's grasp is easily loosened and the instrument removed, while the purse-string suture is securely tied by an assistant. A running silk suture placed over the position of the purse-string completes the operation.

**Indiana Medical Journal, Indianapolis, Ind.**  
*September.*

- 91 \*Unilateral Syringomyelia in a Child. L. H. Herbert, Indianapolis.
- 92 Footwear and Its Influence on Flatfoot. E. D. Clark, Indianapolis.
- 93 Hospitals of Paris and Their Clinical Opportunities. J. W. Sluss, Indianapolis.
- 94 Treatment of Fracture of the Lower Jaw. J. H. Oliver, Indianapolis.
- 95 Surgical Pathology. G. W. Crile, Cleveland.

91. **Unilateral Syringomyelia.**—Herbert reports the case of a child 5 years old that presented symptoms of unilateral syringomyelia, as well as spontaneous necrosis of four toes which ended in self amputation. The child had been healthy until 3 years of age, at which time there appeared on the third right toe a painless panaritium, in the progress of which a piece of bone became separated and fell off. After about three months spontaneous healing of the bone process took place with the loss of this toe. Later a similar process occurred in the second, fourth and fifth toes. The right leg, especially the right foot, exhibited marked disturbances of sensibility. There was a disassociation anesthesia, trophic changes and muscular atrophies, all pointing toward syringomyelia.

**Wisconsin Medical Journal, Milwaukee.**  
*August.*

- 96 Diagnosis of Rupture of the Middle Meningeal Artery. C. H. Lemon, Milwaukee.
- 97 \*Permissibility of Medical Abortions. W. E. Fairchild, Green Bay.
- 98 \*Present Status of the Surgical Treatment of Undescended Testis. C. M. Echols, Appleton.
- 99 \*Clinical Aspects of Diabetes. C. J. Combs, Oshkosh.
- 100 Acute Diarrheas of Children. C. D. Boyd, Kaukauna.

97.—See abstract in THE JOURNAL, June 24, 1905, page 2003.  
98 and 99. Id.—Page 2004.

**The Laryngoscope, St. Louis, Mo.**  
*July.*

- 101 Meningitis; Its Symptomatology, Diagnosis and Treatment. S. Mac. Smith, Philadelphia.
- 102 Symptomatology, Diagnosis and Treatment of Encephalitis and Brain Abscess. F. L. Jack, Boston, Mass.
- 103 Symptomatology, Diagnosis and Treatment of Sigmoid Sinus Thrombosis. J. F. McKernon, New York.
- 105 Pathologic Findings of the Intracranial Complications of Middle Ear Disease. T. J. Harris, New York.
- 106 Facial Asymmetry as a Possible Cause of Deformity of the Nasal Septum. H. L. Swain, New Haven, Conn.
- 107 Unusual Development of the Frontal Sinuses. E. C. Ellett, Memphis, Tenn.
- 108 Tuberculosis Localized in the Third Tonsil. C. S. Means, Columbus, Ohio.
- 109 Foreign Body Swallowed by a Child Seventeen Weeks Old; Case of So-called Hairy Tongue. R. H. Johnston, Baltimore, Md.
- 110 Papilloma of the Lingual Tonsil. Id.
- 111 Epithelioma of the Fauical Tonsil. Id.

**University of Pennsylvania Medical Bulletin, Philadelphia.**  
*July-August.*

- 112 Motor Area of the Human Cerebrum, Its Positions and Subdivisions, with Discussion of the Surgery of This Area. C. K. Mills and C. H. Frazier, Philadelphia.
- 113 Occasional Clinical Resemblance Between Caries of the Vertebrae and Lumbothoracic Syringomyelia, and the Location Within the Spinal Cord of the Fibers for the Sensations of Pain and Temperature. W. G. Spiller, Philadelphia.
- 114 Case of Amyotrophic Lateral Sclerosis in which the Symptoms Were Unilateral and Ascending. C. S. Potts, Philadelphia.
- 115 Case of Tumor of the Left First and Second Frontal Convolution with Motor Agraphia as Its Chief Localizing Symptom; Successful Removal of the Tumor. J. W. McConnell, Philadelphia.
- 116 Study of Contractures in Organic Nervous Diseases and Their Treatment. T. H. Weisenburg, Philadelphia.
- 117 Difficulty of Diagnosticating Between Tabes and Cerebrospinal Syphilis. C. D. Camp, Philadelphia.
- 118 Effect of Intraperitoneal Injections of Leech Extract on the Coagulation of Exudate. L. Loeb.

**Colorado Medicine.**  
*August.*

- 119 Arteriosclerosis Ending in Cardiac Insufficiency and Acute Glosso-Labiolaryngeal Paralysis. M. Hawes, Denver.
- 120 Carlsbad "Kur." C. K. Fleming, Denver.

**Medical Herald, St. Joseph, Mo.**  
*August.*

- 121 Drainage in Acute, Diffuse Septic Peritonitis. V. Knott, Sioux City, Iowa.
- 122 Plea for the Anesthetic Specialist. D. G. Wilson, Kansas City, Mo.
- 123 Treatment of Inguinal Hernia. P. E. Sawyer, Sioux City, Iowa.
- 124 Renal Affections Simulating Abdominal and Pelvic Diseases. J. Block, Kansas City.

**Fort Wayne Medical Journal-Magazine.**  
*August.*

- 125 Treatment of Chronic Constipation in the Infant. S. D. Beavers, Decatur, Ind.
- 126 Modification of Milk in Infant Feeding. L. P. Drayer, Ft. Wayne.
- 127 Injuries of the Elbow Joint. H. A. Duemling, Ft. Wayne.

**Journal of Medical Research, Boston, Mass.**  
*August.*

- 128 Bacteriolytic Power of Immune Serum and the Theory of Complement Diversion. B. H. Buxton, New York.
- 129 Neuroglia Framework of the Cerebellum in Cases of Marginal Sclerosis. E. E. Southard, Boston.
- 130 Harvard Embryologic Collection. C. S. Minot, Boston.
- 131 Relation of the Index of Alkalinity to the Production of Diphtheria Toxin. A. P. Hitchens, Glenolden, Pa.
- 132 General Septicemia. C. W. Duval and P. A. Lewis, Boston.
- 133 Enzymes in Tumors. B. H. Buxton and P. Shaffer, New York.

**FOREIGN.**

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

**British Medical Journal.**  
*September 23.*

- 1 \*Diagnosis and Treatment of Cancer of the Uterus. Dr. Wertheim. H. A. Kelly, C. Lockyer, S. M. Keith, M. Scharlieb, J. Campbell, L. B. Aldrich-Blake, H. Briggs, F. J. McCann and others.
- 2 High Range of Normal Temperature and Pulse Throughout the Puerperium. E. H. Tweedy.
- 3 \*Treatment of Cervical Cancer in the Last Two Months of Pregnancy. T. Wilson.
- 4 Influence of the Presence of Pus in the Female Urethra on the Progress of Gynecologic and Obstetrical Cases. J. Campbell.
- 5 Removal of a Tumor from a Hermaphrodite. H. Corby.
- 6 \*Complications and Degenerations of Uterine Fibromyomata. S. J. M. Cameron.
- 7 Treatment of Albuminuria and Eclampsia Occurring in Pregnancy. R. Boxall, H. Spencer, E. H. Tweedy, J. W. Byers, J. Campbell, T. Wilson, A. N. Holmes, J. I. Parsons and others.
- 8 Case of Elephantiasis of the Vulva in Association with Elephantiasis of the Right Lower Limb. E. J. Maclean.
- 9 \*Further Report on a New Operation for Prolapsus Uteri. J. I. Parsons.

1. **Cancer of the Uterus.**—Since the autumn of 1898 Wertheim has operated in all cases of carcinoma affecting the cervix and portio vaginalis by the abdominal route in such a way that by freeing the ureters and separating the bladder and rectum he has removed the cancerous uterus, together with a great deal of the surrounding cellular tissue and lymph glands. The operation, with which all surgeons are familiar, is described in detail. Wertheim considers extensive vaginal operations more difficult than extensive abdominal ones, and believes that there is no difference between the mortality of the two operations. In spite of all skill and technic, the vaginal operation does not permit of so much of the parametrium being removed as does the abdominal, nor does it permit of the removal of the glands which lie on the iliac vessels.

3. **Cancer of the Cervix in the Last Two Months of Pregnancy.**—Wilson reports two cases of cancer of the cervix complicating pregnancy in which vaginal Cesarean section was performed. In the first case the patient was a woman, aged 32, and the operation was performed at the end of the eighth month. When first examined, a pedunculated growth was observed attached to the posterior lip of the cervix; this growth was removed under anesthesia and the posterior lip of the cervix was curetted. One week later the uterus and its contents were removed. A transverse incision was made through the anterior attachment of the vagina to the cervix, and the bladder was pushed upward; the anterior wall of the cervix was divided in the middle line, the edges of the incision were pulled down by volsella on either side, the bladder was pushed further upward, and the median incision prolonged for about



six inches. Strong silk sutures were passed on either side of the upper part of the incision to serve as guides, and the volsella were removed. By bimanual manipulation the head was pressed into the pelvic brim; the membranes were then ruptured, the forceps were applied to the head, and the child delivered, the cord being immediately clamped and divided. The uterus was then again drawn down by the strong silk sutures that had been applied for the purpose, and without waiting to deliver the placenta, the median incision was continued until, with the help of traction from below and pressure by an assistant from above, the uterus was delivered. Forceps were applied to the broad ligament on either side and to the posterior vagino-peritoneal attachment, the tissues being divided successively as the forceps were applied. After the uterus had been removed in this way the forceps were allowed to remain, a long strip of iodoform gauze being introduced into the bottom of Douglas' pouch and another being packed round between the bundle of forceps and the wall of the vagina. The child was livid when extracted, but was easily resuscitated and lived. The mother's recovery from the operation was uneventful, but a year later her physician reported that she was very weak, thin, anemic, and suffering from diarrhea, alternating with constipation. There was also an offensive bloody discharge from the vagina. The pelvis was occupied by a large, hard nodular mass which descended low in the vagina and rose two and a half inches above the pubic arch. In the second case the woman's age was 29. A similar operation was performed and the patient made an excellent recovery. In this case also the child was partially asphyxiated, but was resuscitated. Wilson states that in both these cases the immediate result of the operation left nothing to be desired. The children were delivered alive and thrived so long as they were kept in the hospital, their subsequent deaths being due to carelessness and neglect on the part of the mothers. He states that his experience in these two cases shows that vaginal Cesarean section, even in the last months of pregnancy, is not a difficult one in suitable cases, that the immediate risk to the mother is not great, and that the chances for the child are good. The value of the proceeding, however, depends on the remote results as regards the reappearance of cancer, and until these can be estimated and compared the question of the best method of operating remains an open one.

**6. Complications of Uterine Fibromyomata.**—Cameron reports illustrative cases and discusses at length the various degenerations and complications which may take place in these growths. He says that while some authorities deny that sarcomatous changes can take place in fibromas of the uterus a careful review of reported cases compels one to admit that they may occur. A point of some interest in sarcomas of the uterus is that they may be shelled out exactly like a fibromyomata. He quotes statistics to prove that the association of adenocarcinoma of the uterine body with fibroids is more than a mere coincidence, and states that a fair average would be from 2 to 3 per cent. Carcinoma of the vaginal portion of the cervix with uterine fibroids is the most common variety. A frequent accompaniment of uterine fibromyomata is a marked increase in the size of the uterine and ovarian arteries, which, in well-marked cases, may approach the carotid in size. They are often greatly increased in length and become exceedingly tortuous. Microscopically, the circular and longitudinal coats are seen to be very much hypertrophied and in some cases there is a tendency to excess of fibrous tissue in the internal coat. Cystic degeneration in fibroids is a fairly frequent occurrence, according to Cameron, and may take place in young women or in women many years past the menopause. The cystic changes may be either diffuse or localized. One of the earliest changes in the histogenesis of cystic fibroids, he states, is a disappearance of the nuclear staining in the connective tissue. The fibers then seem to swell and disappear and the muscle cells are affected secondarily. Such progressive changes may give rise to spaces of large size, the walls of which resemble somewhat the interior of the heart cavities through the projection into them of the relatively unaltered muscular tissue. Cameron states that it is a curious fact that many broad ligament tumors undergo myxomatous change and says that recently he found this change in a spindle-celled sarcoma

growing in the broad ligament. He refers to torsion of the pedicle in subserous myomata of the uterus with consequent displacement of that organ, and in some cases omental adhesions. He reports briefly a case of fibromyomatous polyp complicating a three months' pregnancy. The tumor was removed, but the patient aborted immediately after. Examination of the tumor after removal led Cameron to believe that when a submucous fibromyoma is extruded into the vagina and pregnancy supervenes the so-called mucous membrane may undergo changes analogous to those in the uterus. He refers briefly to fibroids complicated with tuberculous disease of the ovaries and tubes and to adenomyomata of the uterus.

**9. Prolapsus Uteri.**—Parsons reports on the results obtained in 93 cases of prolapse of the uterus with the operation introduced by him, consisting of the injection of the broad ligament with a solution of 12 grains of sulphate of quinin dissolved in 30 minims each of distilled water and dilute sulphuric acid. The idea is to cause an effusion of lymph in the utero-pelvic band within the broad ligaments so that repair will take place. There is no rise of temperature, no inflammation, no pain accompanying this procedure. It can be done anywhere and in a few minutes. The patient is prepared for the operation by douching the vagina with bichlorid of mercury, 1/2000. The bowels are thoroughly emptied and an enema is given the morning of the operation. Depending on the severity and duration of the prolapse, the patient is kept in bed for from one to seven days, and, if necessary, the uterus must be held in place with the pessary. Eighty per cent. of the patients treated had complete procidentia, some of them for many years. There was great improvement in nearly all the cases, and only one entire failure. About 80 per cent. are completely relieved of their prolapse. Six patients have born children since the operation and have not had any recurrence of the procidentia, although the uterus was a little lower after confinement than it was before. Recurrence of the prolapse took place in three cases after operation, and in one case after five months as the result of much coughing.

#### The Lancet, London.

September 23.

- 10 Address on Morbid Growths, with a Suggestion as to Treatment. A. F. Blagdon Richards.
- 11 Paratyphoid Fever. F. P. Mackie.
- 12 Infective Purpura. S. R. Schofield.
- 13 \*Forty Consecutive Cases of Fracture of the Patella Treated by Wiring. C. M. Moullin.
- 14 Case of Acute Tetanus Treated with Intracerebral Injections of Antitoxin. K. S. Storrs.
- 15 Recent Developments in the Surgical Treatment of Strabismus. S. Stephenson.
- 16 Action of Venoms of Different Species of Poisonous Snakes on the Nervous System. G. Lamb and W. K. Hunter.
- 17 Treatment of Word Blindness. C. Wray.
- 18 \*Treatment of Strychnin Poisoning and of Tetanus by Spinal Anesthesia. A. E. Russell.
- 19 Question of a Medical Training for Natives of South Africa. N. MacVicar.

**13. Fracture of Patella.**—For the past eight years Moullin has wired every case of fracture of the patella, with one exception, no matter what the size of the fragments, whether or not they were comminuted or whether the patients appeared to be on the verge of delirium tremens. The one exception was a case of refracture in an enormously stout woman in whom no operation of any kind was advisable. The operation was performed on the third or fourth day after the accident. A semi-circular flap is raised from over the fragments and all the blood clot is carefully turned out. Each fragment is drilled in such a way that the wire does not project through the cartilaginous surfaces. A single stout silver wire is passed through and the ends are twisted together until the fragments are in exact apposition, cut short, and buried. No carbolic acid or other antiseptic is allowed to touch the interior of the joint. There is no occasion to wash it out, as the blood, being all coagulated, can be removed with ease by means of a scoop and forceps. The torn fascia on the cutaneous surface of the patella is then united with catgut and one or two catgut sutures are used to join together the aponeurosis on either side if it has been extensively lacerated. No drain is inserted, but the angle of the cutaneous incision is left a little open in case there should be any oozing. No splint is used. Deep and superficial dressings are applied and the knee is firmly bandaged.



On the third or fourth day the bandages and the superficial dressings are removed and are replaced by a lighter bandage, and the patient is encouraged to flex and to extend the limb more and more each day until by the end of two weeks it can be bent to a right angle. Massage is begun as soon as the wound is healed. The patient is allowed to get up before the end of the third week, and by the end of the fourth he is able to walk without a limp and to kick. In one instance bicycle riding was resumed before five weeks had elapsed from the date of the accident without any ill results.

**18. Treatment of Tetanus by Spinal Anesthesia.**—Russell reports a case of tetanus treated successfully by subdural spinal injections. Sixteen c.c. of cerebral fluid were withdrawn and 3 c.c. of the following solution were injected: One and a half grains of B. eucaïne, one-third of a grain of morphin sulphate and three grains of sodium chlorid, with sufficient water to make three and a half ounces. This procedure was repeated four times.

**Indian Medical Gazette, Calcutta.**  
*September.*

- 20 Extraction of Cataract in the Capsule. H. Smith.
- 21 Notes on Plague in the Punjab. S. Browning-Smith.
- 22 Significance of the Pyriform Circular and Irregular Shaped Bodles Present in the Circulation, Organs or Tissues in Various Forms of Disease in Man and Animals, etc. A. Lingard.

**Bristol Medico-Chirurgical Journal, London.**  
*September.*

- 23 Relation of Medicine to the Natural Sciences. J. M. Clarke.
- 24 Surgical Aspect of Cholelithiasis. J. Swain.
- 25 Twin X-Ray Representation and the Reflecting Stereoscope. W. Cotton.
- 26 Study of the Records of 155 Cases of Operation for Appendicitis. C. A. Morton.
- 27 Note on Congenital Dilatation of the Ureters with Hydro-nephrosis. J. M. Fortescue-Brickdale.
- 28 Some Anomalous Cases of Locomotor Ataxia. F. H. Edgeworth.

**Intercolonial Medical Journal of Australasia, Melbourne.**  
*August.*

- 29 \*Molluscum Fibrosum. A. W. F. Noyes.
- 30 \*Use of Rye Bread in Diabetes. M. C. Lidwill.
- 31 Case of Movable Spleen with Rotated Pedicle—Splenectomy. G. A. Syme.
- 32 Case of Volvulus of the Cecum—Resection of Bowel—Recovery. G. A. Syme.

**29. Fibroma Molluscum.**—Noyes gives the history of five cases observed among 5,000 consecutive cases of skin affections and concludes as follows: 1. The so-called molluscum fibrosum growths arise from branches of the cutaneous nerves, by proliferation of the endoneurium. 2. The new tissue may remain confined by the perineurium for a period, or it may break away and become diffused at quite an early stage, spreading into the adjacent tissue surrounding any or all of the structures of the corium and subcutaneous tissue, including altered nerve branches themselves, which are still confined by the perineurium. 3. The proliferation of the endoneurium, and the consequent disappearance of the nerve fibers and their axis cylinders, leads to more or less loss of sensation in the cutaneous surface overlying the new tissue. 4. Similar changes in the nerves composing the vasomotor apparatus of the cutaneous vessels involved in the new growth may account for the clinically observed discolorations in connection with them. 5. The small nodular projections, due to proliferating endoneurium confined by perineurium, may occur in the smaller nerve branches, giving, microscopically, a neurofibroma-like appearance, without being clinically recognizable as such.

**30. Rye Bread in Diabetes.**—Lidwill was led to the use of rye bread in diabetes by the craving and empty feeling of which patients on the so-called diabetic diets complained. He found that rye bread is satisfying, stopping that empty feeling, and that patients eat but little of it in proportion to wheat bread, about a loaf and a half sufficing for a week. It contains but little digestible starch; it is laxative; the sugar in the urine diminishes considerably during its use; patients do not tire of it, and it is cheap. Its greatest use is in the milder forms of glycosuria occurring in the middle-aged or old.

**Annales de l'Institut Pasteur, Paris.**  
*Last indexed page 1121.*

- 33 (XIX, No. 8.) Les ferments de la caséine. P. Mazé.
- 34 L'ammoniaque dans le lait (in milk). A. Trillat and Sauton.

- 35 Sur la division nucléaire de la levure pressée (of yeast). Swellengrebel.
- 36 Sur le mécanisme du phénomène de l'action fractionnée des toxines (phénomène de Danysz). C. Levaditi.

**Revue de Chirurgie, Paris.**

*Last indexed page 1121.*

- 37 (XXVI, No. 8.) \*Ostéo-sarcome de l'humérus propagé aux parties molles. Amputation interscapulo-thoracique. Survie de un an. E. Jeanbrau.
- 38 \*La survie après l'amputation interscapulo-thoracique pour tumeurs malignes (survivals). E. Jeanbrau and V. Riche.
- 39 \*3 nouveaux cas d'amputations interscapulo-thoraciques, dont deux pratiquées pour des tumeurs de l'extrémité supérieure de l'humérus, suivis de quelques considérations sur les résultats et sur les indications de cette opération, et d'une modification de son manuel opératoire. Berger.
- 40 Systematic Evacuation of the Intestines (lavage by enterotomy combined with catheterization or expression of the loops in acute mechanical occlusions). Two instruments devised for the purpose. Research on the cadaver.—De l'évacuation méthodique de l'intestin. L. Pinatelle and G. Rivière.

**37. Long Survival After Removal of Osteosarcoma of Humerus.**—Jeanbrau describes in detail a case of malignant neoplasm, originating in the humerus, but extending far into the soft parts, which he treated by interscapulo-thoracic amputation, with the survival of the patient for twelve months. The osteosarcoma had evidently been insidiously developing for some time, but had caused no symptoms until the humerus fractured at the point while the patient, a woman of 41, was trying to open an umbrella in a storm. The amputation was by the Berger-Farabeuf technic. This entails the minimum of shock and prevents the generalization of the growth. The preliminary ligature of the subclavian artery and vein also prevents any appreciable loss of blood and diffusion of infectious material from the tumor. Great care should be taken not to pull on the arm, not even touching it, and not shaking the shoulder, thus avoiding embolism. By this means all traction on the spinal cord is avoided, and the operation is no more serious than mere disarticulation of the shoulder.

**38. Survivals After Interscapulo-thoracic Amputation.**—Further research and analysis of published records have shown that the operative mortality of this operation for malignant new growths, which was 29.16 per cent. before 1887, has dropped to 7.84 per cent. in recent years, and to 5 per cent. or less if the fatalities for which the operation was not responsible are excluded. The average survival is three years, which is a most remarkable showing when we consider that this crippling operation is not accepted by patients except as a last resort in advanced stages of malignant disease, when their resisting powers are at a low ebb. The number of cases on record is now 125 histologically verified and 63 not verified with the microscope, as the diagnosis was unmistakable at the stage of the disease when the operation was performed. Before the year 1887 the number was 35 cases, with 29.16 per cent. mortality, but since that year the mortality has been only 7.84 per cent. in 153 cases. Absolute cure is possible, as 24 of these patients were in good health five years and more since the operation. Küster, Roth and Ochsner have each a patient in good health for more than ten years, Ochsner and Körte others for more than thirteen, and Chavasse others for more than fifteen years after operation. A patient operated on by Ollier in 1884 is in good health to-day, and one of Syme's patients was known to be in good health for twenty-six years. All the cases since 1887 are summarized at the conclusion of the article.

**39. Modified Technic of Interscapulo-thoracic Amputation.**—Berger here describes 4 new cases of this operation and his latest modification of his original technic. He has performed the operation seven times. He classifies the 129 cases since 1887 according as the lesion originated in the humerus, in the scapula or in the soft parts. When in the humerus, the mortality has been 2.75 per cent. in 73 cases; in the scapula, 25 per cent. in 20 cases of sarcoma, while one operation for a chondroma was followed by recovery. In 35 cases of tumors originating in the soft parts the mortality was 11.24 per cent. These figures indicate the greater seriousness of lesions in the scapula or soft parts in comparison with those in the humerus. It is more difficult to find and to ligate the subclavian and axillary vessels, and, as the muscles are more liable to be involved, the mutilation is more extensive. Recurrence or



generalization of malignant tumors in the humerus was observed in only 48.38 per cent., while the proportion was 73.17 per cent. with tumors of other origin. The survival after removal by this technic of sarcoma of the humerus has averaged from nineteen to twenty months in 30 cases; in case of sarcoma of the scapula from thirteen to fourteen months elapsed before recurrence or generalization was observed, and from nineteen to twenty months in case of malignant tumors in the soft parts. Recovery is the rule after removal of a chondroma. Instead of resecting merely the median portion of the clavicle, he now resects the entire sternal portion after dividing the clavicle in the center. Drainage must be thorough, and for this purpose he introduces a large drain through an incision in the belly of the stumps of the serratus magnus and of the latissimus dorsi to drain the blind pouch between them and the thoracic wall. Drain tubes as large as one's thumb are also inserted at each side and corner and at the lowest point of the operative wound, which should be sutured elsewhere. The dressings should be changed every day, withdrawing the drains after from the fourth to sixth day. In his last four cases healing was complete by the tenth day.

#### Semaine Médicale, Paris.

- 41 (XXV, No. 38.) \*Des sténoses méconnues du pylore dans l'ulcère gastrique (unsuspected stenosis). Oettinger.  
42 \*Le signe de Kernig est-il pathognomonique de la méningite?

41. **Unsuspected Stenosis of the Pylorus.**—Oettinger calls attention to the frequency of unsuspected partial stenosis of the pylorus. He believes that many cases have been diagnosed as gastrosuccorhea or other anomaly when in reality the trouble was due to partial stenosis accompanying an ulcer near the pylorus. He describes a case which sustains this assumption. The patient was under observation for six years, and yet until the last few months the possibility of stenosis had never been thought of. He had presented stomach symptoms for eleven years. At first they were intermittent, actual crises with intervals of apparently perfect health. Stagnation of food, with hypersecretion and peristalsis of the stomach, were noted even from the first, but the intervals of apparently perfect health caused the first suggestion of stenosis to be dismissed as untenable. The intervals became shorter and shorter, the symptoms of the crises simulating those of gastrosuccorhea, intermittent at first, but later becoming chronic. The duration of the attacks was variable, sometimes lasting for several days, but always presenting the features of extremely violent paroxysmal pain, coming on two or three hours after the meals, especially at night, and frequently, but not always, terminating in vomiting of an acid fluid or else of food. According as the stomach contents were obtained at different times, the findings varied from those of hypersecretion with stasis, hypersecretion without stasis or intermittent gastrosuccorhea to findings which seemed to indicate that the motor functions were quite or nearly normal. All the time the real cause of the disturbances had been an ulcer near the pylorus, entailing partial stenosis of the latter. The stomach was frequently found entirely empty, but at other times residual fluid was found in the morning. If this finding is repeated several times, the amount of fluid being over 40 or 50 c.c., the diagnosis of stenosis becomes more probable, even if at other times the stomach is found empty. The occurrence of pyloric ulcer with partial stenosis may be secondary to hyperacid catarrh, which is generally accompanied by hypersecretion and delay in the evacuation of the stomach.

42. **Kernig's Sign.**—An editorial reviews the evidence presented in the last few months in regard to the pathognomonic value of Kernig's sign in meningitis. The conclusions are that this sign does not necessarily imply the involvement of the meninges, but that it is a confirmatory sign in addition to others suggesting the presence of meningitis.

#### Archiv f. klinische Chirurgie, Berlin.

Last indexed page 1206.

- 43 (LXXVII, No. 2.) \*Ueber Pneumonien nach Laparotomien. G. Kelling.  
44 Local Tetanus.—Fall von "örtlichem Tetanus. Antitoxin-Einspritzungen in die Nerven-Stämme. Heilung. E. Kuster.  
45 Ueber Gallenfluss nach Echnokokken-Operation (flow of bile). E. Rausch.  
46 \*Ueber den postoperativen Vorfall von Baucheingeweiden (prolapse of viscera). O. Madelung.

- 47 Kroenlein's Orbital-Resection zur Behandlung retrobulbarer Geschwülste und Entzündungen. T. Axenfeld.  
48 Retroperitoneales Lipom der Nierenfettkapsel im Kindesalter (of adipose capsule of child's kidney). A. Neumann.  
49 Einfluss der Gas-Gemisch-Narkosen auf die inneren Organe. B. Müller.  
50 Mental Weakness and Physical Affections in Surgical Domain.—Geistige Schwäche und körperliche Leiden auf chirurgischem Gebiete. Hydrops Genu permagnum. Riedel.  
51 Die Tracheo-Bronchoskopie in diagnostischer und therapeutischer Hinsicht. Kliffan.  
52 Zur Frage des Verschlusses traumatischer Schädeldefecte (defects in skull). A. Stieda.

43. **Postlaparotomy Pneumonia.**—Kelling's researches have established, he thinks, that there is a tendency to hypostasis in the lungs, especially in the right lower lobe, after a laparotomy. Aspiration pneumonia occurs more frequently after laparotomies than after other operations, especially pleuropneumonia of the right lower lobe. This occurs most often when the field of operation was infected. The lung becomes infected through the lymphatics passing through the diaphragm. Pneumonia from embolism is also of frequent occurrence. The infection is transmitted from some ligated vein communicating with the vena cava system or by way of the retroperitoneal veins whose lymphatics are connected with those of the mesentery. Sepsis with hypostatic pneumonia can also spread from the abdomen, and infectious thrombi may form at predisposed points of the veins, because the lymphatics of the diaphragm communicate directly with the blood-vessel system. Infection from the air also deserves more attention than has hitherto been accorded. The conditions are more unfavorable during a laparotomy than in almost any other operation. Postoperative pneumonia is due to infection which would not have occurred without the operation. The operation should be performed in a room absolutely free from dust. There should be no talking over the wound, and mouth masks should be worn. It should further be investigated whether diluting the germs by copious rinsing might not attenuate their virulence. It might be well to flush out the abdominal cavity through the laparotomy wound with a stream of water entering elsewhere and pouring out through the wound. Copious ingestion or injection of fluids also promotes the circulation and reduces the danger of embolism. Early movements of the legs are also important to prevent thrombosis. If the legs are varicose, they should be raised high on pillows. He is convinced that the prevention of infection of the field of operation is the main point in preventing pneumonia after laparotomies.

46. **Postoperative Prolapse of Abdominal Viscera.**—Madelung has collected 144 cases from the literature and knows of others, including seven in his own experience, that bring the total to 157. He analyzes them all to learn the causes of the giving way of the cicatrix and of the prolapse. In 29 cases death was the direct result of the prolapse. Those who survive are not exposed to more disturbances than other people, after the prolapse has been corrected. The number of cases in which the cicatrix was abnormally thin was surprisingly small. The prolapse recurred twice in one and three times in another case. Reposition was generally difficult. Narcosis is not necessary for reduction, as the manipulation of the prolapsed intestines is not felt as pain.

#### Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 744.

- 53 (XXIX, No. 32, Aug. 12.) \*Spontane Narben-Ruptur nach queren Fundal-Schnitt (rupture of cicatrix after transverse Cesarean section). Schink.  
54 2 Fälle von Zwillings-Placenta mit gemeinsamen Amnion (twins with single amnion). T. v. Wenzel.  
55 Eine neue Wochenbettsbinde (bandage after delivery). J. Ernst (Cologne).  
56 (No. 33.) \*Ueber Ovarial-Resektion. P. Zacharias.  
57 Ueber Clavicula-Frakturen Neugeborener bei Geburt in Schädellage (in vertex presentation). E. Hauch.  
58 (No. 34.) Origin of Oblique and Transverse Presentation.—Zur Entstehung der Schräg- und Querlagen. F. Kermanner.  
59 Fall von polypösem Kystom. O. Nebesky.  
60 \*Varying Tonality of Uterine Muscle.—Ueber wechselnden Tonus des Gebärmuttermuskels mit Bezug auf die Gefahr einer Perforation bei der Curettage. C. V. Tussenbroek.  
61 (No. 35.) Does Large Head Justify Operation to Enlarge Pelvis?—Rechtfertigt ein abnorm grosser Kindskopf auch beim wenig verengten Becken die operative Beckenerweiterung? H. Sellheim (Krönig's clinic), Freiburg.  
62 Delivery in Case of Extreme Hypertrophy of Cervix.—Geburtsverlauf bei einem Fall von hochgradiger Cervix-Hypertrophie. T. Haagen.



- 63 (No. 36.) Zur Topographie und Technik der subkutanen Hebotomie nach Döderlein (extramedian symphyseotomy). H. Seilheim. Id.—G. Walcher.

**53. Spontaneous Rupture of Cicatrix After Fundal Incision.**—Schink has observed a case of rupture of the cicatrix after a transverse fundal incision, and has found three similar cases on record. He gives the details of each. His patient had passed through a pregnancy since the incision, and the rupture did not occur until the second pregnancy. The placenta was not attached near the point of rupture. He thinks that such cicatricial tissue is liable to be less resistant than the rest of the uterus.

**56. Resection of Ovary.**—Zacharias relates that Menge has succeeded in maintaining menstruation in three women on whom he operated for removal of bilateral ovarian cysts that had substituted the normal ovary. He accomplished this by making an oval incision around the base of the tumor, which he then shells out with his fingers, leaving an oval plate of ovarian tissue not more than 1 or 2 mm. thick at any point. The edges of this plate are then turned in until the raw surface is entirely covered and the tissue is sutured, the resulting roll being shaped something like a sausage, in the place of the normal ovary. This little roll contains the germinal epithelium of the albuginea and a strip of connective tissue. No follicles could be discovered in it, but a few isolated corpora albicantia were found. The three patients exhibited a few symptoms of the artificial menopause immediately after the operation, but they rapidly subsided, and menstruation has been apparently entirely normal since. The patients were from 25 to 34 years of age.

**60. Varying Elasticity of Uterine Muscle.**—Van Tussenbrock is amazed that the variations in the elasticity of the uterine walls have attracted so little attention. In many text-books it is announced as a sure sign of perforation when the curette can suddenly be pushed in a few centimeters farther than at first. She thinks that this is of frequent occurrence, and that it is merely the result of the sudden relaxation of the elasticity of the musculature under the influence of the curetting or of the preceding tent dilatation. In some instances she has even found the walls so loose and flabby that curetting was impossible, but by waiting for a time they regained their normal elastic retraction. This flabbiness, of course, increases the predisposition to perforation. She gives a number of illustrations and arguments to show that this transient paralysis is probably due to the mechanical irritation and reviews the literature on the subject since van der Mey first called attention to it in 1894.

#### Deutsches Archiv f. klinische Medizin, Leipsic.

*Last indexed pages 1084 and 1208.*

- 64 (LXXXIII, Nos. 5-6.) \*Experimentelle Untersuchungen über die Ursachen der Abtötung von Bakterien im Dünndarm (causes of destruction of bacteria in small intestine). Rolly and G. Liebermeister.
- 65 \*Influence of Changes in Circulation on Composition of Urine.—Einfluss von Kreislaufänderungen auf die Urinzusammensetzung. A. Loeb (Strasburg).
- 66 \*Action of Roentgen, Radium and Ultra-violet Rays on Blood, etc.—Experimentelle Untersuchungen über die Einwirkung der Roentgenstrahlen auf das Blut, und Bemerkungen über die Einwirkung von Radium und ultraviolettem Lichte. P. Linser and E. Helber.
- 67 Purinstoffwechsel beim Menschen (purin metabolism in man). B. Bloch.
- 68 \*Utilization of Nitrogenous Food in Digestive Disturbances.—Ausnutzung stickstoffhaltiger Nahrungsmittel bei Störungen der Verdauung. W. Roehl (Heidelberg).
- 69 \*Bakteriämie bei der Lungen-Tuberkulose. O. Jochmann (Breslau).
- 70 Determination of Ammonia and Carbonic Acid in Urine.—Ueber Ammoniak- und Kohlensäurebestimmung im Harn. F. Moritz.
- 71 \*Bedeutung der Dermographie für die Diagnose funktioneller Neurosen. H. Stursberg (Bonn).

**64. Causes of Destruction of Bacteria in Small Intestine.**—Among the conclusions of the experimental research reported is one to the effect that bile, pancreatic juice and intestine juice have no bactericidal action, but form a good culture medium for microbes. The intestinal wall, on the other hand, plays a certain part in the destruction of bacteria. The acidity of the chyme as it leaves the stomach has an inhibiting action on the growth of the bacteria, but if it is neutralized by an alkali the bacteria flourish. They also proliferate when the intestinal walls are irritated or the peristalsis diminished. The

mucosa of the normal small intestine insures freedom from bacteria throughout this part of the bowels. When the mucosa is inflamed or diseased it is no longer able to accomplish this, while the intestinal juice offers a good culture medium for the bacteria in which they flourish accordingly.

**65. Influence of Changes in the Circulation on Composition of the Urine.**—The first part of this study is devoted to orthostatic albuminuria. The details of the examination of 17 patients and of a number of normal persons are given in tabulated form for comparison. The findings testify to the fact that orthostatic albuminuria does not positively exclude nephritis, but that a majority of the cases are not of a nephritic, but rather of a cardio-vascular, circulatory nature and origin. Changing from the reclining to the upright position seems to be the cause, not the upright position in itself, as the albuminuria grows less after the individual has been up for some time. The increased concentration of the urine suggests that the circulation through the kidneys is hampered, while the pressure in the veins is higher, and this means venous hyperemia, which can not fail to injure the organ more or less in time, although Posner's patient has exhibited orthostatic albuminuria for many years without evidence of nephritis. Linossier and Lemoine found that the amount of urine was less when their patients were up than when they spent a corresponding twelve hours in bed. The reduction in the output of urine was most pronounced in the patients with some kidney affection.

**66. Action of Roentgen, Radium and Ultra-violet Rays on the Blood.**—Linser and Helber summarize the results of their experimental studies in the statements that radium and ultra-violet rays have no appreciable influence on the blood, but that the Roentgen rays have an elective destructive action on the white corpuscles. This action is most pronounced in the circulating blood. The lymphocytes are the least resistant to the Roentgen rays. A leucotoxin is generated by the destruction of the white corpuscle, and injection of this leucotoxin into the circulation of other animals has a destructive action on the circulating leucocytes. The leucotoxin produced in the blood after exposure to the Roentgen rays induces an immunity to the leucotoxin in time. After Roentgen exposures, nephritis was frequently observed even when the rays had not been applied directly to the kidney. Rabbits, rats, dogs and pigs were the animals used in the experiments.

**68. Utilization of Nitrogenous Foods in Digestive Disturbances.**—Roehl's tests failed to show that digestive disturbances prevented the utilization of the nitrogenous elements of the food to an extent sufficient to explain the prostration and loss of weight observed in these cases. The cause of the disturbances in the metabolism can not be sought in the nitrogen assimilation.

**69. Bacteriemia in Pulmonary Tuberculosis.**—Jochmann asserts that, as a rule, it is impossible to detect bacteria in the blood in progressing cases of pulmonary tuberculosis. When found postmortem, they are due to agonal invasion, when the bactericidal properties of the blood have been lost.

**71. Dermographia.**—Stursberg examined 90 men, 84 women and 70 children in regard to the response of their skin to a line drawn with moderate pressure and moderately quickly along the skin with the rounded end of a metal pencil holder. The stroke was made on the skin of the chest and upper part of the back, and the interval before redness appeared and before it disappeared was noted. The skin became red in nearly every instance. The redness was slightly more pronounced in the patients with neuroses than in others, but the average was surpassed in some of the patients who were free from neurotic manifestations. Dermographia, therefore, has no appreciable diagnostic significance.

#### Deutsche Zeitschrift f. Chirurgie, Leipsic.

*Last indexed page 142.*

- 72 (LXXVI, Nos. 2-3.) Causes of Pressure Stasis from Compression of the Trunk.—Die sogen. Stauungsblutungen infolge Ueberdrucks im Rumpf und dessen verschiedene Ursachen. R. Milner. (Supplement in No. 4.)
- 74 Perorale Tubage und pulmonale Narkose. F. Kuhn (Cassel).
- 75 Fall von intra- und extracranial gelegenen Echinococcus. W. Schlagintweit.
- 76 Knorpel-Regeneration (of cartilage). M. Mori.
- 77 Fracturen der Finger-Phalangen. O. E. Schulz.



- 78 \*Ueber Pathologische Fracturen (Spontan-Frakturen). Grunert.  
 79 (Nos. 4-6.) \*Intestinal Stenosis After Operative or Non-Operative Reposition of Incarcerated Hernia.—Ueber Darmverengerungen, etc. L. Meyer (Chaux-de-Fonds).  
 80 Zur Frage von den primären Muskel-Angiomen. H. Sutter.  
 81 Cure of Chronic Incarceration of Stomach in Congenital Hernia of the Diaphragm, with Remarks on Possibility of Resecting a Carcinoma in the Cardia.—Geschichte eines Falles von chron. Incarceration des Magens, etc. L. Heihenhaln.  
 82 \*Statistik und Casulistik über 290 histologisch untersuchte Haut-Carcinome (of skin). R. Borrmann (Göttingen).  
 83 Obstruction from Changes in Position and Shape of Colon.—Ueber den durch Lage- und Gestaltsveränderungen des Colon bedingten vollkommenen und unvollkommenen Darmverschluss. H. Braun.  
 84 Case of Congenital, Inherited Genua Valga and of Luxation of the Head of the Radius.—Fall von angeb. vererbter Verbildung beider Knie- und Ellenbogengelenke. F. Roskoschny (Vienna).  
 85 \*Action of Shock in Shot-Wounds.—Zur Shockwirkung bei Schrotschüssen. Schieffer.

**78. Pathologic Fractures.**—Grunert classifies pathologic, spontaneous fractures as those due to local changes in the bones, those due to some general affection and those due to idiopathic fragility. He reviews the literature of each class. There are now 73 cases of idiopathic fragility of bone on record. The influence of heredity is a striking feature of some of the cases, fully 20 out of the 73 showing hereditary transmission. The multiple fractures numbered 113 in Chaussier's cases, 119 in Hondley's and more than 200 in Esquirol's. The tendency to fracture in the idiopathic cases is manifested early. He notes that 45 of the 73 cases were observed in England or America, and only 28 in Germany, France and Italy. Verchère has reported that young people displaying a tendency to fractures from slight trauma exhibited polyuria with elimination of unusually large amounts of phosphoric acid. It may be possible, Grunert suggests, that a predominant meat diet may alter the composition of the bones in the course of generations so that they may acquire extraordinary fragility, although the diet of the later generations may be entirely hygienic. Further study of the assumed phosphaturia in these cases is necessary to elucidate the still obscure question of the idiopathic tendency to multiple fractures from trifling causes.

**79. Stenosis of Intestine After Reposition of Incarcerated Hernia.**—Meyer reports a case and tabulates those found in the literature in which symptoms of obstruction developed after reposition of an incarcerated hernia. In some cases the symptoms of obstruction persisted either from mechanical obstruction or from functional disturbance of the activity of the intestines; in others the stenosis developed later, after the intestine had been permeable for some time. The details of the latter class are tabulated, thirty pages being devoted to the tables and twenty more to analysis of the cases. He also analyzes the literature on the subject of intestinal hemorrhage after reposition of incarcerated hernia. The danger of tardy stenosis is another reason why forcible taxis should be rejected and herniotomy preferred. Kocher emphasizes the importance of noting whether the arteries in the mesentery of the loop are pulsating as a criterion of the condition of the circulation in the loop. This guards against reposition of a loop destined later to perforate or become gangrenous. The tendency to stenosis seems to be the prerogative of the mucosa. Whether to make an artificial anus or to keep the loop outside the abdomen for a time depends on the individual conditions. The symptoms of tardy stenosis should first be treated on the assumption that they are purely functional, but when this is disproved by their persistence the surgeon should be called for enteroanastomosis or resection, preferably the former. The advantages of resection include microscopic examination of the resected portion which removes all doubt as to the nature of the trouble. If an operation is deemed inadvisable under the circumstances, a temporary artificial anus will relieve and the resection or anastomosis can be made later.

**82. Histologic Examination of 290 Extirpated Superficial Cancers.**—The details of the 290 cases collected between 1901 and 1904 are given in tables with thirteen columns for better comparison. No recurrence has been observed in 111 out of 117 cases in which the cancer was excised into sound tissue, while recurrence has followed in 15 out of 27 in which histologic examination of the edges of the excised portion showed that it did not extend into sound tissue. Borrmann insists that cancer statistics are reliable only when the cases are fol-

lowed after excision and when histologic examination of the excised tumor shows whether or not the excision was made into sound tissue. He found sound tissue in 81.3 per cent. of the 229 cases of carcinoma of the face, while it was found in only 62.5 per cent. of the cancers removed from the brow and in 70 per cent. of those from the cheek. His experience has been that the percentage is much less in cancers of the tongue and mucosa of the mouth, while it is highest in cancer of the upper lip. The various features of the cases are given with a wealth of details, and the cancers are grouped and classified according to the location, character, course, etc.

**85. Shock in Case of Shot Wounds.**—Schieffer refers to the sudden collapse of dogs when they are hit by shot. It is explainable only by the assumption of shock, as the wounds themselves are not enough to cause death so suddenly. In this article he describes his experiences with dogs under the influence of lumbar anesthesia which seems to attenuate or entirely to abolish the shock. Four out of 5 normal dogs dropped dead when shot, while those under the influence of the lumbar anesthesia survived much longer, although their injuries from the shot were more serious than those of the other dogs.

#### Mitteilungen a. d. Grenzgebieten der Med. und Chir., Jena.

*Last indexed XLIV, page 1724.*

- 86 (XIV, No. 5.) \*Zur Naturgeschichte der Gallensteine und zur Cholelithiasis (natural history of gallstones). B. Naunyn.  
 87 \*Invagination in Children.—107 Fälle von Darm-Invagination bei Kindern behandelt im Königin-Louisen-Kinderhospital in Kopenhagen 1871-1904. H. Hirschsprung.  
 88 Zur Frage der Früh-Operation der Appendicitis. P. Klemm.  
 89 Zur Frage der Nierenaushülung nach Edebohls (decapsulation). C. Stern.  
 90 Darmverschluss und Darmverengerung infolge von Perityphlitis (occlusion and stricture). H. Loevinsohn.  
 91 Gelatine und Blutgerinnung (coagulation of blood). G. Landmann.  
 92 \*Wirkung der Radiumstrahlen auf verschiedene Gewebe und Organe (action of radium rays on various tissues and organs). A. Thies.  
 93 Ueber chronische ankylosierende Wirbelsäulenversteifung (rigid spine). O. Ehrhardt.

**86. Cholelithiasis.**—Naunyn remarks that the modern era of cholelithiasis dawned only thirteen years ago. His studies of the natural history of gallstones are based on examination of stones from more than 1,000 cadavers. In all this experience he encountered only ten instances in which there had been an unmistakable dissolving of the stones. They were composed mostly of cholesterin, and the features of the dissolving process observed suggest that it was due to the action of certain bacteria. The action of bacteria is further evidenced by the presence of inorganic lime—phosphate and carbonate—in the stones. Attempts to dissolve the stones by therapeutic measures he does not regard as very promising. The task of internal medicine is to fight the infection of the biliary passages complicating or causing the lithiasis. Nothing is so successful for this as systematic and energetic application of cataplasms to the liver region with hot Carlsbad or similar alkaline-carbonated sodium sulphate water internally. Neither purgatives nor cholagogues are so effectual, according to his experience. He is convinced that it is possible for even a large gallstone to form within a few days or even hours. The Roentgen rays show up well only the stones containing considerable lime. In differentiating cholelithiasis from a stomach affection, the character of the first attack of pain is very important, especially if it occurs in the middle of the night. In this incipient phase the gall bladder is seldom adherent to the pylorus or duodenum. Consequently the pains at first are independent of the taking of food. Later they simulate gastric disturbances. A palpably enlarged spleen is a strong argument in favor of cholelithiasis. Suddenly developing cachexia speaks for cancer in dubious cases. In cases of a fistula into the duodenum, symptoms develop suggesting ileus or diffuse peritonitis. This condition may last for weeks, and when the surgeon is ready to operate the passage of a stone may restore conditions to normal.

**87. Invagination in Children.**—In the 107 cases of invagination reported, the children were well nourished, but habitual constipation seemed to be the rule. The ages ranged from a few months to 8 years. Over 60 per cent. were cured by chloroform, taxis and injection of water under pressure. Hirschsprung expresses surprise at the comparatively large



number of cases of invagination which he has had occasion to observe, no one else reporting such figures as his. The invaginations in some years seemed to assume almost an epidemic form. The passage of blood-stained stools should warn the mother and physician of the possibility of existing invagination, and the discovery under chloroform of the solid, cylindrical tumor confirms the diagnosis. Digital exploration of the rectus brings away a lot of blood-stained mucus. Under taxis the tumor changes its place and grows smaller and smaller until it finally disappears altogether. Laparotomy had to be performed in 4 cases, 2 of the children recovering. In one of these the invagination was in the small intestine, and reduction was impossible. The abdomen was opened at once, although the child had been brought in during the night, and the invagination was reduced, nine hours after the first symptoms. In the 2 cases in which the children died after laparotomy, five days or fifty-four hours had elapsed after the first symptoms before the children were brought to the surgeon, several days having been wasted on internal measures.

## 92. Action of Radium Rays on Various Tissues and Organs.

—Thies has been conducting extensive experimental research on the action of radium rays on living tissues. He has found that it is by no means always a destructive action, but that under certain conditions cell multiplication becomes more lively. The cells of the epidermis proliferate, giving rise to an appearance resembling that observed in canceroids of the skin. The tests were made on tissues and organs of guinea-pigs and mice and on scraps of tissue from Thies' own arm. The vessels proved exceptionally susceptible to the action of the radium rays, and this explains their efficacy in curing angioma. Two large angiomas on a child were exposed for an hour to the action of 10 mg. of radium. In the course of two weeks a flat scab formed over the exposed parts, and was thrown off six days later. By the sixth week after the exposure the vessels were no longer visible. In the place of the angioma there was merely a patch of apparently normal skin a little lighter in color than its surroundings, but even this difference was scarcely perceptible by the end of six months. In another case a protuberant angioma was exposed for an hour and a half. By the sixth week an insignificant scar was all that was left of the former prominent disfigurement. No spermatozoa were found in the testicles and epididymis of guinea-pigs after the radium had been fastened on the testicle for twenty-four hours. All the various tissues exposed reacted in some way to the radium rays, the reaction of the adenoid tissue and bone marrow being most pronounced. The lymphocytes vanished almost entirely from the blood of the exposed animals and also the polynuclear leucocytes. Next in order of susceptibility comes the epithelium. The epithelial cells are completely destroyed, as a rule, but when certain substances are interposed the cells are stimulated to redoubled proliferation.

## Zeitschrift f. Geb. und Gynäkologie, Stuttgart.

*Last indexed XLIV, page 1889.*

- 94 (LIV, No. 2.) Ueber die Statik und Mechanik des weiblichen Beckens (of female pelvis). A. Jaks.
- 95 Geburt bei Amnion-Anomalien (delivery in case of amnion anomalies). H. v. Bardeleben.
- 96 \*Bemerkungen zu den biologischen Theorien der Eclampsie. A. Labhardt.
- 97 Ueber Indikation und Ausführung des Kaiserschnitts (Cesarean section). H. Dauber.
- 98 Das klinische Verhalten des Adenomyoma corporis uteri. O. Polano.
- 99 Ueber Agglutination der Vaginal-Streptokokken gravidar Frauen und die durch dieselben hervorgerufene Hemolyse. H. Reber (Berne).
- 100 Gibt es histologische Indizien für das Chorionepithelioma "Benignum"? K. Hörmann (Munich).
- 101 (No. 3.) Proliferation of Corpus Epithelium with Cervix Carcinoma.—Ueber Wucherungen im Korpusepithel bei Zervixkarzinom. E. Kraus.
- 102 \*Zur konservativen Behandlung der Myome des Uterus. L. Pincus.
- 103 Ein weiterer Beitrag zur Hydrorrhoea uteri amnialis. W. Stoeckel.
- 104 Histologische Untersuchungen über die sekretorische Tätigkeit des Amnion-Epithels. L. Mandl.
- 105 Pathology of Childbirth According to Bible and Talmud.—Die Pathologie der Geburt nach Bibel und Talmud. J. Preuss.
- 106 Ein weiterer Beitrag zur Lehre von den Gynatresien. Fromme.
- 107 Spontaneous Correction of Position of Head with Face Presentation.—Ueber spontane Haltungskorrektur des Kopfes bei Gesichtslage. H. Friolet.
- 108 \*Ergebnisse der abdominalen Radikaloperation des Gebärmutterkreises mittels Laparotomia hypogastrica (for utero-vaginal cancer). A. Mackenrodt.

96. **Biologic Theory of Eclampsia.**—Labhardt analyzes the relations between the biologic theory of eclampsia and the pathologic anatomic findings and the general principles of biology and pathology. Also the connection between the biologic theory and the clinical manifestations of the affection, and reviews the experiments that have served to sustain the biologic theory. His comment on the whole is that the theory conflicts with what is known and lacks proof to sustain it, while all the evidence is antagonistic. The placenta and fetus are not foreign bodies to the maternal organism, and the absorption of their tissue, he declares, does not injure the kidney and can not be the cause of eclampsia.

102. **Conservative Treatment of Myoma of Uterus.**—Pincus describes the technic of steam or superheated-air cauterization of the uterus as he has evolved and perfected it, and reviews the indications for its use. This method of conservative treatment of uterine lesions has been previously described in these columns.

108. **Results of Abdominal Laparotomy for Uterovaginal Cancer.**—Mackenrodt reports 90 per cent. operability; 19 per cent. mortality; 69 per cent. cures, and recurrence in 12 per cent. of his clinical cases. The frequent discovery of metastases in the parametrium in patients who seemed to be in the incipient stages has compelled him to believe the hypogastric the only safe route. He describes his technic and gives the particulars of his operative intervention in a number of cases.

## Archivio per le Scienze Mediche, Turin.

*Last indexed XLIV, page 1972.*

- 109 (XXIX, No. 3.) In Memoriam. G. Blizzzero.
- 110 \*Ricerche sulla tubercolosi del rettili (of reptiles). E. Bertarelli.
- 111 Study of Inguinal Canal in Both Sexes.—Sull'ernia inguinale diretta nella donna. M. Donati.
- 112 Sull'adenoma delle ghiandole sudoripare e suoi rapporti coi cilindromi ed endoteliomi cutanei. C. A. Grillo.

110. **Tuberculosis in Reptiles.**—Bertarelli succeeded in inoculating the lizard with tuberculosis from human sputa. The lesions were not very extensive in the reptile and the bacilli seemed to become attenuated by their passage through its body, but not sufficiently so to confer vaccinating properties in further inoculation of guinea-pigs. Human bacilli multiplied in amazing numbers after subcutaneous injection into the lizard, but they evidently behaved to a certain extent like saprophytes, adapting themselves to their new host. The reptiles of the tropics frequently exhibit lesions similar to those found in this lizard, but they have never been noted before in the reptiles of Italy. Bertarelli suggests that tropical reptiles may prove promising subjects for experimental research in the endeavor to obtain an effectual vaccine against tuberculosis in man.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

**CLINICAL DIAGNOSIS.** The Bacteriological, Chemical and Microscopical Evidences of Disease. By R. v. Jaksch, M.D. Edited by A. E. Garrod, M.A., M.D., F.R.C.P. Fifth Edition. 172 Illustrations, Many in Colors. Cloth. Pp. 601. Price, \$7.50. Philadelphia: J. B. Lippincott & Co. 1905.

**DIE CHIRURGISCHE BEHANDLUNG DER HAEMORRHOIDEN.**—Eine klinische Sammelstudie. By Dr. P. Schlacht, Königlich-Preussischem Assistenzarzt im 2. Ostpreussischen Feldartillerie-Regiment Nr. 52. Zweite Auflage. Königsberg i. Pr. 1904. Gräfe & Unzer.

**MANUAL OF OPERATIVE HISTOLOGY.** By J. F. Binnie, A.M., C.M. Second Edition. 567 Illustrations, Some in Colors. Cloth. Pp. 622. Price, \$3.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

**A GUIDE TO ANESTHETICS** for the Student and General Practitioner. By T. D. Luke, M.B., F.R.C.S. Second Edition. 45 Illustrations. Cloth. Pp. 135. Philadelphia: J. B. Lippincott & Co. 1905.

**MATERIA MEDICA AND PHARMACY.** By R. W. Wilcox, M.A., M.D., LL.D. Sixth Edition. Cloth. Pp. 624. Price, \$2.50 net. Philadelphia: P. Blakiston's Son & Co. 1905.

**METHODS OF MORBID HISTOLOGY AND CLINICAL PATHOLOGY.** By J. W. Hall, M.D., and G. Herzheimer, M.D. Cloth. Pp. 290. Philadelphia: J. B. Lippincott & Co. 1905.

**VITAL QUESTIONS.** By H. D. Chapin, M.D. Cloth. Pp. 189. Price, \$1.00 net. New York: T. Y. Crowell & Co.



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## Address

### MODERN PROBLEMS OF METABOLISM.\*

PROF. CARL VON NOORDEN.

FRANKFURT-A-MAIN, GERMANY.

Your president has conferred on me a great honor in asking me to deliver one of the opening lectures of the new Harvey Medical Society of this city.

It is your aim that from this well-established center waves of scientific stimulation for research work may arise and reach not only the circles of the professional workers of this city, but even those of the whole country. At this moment, when a society, promoted under such favorable auspices, opens its career by a course of lectures, I think it is opportune, not only to recount the results of investigations already completed, but principally to consider those problems which still await solution.

I am perfectly aware that in doing so I must renounce giving to my hearers the harmonious impression, which a well-worked scheme calls forth; for I am to touch manifold subjects and points of view which stand wide apart and in no organic relation to each other.

Even in confining myself to a very small sphere of the problems of metabolism, a complete and exhaustive representation of such will be impossible. Only a small selection can be made, and even this will savor of arbitrariness.

I may touch, perhaps, on several subjects which to you appear quite unimportant, and, on the other hand, I may omit many points which are of recognized importance. I expressly remark, therefore, that I shall mostly confine myself to questions which enter into my own program for future investigations on the problems of metabolism. If, as a result of my communications, you gain the impression that details of the problems are thrown together by arbitrariness or by chance of selection, I hope that, on the other hand, the personal factor will be the joining link for compensating such disadvantages.

A short retrospect of the history of several problems of metabolism may form a useful preface. All the first investigations, decades ago, were directed toward the recognition of the quality of the chemical changes in the body. The substances, which resulted from the breaking up of the tissues of the body and of the ingested food, were the earliest to be demonstrated. The end-products of animal metabolism were determined. The most important rules were discovered, concerning the production of  $\text{CO}_2$ , urea, uric acid, kreatinin, indican and hippuric acid, etc. Among the normal end-products, many substances were found which appeared only under certain conditions, and were regarded as

characteristic for particular diseases. As examples of such substances I may mention sugar, the various types of albumins, peptone, leucin, tyrosin, lactic acid, cystin, etc. Following this period, in which the names of Wöhler and von Liebig stand out prominently, came the second era, viz., that of pointing out the quantitative changes of metabolism. First introduced by Bisehoff, the work in this branch of investigation was carried on and thoroughly established by Carl von Voit and von Pettenkofer and their pupils. Originally confined to the physiologic circumstances in animals and men, this "quantitative study of metabolism" has since obtained new triumphs in its application to clinical medicine and to the study of pathologic processes. It is scarcely twenty years since these investigations commenced, and already, both in the physiologic and in the clinical laboratory, these quantitative estimations are being placed in the background, while attention is being directed to the newer field of the intermediary processes of metabolism. The finest and best work of late years relates to these questions. Hence to-day the investigations on metabolism approach again in character to those of the first period; but what then appeared impossible is now being attacked from all sides. Then one had to be satisfied with a knowledge of the end-products only; to-day one endeavors, through the prominent discoveries in chemistry, to make clear the intermediate stages, through which the metabolites pass to their final conditions. An infinite number of new questions is thus presented by the recent advance in physiologic and pathologic chemistry.

A number of important questions, which are of interest to the physiologist and pathologist alike, however, were left unsolved during the earlier periods of quantitative estimations, and it is only now that—thanks to the better technique of recent times—exact measuring methods are available for their investigation.

First of all, there is the question of the metabolism of energy. Since the time of Voit and Rubner it has been customary to express and to measure body "energy" in terms of calories. In part through the relation of the body weight to the necessary intake of food, and in part from the amount of oxygen consumed and of  $\text{CO}_2$  expired, certain average figures have been determined. When an adult man is in a condition of complete muscular rest, from 22 to 24 calories per kilo of body weight are necessary during each twenty-four hours; with usual light work, from 32 to 36 calories are required. The daily food must have these calorific values if the weight of the body shall neither increase nor diminish. With the increase of muscular work, the amount of energy consumed increases in certain proportions, and these latter have been sufficiently ascertained. We know also that children require a relatively high, and old people a relatively low, exchange of energy.

Still, all these are only average numbers and they

\* Lecture read before the Harvey Medical Society, New York, October 14, 1905, in the Academy of Medicine.



require the further support of numerous careful and exact observations. Even the most trustworthy figures, obtained by the use of methods, of whose accuracy there is not the slightest shadow of doubt, showed that under exactly the same conditions a difference of from 20 to 25 per cent. arose between single individuals; this can only depend on the so-called individual factors. In future, however, this difference may not be slurred over by the use of the mystic word "individuality"; we must endeavor to make clear the reasons for the rise above the average in oxidative processes in one person, and the fall below the average in another. Such information would provide us with a clear—I might even say a mathematical—insight into the condition which we now designate by the term "individuality."

An important by-question which arises in regard to the physiology of nutrition, is the problem of the influence exerted on the consumption of energy by the respective constituents of the food.

Certain experiments which Max Rubner and Ed. Pflueger have carried out on animals, tend to show that when the food contains an excessive quantity of proteids the energy-exchange rises considerably above the average. The energy production appeared to rise higher than was necessary for the muscular work done and for the maintenance of the body warmth. These results remind one of the old theory known by the name of "Luxus-consumption," if even it does not entirely compass it. They are too few and insufficient to revive the old hypothesis, which we have long known to be erroneous. As, however, one of the bases of the new science of nutrition is touched by it, the point should be thoroughly cleared up by new and better experiments on human subjects. If the excess of proteid intake really exerts a marked influence on the oxidative processes of the human organism, then we must change many of our views and explain differently a number of former experiments in metabolism. Up to now we trust that not the kind and the amount of food but only the internal and external bodily work rules the extent of the oxidation. The question is not a theoretical one only. Recently manifold endeavors have been made to shake the old standard numbers for the albumin intake of healthy men settled by the school of Voit for these endeavors, which originated from the supporters of vegetarianism, it would be water on their mill if it were proved, that large amounts of albumin raised the consumption of energy to an unseemly, that is to say, to an unnecessary and prodigal, extent. The theory of vegetarianism would also receive a specially strong support were it possible to confirm the oftspoken assertion that the prodigal expenditure of energy only follows an excessive intake of animal albumins and does not result from a similar quantity of vegetable albumins. A few experiments we made lately turned against the theories of Rubner and Pflueger.

Of greatest interest and importance are, of course, those alterations of the exchanges of energy which occur in various diseased conditions. Single and occasional former investigations excluded, we first commenced only about ten or fifteen years ago to busy ourselves with these matters. One single important fact is thoroughly established, viz.: The increase of the energy exchange which follows the administration of thyroid gland substance. This observation, which was made in my clinic by my former assistant, Prof. A. Magnus-Levy was suggested by the practical experiences of Yorke-Davies and Leichtenstern on the influence of thyroid gland tablets on obesity. Later, Mag-

nus-Levy discovered a similar increase in the transformation of energy in exophthalmic goiter and a decrease in myxedema. But these are the only diseases in which, up to now, spontaneous changes in the output of energy are known to occur. Thus the studies—I might call them preliminary—which have hitherto been made on the extent of the processes of oxidation and the amount of nutriment necessary in diseased conditions, afford sufficient reason for the use of our improved methods in further investigations in this field. Many of these problems are of great practical importance for bedside treatment. Next, there is the old question of how great the metabolism energy is in people who are run down by chronic disease or by insufficient nourishment. Do these persons require the same amount of food as do healthy individuals, reckoned per kilo of body weight, or do their bodies diminish the extent of exchange on some self-regulated plan? It is certain that the albumin metabolism is diminished. It has even been asserted that the total production of energy also is diminished, but on this we are as yet without definite proof. My preliminary observations point to the contrary, but the question has not yet been investigated with scientific exactitude. The extremely painstaking and brilliant work of Neumann in Kiel, and of Chittenden in America, which has demonstrated the surprising extent to which the food of an adult man may be diminished without affecting the capacity for work and without altering the nitrogenous equilibrium of the body, leaves untouched this particular question.

Obesity is quite the contrary. For a very long time it has been asserted that there are two forms of obesity. One type is said to result from an excessive intake of food or from insufficient muscular exercise; the other is said to arise from an endogenous retardation of metabolic exchanges. The question is of great theoretical interest, but, as every one must admit, it is also of marked practical therapeutic importance. Since I first approached the matter, some twelve years ago, by investigations on the respiratory exchanges, the question has been constantly discussed. Some differences exist between the results of clinical observation and of laboratory experiments. Clinical reports indicate the occurrence of cases in which the obesity is due only to abnormal lowering of the oxidation, that is, to a diseased state of the protoplasm. Scientifically exact experiments, however, have failed to discover such relations. The results of some work done in the clinic at Basel seemed to point to abnormal low oxidative changes during muscular work and during the digestive processes of obese persons, but they must be discounted by the fact that the methods of estimation employed were not free from objections; correct deductions from them are therefore impossible. I am convinced, however, that with the advent of more satisfactory methods the views of the practitioners will be confirmed by laboratory experiments.

Since the earliest days of investigations on metabolism, the question as to the energy exchanges in fever has received attention. That the albumin exchanges are increased is quite certain; toxic influences are the reason. But why does the patient waste during the periods of fever? Why does he also lose so much of his body fat? As a matter of fact, in every case of long-continued fever, we observe an enormous loss of weight, even if we endeavor to avoid this loss by the administration of rich and nutritious foods. Does the cause lie in the fact that in spite of all our care an individual can not ingest the normal average calories



of the food, since the digestive organs during fever are unable to take in or to digest the necessary amount? Or do the oxidative processes in the fever periods rise markedly above the normal? If this is the case, the food requirements of the fever patient will not be satisfied by ordinary quantities; the amount of food sufficient for a healthy individual would not prevent the patient wasting during the stages of fever. The practitioner of earlier times did not doubt that fever was always accompanied by a substantial increase in all the processes of oxidation. The exact investigations on metabolic changes which have been made during the last decades do not, however, confirm these ideas. These consist, in particular, of the works of Senator and some investigations by F. Kraus and by the pupils of Zuntz. If we thoroughly and critically read through these works, we find that they are full of contradictions and by no means permit of any final conclusions being made. The technique of to-day promises, however, a satisfactory and objection-free solution of this old problem. Still, the working out of the matter is naturally dependent on clinical material, and, unfortunately, the majority of hospitals to-day are not equipped with the necessary apparatus.

Among other diseases, in which the energy exchanges should be further investigated, I may mention diabetes mellitus. In slight cases, the relations are simple and undisputed. Such cases do not exert any influence on the energy exchanges. For a long time, however, it has been supposed—and lately the assertion has been revived on many sides—that in severe cases of diabetes the production of energy, and consequently the food requirements, are distinctly diminished. It has been calculated that in these patients the daily energy needs are satisfied with from 18 to 20 calories per kilo of body weight, while the healthy person requires from 34 to 36 calories under parallel conditions. The question is of great practical importance, because a clear conception would be of real assistance to us in the difficult dietetic treatment of diabetes mellitus. I do not allow the just-mentioned figures, concerning the diminished production of energy in severe cases of diabetes, to be quite correct; and I am of the opinion that the few previous exact observations on the production of  $\text{CO}_2$  and the consumption of oxygen, are quite sufficient to prove this. Anyone who possesses a large respiratory apparatus, can definitely settle the entire question in a few days.

We leave now those questions which are intimately connected with the transformation of energy, and turn to another very interesting and important problem, relating to the metabolism of albumin. Earlier experiments on animals and recent investigations on human subjects have taught us that an excessive amount of food compels a retention of nitrogenous substances in the body. The usual nitrogenous equilibrium is disturbed; a smaller quantity of nitrogen appears in the excreta than was present in the food. This retention of nitrogen may be attained by the administration of large amounts of albumin, but much more thoroughly and surely by a simultaneous excess of fat or especially of carbohydrates. The albumin-sparing properties of the two latter substances, of course, are well known. The ultimate effect of such overnutrition is always an increase in the total quantity of fat. We apply this knowledge therapeutically in our "feeding cure," etc. But regarding the nitrogen there was until a short time ago the opinion that in spite of such an excessive nutrition, the nitrogen retention was only slight in quantity and short in duration—at least so far as well-nourished

adults are concerned. It was taught that the body always endeavors to maintain a nitrogenous equilibrium so that, in the case of over nutrition while the excess storing of fat may continue for a long time, a similar storing of proteids is soon stopped. In certain cases, however, the storing of body proteids seemed to be both extensive and long continued, as for instance, during the period of body growth, or after chronic exhaustive diseases, or after periods of lowered nutrition—it is always during the new growth of tissues. The occurrence of considerable nitrogen retention has recently been noted, apart from the conditions just mentioned. In a case of my own, I found that in two months not less than 370 grams of nitrogen were retained. Expressed in terms of meat this is more than 11 kg. of flesh. Is this retained nitrogen really built up into pure albumins and protoplasmic substance? Our general knowledge tends to indicate otherwise. We know that excessive feeding produces obese, but never athletic, individuals. *A priori*, it is very improbable that the nitrogen retained during excessive nutrition indicates the formation of pure albumins or a new formation of tissue substance. Perhaps the nitrogen only exists in the form of nitrogen-containing fragments of the large molecules of albumin, which are held for a time and are then cast off at a later period. In favor of this supposition there is the fact, that when the period of excessive nutrition is stopped, it is usual for an enormous quantity of nitrogen to appear in the urine.

The exact form in which the nitrogen is retained within the body is still, however, entirely unknown. It is, nevertheless, an important question, because a knowledge of it would throw light on the changes which the molecules of albumin undergo in the body.

This problem leads us by easy paths to the consideration of the intermediate stages of metabolism, which is the special field of modern physiologic chemistry.

Naturally, most questions of the "intermediary" metabolism concern themselves directly or indirectly with the fate of the albumin molecules; with their disintegration as well as with their synthesis. It seems that the synthesis of albumin in the body may originate from much simpler molecules than we could conceive of until lately. By intense and long-continued tryptic digestion of albumin, the latter has been broken up until the solution no longer yields the biuret reaction. In spite of this, the administration of the products of such digestion to animals, served for the substitution of pure albumins and for the maintenance of nitrogenous equilibrium.

In close theoretical relation to this brilliant and important experiment of Otto Loewi stand those considerations, which are bound up with the discovery of erepsin in the walls of the alimentary canal. This ferment splits up the albumoses and peptones into simpler substances and, in particular, splits off the amino-acids. Hence, it has been assumed, that this action represents the regular arrangement of processes, that the organism normally lives on the amino-acid mixtures, and that from these basal substances are formed the albumins which ultimately circulate in the blood stream. Such a sweeping conclusion, however, is a little too previous, for it has been shown recently that erepsin occurs in all the organs of the body and thus is not specific for the alimentary tract. The ferment, which *in vitro* is able to split up the albumoses when acting in the intestine may, synthetically, form albumoses from amino-acids. Such reversibility of ferments is already known. These considerations appear to indicate, there-







ferments is reversible, so this procedure may also take place in the reverse way. As a matter of fact, we know that very often the administration of lactic acid to individuals affected with severe diabetes, and more especially to dogs after removal of the pancreas, is followed by an increase in the glycosuria. We also consider lactic acid as a rich source of glycogen. These few available facts lead to the following hypothesis:

A part of the sugar which is broken up in the muscle circulates in the blood as lactic acid; the lactic acid passes to the liver and is there rebuilt up to carbohydrate and eventually reaches anew the muscles in the form of sugar. With this conception of the intermediary stages and circulation of the carbohydrates in the form of lactic acid, some well-known facts are in full agreement. After extirpation of the liver, sugar disappears from the blood stream and lactic acid makes its appearance. Another remarkable fact may also be explained on this hypothesis. When the pancreas is removed from birds, glycosuria does not result. In these animals, lactic acid is not bound to be regenerated into sugar, but with the addition of ammonia, it can form uric acid. If this view be a correct one, then the uric acid of the bird is partly a derivative of sugar. I advance this theory, of course, only in the form of an hypothesis; it has, in any case, the advantage of promoting further investigations on the intermediary stages of carbohydrate metabolism and of providing a new aim and a definite proposition for further proof.

I have already mentioned that, theoretically, acetone may be produced from leucin, and that we have been able to demonstrate this procedure by experiments on animals. This result is very remarkable, since the opinions of to-day designate the fatty acids alone, and the lower fatty acids in particular, as the source of the acetone bodies, and because until now we have always accepted the oxybutyric and diacetic acids as the necessary precedents to acetone. This latter view thus requires correction, although our experiments in no way show that in the formation of acetone leucin plays an important figure in respect to quantity. At all events, it indicates that the acetone question can not yet enter into a condition of rest. Also the problems of the formation of acetone from fat and the hindrance to the production of acetone through the simultaneous oxidation of carbohydrate, are still sufficiently enigmatical and can not be solved until we know much more about the intermediary disintegration of fats and of carbohydrates than we do up to this day.

With this I wish to conclude my survey of modern problems of metabolism. As I stated at the commencement of the lecture, it has been necessary to roam over a large amount of ground and to consider subjects that were but slightly related to each other. You will observe that to-day we are busying ourselves in a much more intimate manner with the details of metabolic processes than in not very remote periods was deemed either necessary or possible. Already the little that has been mentioned here is more than the working powers of one single man can master; but on all sides we see new young energy pouring into this interesting and important branch of medical investigation, in order to harvest this inexhaustible field. We greet them with joy and with satisfaction. The results will not be long in coming.

We are all convinced that these marked steps into the wonderland of animal metabolism will not only advance the theoretical science, but, as we have always seen, that every advance in physiologic and pathologic chemistry has been followed by improvement of our bedside

treatment. The achievements of the dietetic treatment of diseases have gone hand in hand with the advances in theoretical investigations. If we compare the progress in dietetics that has been made during the last decade with the wonderful successes of the surgeon, the medical clinician no longer need feel either shame or envy. In the same period a vast amount of work has been done by the internist in regard to therapeutic matters. The close relations which have been maintained between the progress in clinical bedside treatment on the one hand and physiologic and pathologic chemistry on the other, has been very fruitful indeed, and still fruitful will remain.

Great problems still await solution and rich outside help is necessary thereto. With confident expectation, medical science looks to this country, in which in recent times numerous ardent and honest research-loving young workers have entered into the service of problems of metabolism, and in which the riches and the munificence of its inhabitants more than elsewhere have provided that external aid which has made more easy the prosecution of great and far-reaching investigations. I close with the prophetic words of our Goethe:

Amerika, Du hast es besser  
Als unser Continent der Alte.

## Original Articles

### COCCIDIOIDAL GRANULOMA.\*

W. OPHÜLS, M.D.

SAN FRANCISCO.

We have in California a peculiar form of oidiomycosis of which, so far, no cases have been described in people who had not been in our state, except the very first case of this form of infection which was observed by Wernicke<sup>1</sup> in Buenos Ayres and later more accurately described by Posadas. The first case in California was reported by Dr. E. Rixford<sup>2</sup> of San Francisco to the San Francisco Medico-Chirurgical Society, March 4, 1894. Another similar case under the care of Drs. Thorne<sup>3</sup> and Robinson was seen by him<sup>4</sup> the same year. Later Dr. Rixford,<sup>5</sup> in conjunction with Dr. Gilchrist of the Johns Hopkins Hospital Medical School, gave a more complete description of these two cases and of the parasite.

This description established fully the morphology of the parasite in the tissues and the nature of the lesions which it produces. At that time, however, the organism was looked on as a protozoon, on account of failure to obtain growths, and on account of a certain resemblance to the coccidia named *Coccidioides immitis pyogenes* resp., the idea being that on account of some morphologic differences the parasites in the two cases might not be the same. This view of the animal nature of the parasite proved to be erroneous in the course of the examination<sup>6</sup> of a new case of this disease which oc-

\* From the Pathological Laboratory of Cooper Medical College, San Francisco.

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Wernicke: Centralblatt f. Bact., 1892.

2. Occidental Medical Times, 1894, vol. viii, 326.

3. Thorne: "A Case of Protozoic Skin Disease." Occidental Medical Times, 1894, vol. viii, 703.

4. Rixford: "A Case of Protozoic Dermatitis." Occidental Medical Times, 1894, vol. viii, 704.

5. Rixford and Gilchrist: "Two Cases of Protozoan (Coccidioid) Infection of the Skin and Other Organs," Johns Hopkins Hospital Reports, vol. I.

6. Ophüls and Moffitt: "A New Pathogenic Mould," Philadelphia Medical Journal, 1900.



occurred in 1900, when it became apparent that the parasite could be cultivated and developed in the cultures in the form of a mould-like growth. It probably belongs to the oidia. I have therefore proposed the name *Oidium coccidioides*.

The lesions as well as the parasite of coccidioidal granuloma show certain resemblances to the tissue changes and organisms found in blastomycetic dermatitis as described by Gilchrist, Stokes and Gilchrist, Wells, Hessler, Hyde, Hektoen, Montgomery and others. There is this difference, however, that whereas in blastomycetic dermatitis the primary focus of infection always is the skin and the disease remains localized in that organ, with the exception of one case reported by Walker and Montgomery,<sup>7</sup> in which a generalization of the process took place; such generalization of the disease is the rule in coccidioidal granuloma and the pri-

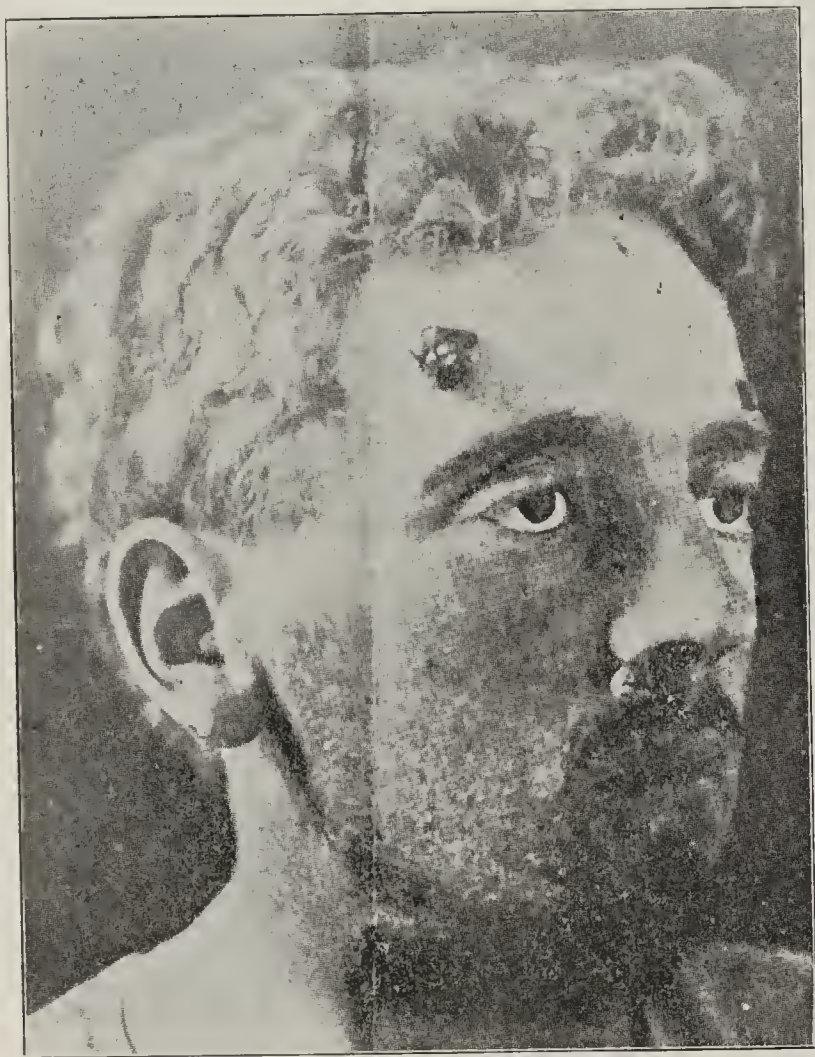


Fig. 1.—Face lesions in case of Montgomery (British Journal of Dermatology).

mary focus of infection is just as frequently to be found in the interior of the body as in the skin. Typical cutaneous lesions are often missing entirely. The parasite in coccidioidal granuloma differs from the various fungi described in blastomycetic dermatitis first by the absence of budding during its development in the tissues, second by its multiplication by endosporulation, third by certain differences in its growth on artificial culture media. Still the resemblances between lesions and parasites in blastomycetic dermatitis and those in coccidioidal granuloma seem close enough to my idea to classify them together, perhaps after Ricketts' suggestion, as oidiomycoses. It must be acknowledged, though, that there is this difficulty in the way of accepting Ricketts' nomenclature, namely, that under the term oidiomycoses should be included all diseases produced by oidia,

whereas Ricketts attempts to limit the term to what is commonly known as blastomycetic dermatitis, a few cases of more general infection with yeast fungi and infections with *Oidium coccidioides*. On the other hand, the term blastomycosis would hardly include all the fungi which cause these troubles. Many of them are very much more complicated in their modes of development than ordinary blastomyces. In this dilemma about names I believe we should look rather to the professional botanist than to the medical worker for a decision whether these organisms should be properly classified as blastomycetes or as oidia. Certain is this, that we have here a class of diseases usually with the anatomic characters of granulomata frequently localized in the skin but also occurring in other organs which is caused by a variety of lower fungi, some resembling more blastomycetes, others more oidia.

There are now on record 10 cases of coccidioidal granuloma, to which I can add three new cases, making 13 in all.<sup>8</sup> Unfortunately, the records of the three new cases are not complete.

One of these is the case of a young canner, C. M., 19 years of age, who came to the City and County Hospital at San Francisco Sept. 23, 1901. Before entering the hospital he had irregular attacks of fever with violent chills for four weeks. In the hospital he developed the symptoms of a severe, unusually chronic meningitis and died Dec. 17, 3 months after entering. The necropsy showed an old calcified caseous spot in one of the peribronchial lymph glands on the left side, one old miliary tubercle in the left kidney, a chronic irregular caseous process in both adrenals, a basilar meningitis with many tubercles in the Sylvian fissures and a very extensive chronic inflammation of the pia mater of the spinal cord which in places was 3 to 4 mm. thick and full of tubercles and submiliary abscesses. The spinal cord showed a marked softening especially in the periphery underneath the thickened pia mater. He also had a terminal bronchopneumonia and beginning cystitis and pyelitis in consequence of a paralysis of the bladder which developed toward the last and necessitated catheterization. At the time the case was regarded as an ordinary case of tuberculosis. No attempts were therefore made to obtain cultures. Several years later only, adult and sporulating forms of *Oidium coccidioides* were discovered in sections from the meninges. One of the most remarkable features of this case is that tubercle bacilli and no other parasites were found in the adrenals, whereas no tubercle bacilli, but many oidia could be demonstrated in the meninges.

The second case was one observed at the German Hospital in San Francisco in Dr. Weil's service, to whom I am much indebted for allowing me to make use of it here. The patient was an old man, born in Germany in 1842. When 16 years old he had an enlargement of the glands of the neck with extensive suppuration, which after considerable time healed with the formation of large scars. He came to America in 1874, lived in New York, San Francisco, Oakland and Sacramento. He was employed most of the time as a baker or as a mill hand. In Sacramento he was overseer of a large market. He never lived in the San Joaquin Valley. Toward the end of 1903 a large cold abscess developed on the left side of his chest which was opened in March 1904. Two ribs were resected. The wound remained open ever since. Later soft fluctuating swellings developed on both sides of his neck. In June, 1904, Dr. Weil curetted the open sinus and removed some diseased bone. Microscopic examination of the granulation tissue showed miliary and submiliary chronic abscesses, some with giant cells in their walls and in these abscesses the parasites; there were many sporulating forms. Some time afterward the patient was discharged, apparently cured.

In the third case, Chinese, W. D., at the City and County

7. "Further Report of a Previously Recorded Case of Blastomycosis of the Skin; Systemic Infection with Blastomyces, Death, Autopsy," THE JOURNAL A. M. A., 1902, vol. xxxviii, 867.

8. At the end of the paper is a short synopsis of the cases already published and a more detailed account of the new cases. The numbers in the text refer to the numbers given to the cases in that place.



Hospital, the external condyle of the right humerus was removed in June, 1905, on account of caries involving the elbow joint. Microscopic examination of the specimen showed fibrous thickening and cellular infiltration of the periosteum and the adjoining muscle. There was extensive destruction of the bone with formation of tubercle-like nodules with large giant cells of the Langhans' type. In other places there were submiliary chronic abscesses. One section shows a large area of diffuse caseation. In the latter were many large full grown parasites. In one of the submiliary abscesses was a typical sporulating form. The patient died with symptoms of a chronic pulmonary trouble with sputum in which no tubercle bacilli could be found. He also had a paralysis of both legs. Unfortunately in this case also no necropsy could be made.

If we look over the cases so far reported in order to obtain a clinical and anatomic picture of the disease, we find that on account of the great variety of lesions produced by the parasite and the great variety of organs affected, it is very difficult to make any generalizations. The clinical symptoms in these cases, of course, depend entirely on the localization of the disease in the different organs of the body and the extent to which these organs have been involved in the process. So far no typical clinical picture can be given, but in some cases there is a striking resemblance to tuberculosis. In regard to the anatomic changes, one can say that the disease belongs to the infectious granulomata resembling tuberculosis, although at times differing from it in certain respects. As in all infectious granulomata the manifestations of the disease are very manifold, the most characteristic, of course, being nodules consisting of granulation-tissue at various stages of development, but in addition to such lesions and mixed with them we find suppurative processes usually of a chronic character which in exceptional instances may be quite acute, however. The infection with *Oidium coccidioides* therefore produces either submiliary, miliary or larger nodules, which resemble tubercles very closely. These nodules may caseate. Later the caseous material may liquefy and cavities containing pus-like material may be produced in this way. Or, in other cases, there may be suppuration from the beginning, sometimes of a rather acute type, but usually more chronic in character, leading to the formation of miliary or larger, sometimes very large (size of an infant's head) chronic abscesses or chronic ulcers. The lesions are nearly always progressive, with marked tendency to dissemination by the lymph and blood current, still sometimes they may heal eventually. In this tendency to rather rapid spreading in the same organ and from one organ to another, and in the more suppurative character of the lesions the disease at times resembles glanders more closely than tuberculosis, although it has been clinically most often confounded with the latter.

Six of the 12 cases which have been reported more accurately had peculiar skin lesions. The appearance of these differed considerably in the different cases. Sometimes they were composed of large tubers with more or less ulceration, recalling the clinical picture of mycosis fungoides. This was observed in Cases 1 and 4.<sup>8</sup> The lesions in the latter case are shown in Fig. 1. In Cases 2 and 8 the nodules in the skin were much smaller and the trouble had the appearance of a hypertrophic lupus, as shown in Fig. 2. Again in Case 3, the lesions were more ulcerative in character, there was less tumefaction at the edges of the ulcers and instead of more or less solid nodules, submiliary abscesses were largely encountered (Fig. 3). The trouble in these cases usually started in some exposed part of the skin and extended from there discontinuously more or less all over the

body. In one of my cases, a Japanese, there was only one ulcer on the foot, of the appearance of a simple chronic ulcer without tumefaction, nodules or miliary abscesses at the margins. The ulcer was covered with a thick brown scab.

These cutaneous lesions seem to have been the primary seat of infection in 4 of the 6 cases. In Cases 4 and 8 this is a little doubtful, because in both of them there were symptoms of internal disease before the cutaneous manifestations developed. Case 4 apparently is an example of primary pulmonary infection, of which there are two more instances among my own cases. In Case 5 the first clinical symptom was a pleurisy on the left side, and at the necropsy the lungs were found extensively involved. In the other, Case 6, there were old scars at both apices, from which the process probably had started. Case 7 also probably has to be regarded as a primary pulmonary infection; otherwise the source of infection would be entirely obscure in this instance, in spite of careful anatomic investigation. In the other cases there was no chance for investigation sufficient to obtain any clue in regard to the mode of infection.

In the lungs a variety of conditions have been ob-



Fig. 3.—Face lesions from second case of Rixford and Gilchrist (Johns Hopkins Hospital Reports).

served. In Case 6 nothing was left in the lungs except small scars at the apices, whereas in other cases the lesions were rapidly progressive and very destructive. Case 5, which is a typical example, showed irregular nodular consolidations, with extensive caseation and abscess formation, many disseminated miliary nodules and small abscesses, several large abscesses, one extending into mediastinum and another into the diaphragm. There was an empyema on the left side. The early involvement of the pleura and the extension of intrapulmonary abscesses into adjoining viscera (mediastinum, diaphragm, soft tissues of the lower neck, etc.) seem to be rather characteristic of the disease.

If the lungs are infected secondarily by the blood current, the result, as a rule, seems to be the formation of innumerable miliary nodules, very much like those observed in acute disseminated miliary tuberculosis. These also occur in such instances in spleen, liver and kidneys and may or may not develop in these organs into small chronic abscesses.

The lymph glands are affected early and extensively. They usually show enlargement, caseations and suppuration.



In its predilection for certain organs the disease is rather similar to tuberculosis. The adrenals are frequently diseased (mentioned in Cases 2, 7, 8). In all three cases the lesion consisted in an extensive caseation of these organs. Basilar meningitis, resembling tubercular meningitis very closely, was observed in Cases 6 and 7. In Case 6 the lesions were rather acute, like ordinary tubercular meningitis, whereas in Case 7 the process was very much more chronic, lasting for over three months.

Disease of the bones was noticed in Cases 2, 5, 10, 11, 12. The trouble was often multiple and had the appearance of a chronic suppurative periostitis and osteomyelitis, with caseation. Here, again, in some instances particularly, the resemblance to tubercular caries was quite marked.

In one case only (Case 2) the internal genitalia were affected. There was a chronic caseation and suppuration of prostate, seminal vesicles, both epididymides and testes. This observation is interesting on account of the invariably occurring chronic suppurative orchitis in guinea-pigs after intraperitoneal injection.

The histology of the lesions is remarkable on account of the close resemblance of some of the lesions to those produced by the tubercle bacillus, showing that in tuberculosis, just as in all other diseases, the reaction of the tissues to the virus is not specific or in any way pathognomonic. In coccidioidal granuloma we also observe histologically interesting transitional stages between small chronic abscesses and tubercle-like nodules, which, however, although more rarely, may also be found in cases of tuberculosis. Figure 4 shows, in one section "typical" tubercles, with giant cells of the Langhans' type and submiliary abscesses surrounded by thick layers of epithelioid cells. In Figure 5 several of the "tubercle"-like nodules are shown with the high power. In Figure 6 we see a similar nodule with a central abscess cavity filled with polymorphonuclear leucocytes, and in Figure 7 a chronic abscess\* surrounded by epithelioid cells. On one side in the layer of epithelioid cells there is a small giant cell. Figure 8 is taken from the edge of a larger tubercle and shows typical caseation.

Examples of more acute lesions are given in Figs. 9 and 10. In Fig. 9 one sees an irregular accumulation of cells, largely polymorphonuclear leucocytes, in the meninges with beginning necrosis in places, and Fig. 10 illustrates the thick wall of one of the larger chronic progressive abscesses in Case 2. There is a thick layer of granulation tissue, the superficial layers of which are necrotic. In the granulation tissue there are many parasites; around some of them small abscesses are noticeable.

The *Oidium coccidioides* occurs in the tissues in the form of spherical bodies that grow to about 30 microns in diameter, consisting of an irregularly staining protoplasmic body and a double-contoured capsule which in the larger forms is thick and often covered on the outside with prickles or even long spines (Fig. 11). Different from the parasites in blastomycetic dermatitis, these spherical forms do not multiply by budding, but by endosporulation, as shown in Fig. 12. The formation of spores is preceded by a division of the protoplasm into 2, 4, 8, 16, etc., parts. The spores may number 100 and more. They are liberated by a bursting of the capsule and grow out directly either outside or often still within the old capsules into young spherical parasites.

If many sporulating forms are present, the process is usually more acute and more suppurative in character. The number of the parasites in the lesions varies a good deal. Usually they are numerous enough to be easily found, at other times several sections have to be carefully studied before they are noticed. In pus they are most easily found when a drop of fresh pus is spread between coverslip and slide and looked at with the low power.

When one of the adult parasites is placed in a suitable medium it grows out into long septate hyphae in the manner shown in Fig. 13, iv and v, developing in course of time into a mouldlike growth (Fig. 15). It is probable that the spores also may be the starting point of such growth (Fig. 13, vi). It is not always easy to obtain the first growth, because not all parasites give rise to the formation of hyphae, and they do so only when they are free, entirely separated from the tissues. A drop of pus is the best material for starting a culture. Solid tissue containing parasites must be carefully teased or ground in a sterilized mortar before a growth can be obtained.

The fungus grows well on all media in the incubator and more slowly at room temperature. Fig. 14, iv, shows the mycelium of a fresh culture which consists of cylindrical septate branching hyphae. After varying intervals, sometimes a month or more, spores develop in the ends of the hyphae (Figs. 13, i, and 14, i). These spores are of interest, because from them, after introduction into the tissues, the spherical forms develop in the manner shown in Fig. 13, vii, by direct enlargement. As long as the culture does not contain any spores it is not infectious. Spherical forms with endosporulation are never observed in ordinary cultures nor are mycelia ever found in the tissues. Wolbach, however, succeeded in developing the spherical forms with endosporulation outside the tissues in collodion sacs placed in the peritoneal cavity of animals.

The spores which form on artificial media can also be the starting point of a new growth on new media (Fig. 13, iii). The spores are first biconcave on both sides with sharp edges, later they may take all sorts of irregular forms (Fig. 14, iii). In old cultures I have found a few times yeast-like growths like the one shown in Fig. 14, ii.

Experiments have shown that dogs, rabbits and guinea-pigs are very susceptible to infection with *Oidium coccidioides*. The cutaneous lesions have been reproduced in dogs. Intraperitoneal injection is followed by chronic inflammation of the omentum with formation of nodules and abscesses, the formation of nodules on the peritoneum in liver and spleen and sometimes in pleura and lungs. In male guinea-pigs and rabbits, as has already been mentioned, a chronic suppurative periochitis develops after this form of infection.

After intravenous injection the chief lesions are encountered in the lungs in the form of innumerable miliary nodules; most other organs, however, are usually affected similarly and sometimes bone lesions occur. Fig. 16 gives an illustration of the lesions in the omentum of a guinea-pig. The microphotograph, which is taken with a very low power, shows numerous small abscesses in a mass of cicatricial tissue. In Fig. 17 a more tubercle-like lesion from the lower side of the diaphragm of an animal is represented.

So far it has not been possible to trace the source of the infection in any of the human cases. As mentioned

\* EDITOR'S NOTE: A chronic miliary abscess. The word biliary, under the cut, is a typographical error.





Fig. 2.—Skin lesions on face and hand of Case 2. Taken from Rixford and Gilchrist's paper in Johns Hopkins Hospital Rep., I.

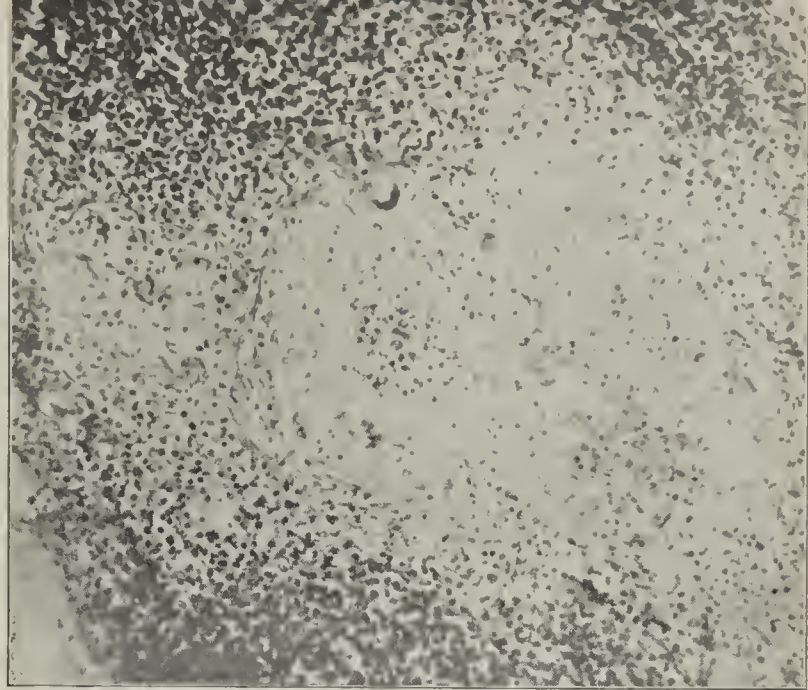


Fig. 6.—Tubercle-like nodule with small central abscess. Pia mater of spinal cord, Case 7. High power.

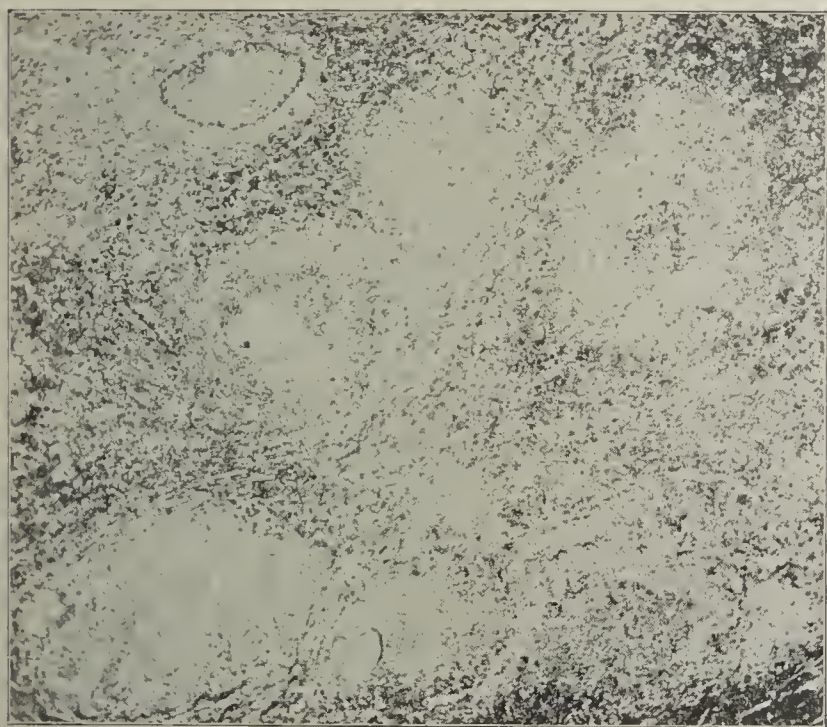


Fig. 4.—Nodules resembling tubercles and chronic miliary abscesses in pia mater of spinal cord in Case 7. Low power.

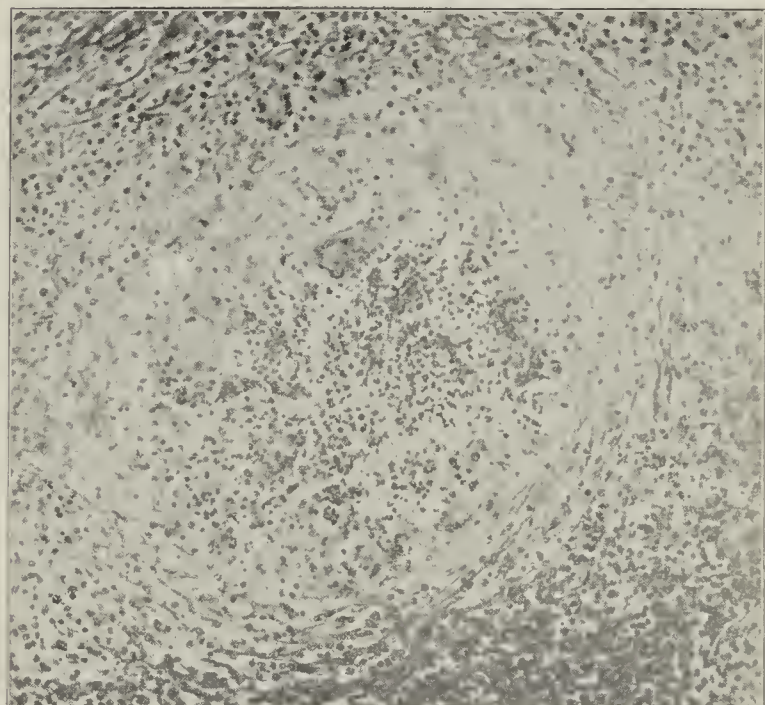


Fig. 7.—Chronic biliary abscess with giant cell in wall. Pia mater of spinal cord, Case 7. High power.

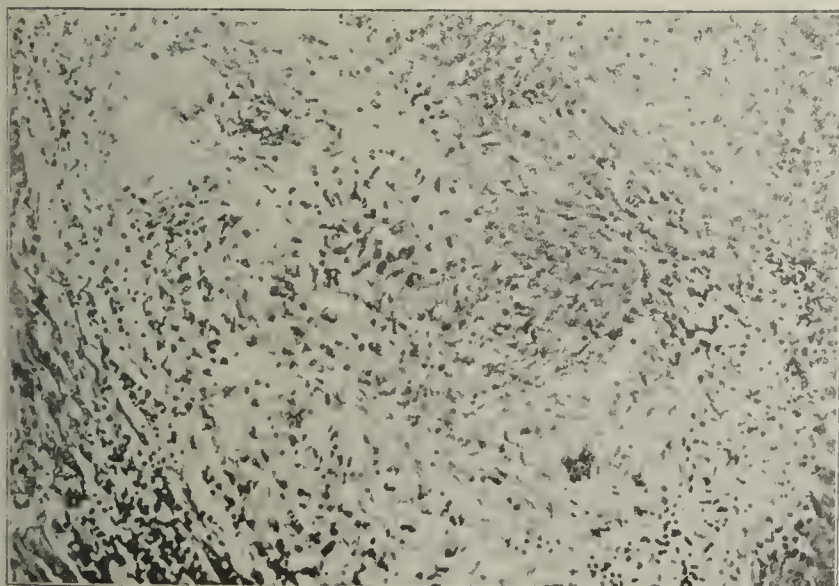


Fig. 5.—Nodules resembling tubercles. Pia mater of spinal cord, Case 7. High power.

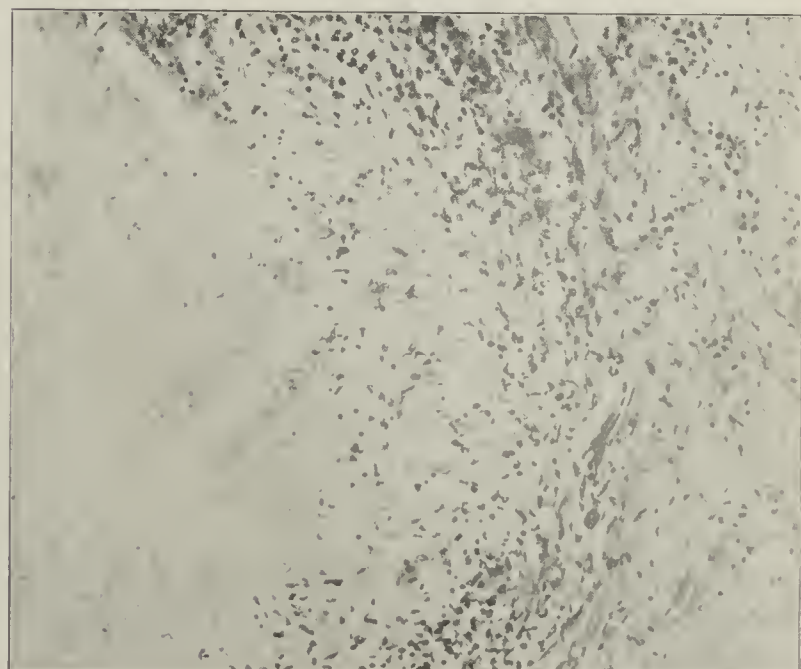


Fig. 8.—Large nodule with caseation. Pericardium, Case 6. High power.





Fig. 9.—Subacute basilar meningitis with caseation in Case 6. Low power.

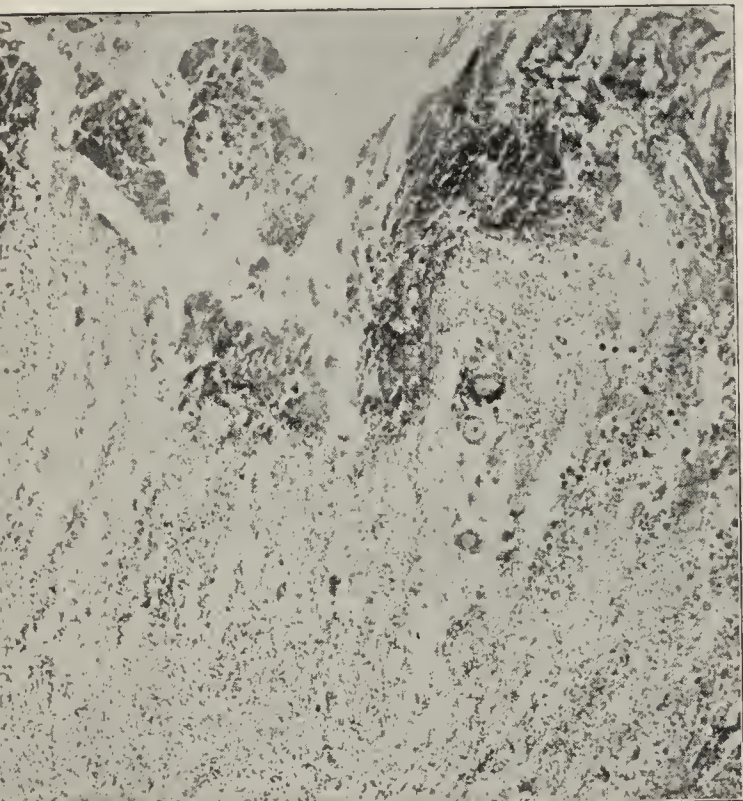


Fig. 10.—Wall of chronic abscess with many parasites. Case 5. High power.

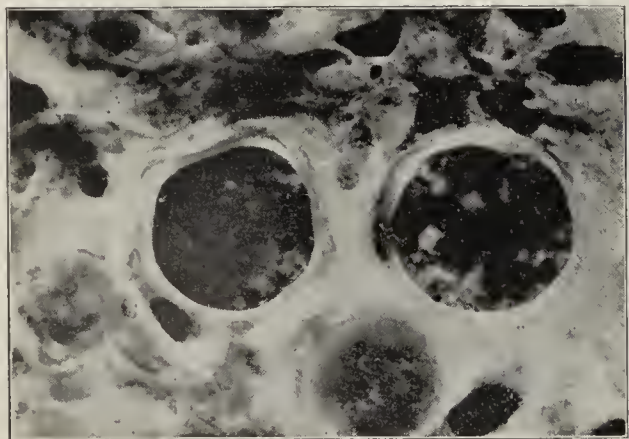


Fig. 11.—Adult parasites, Case 5, 1/12 hom. immersion.

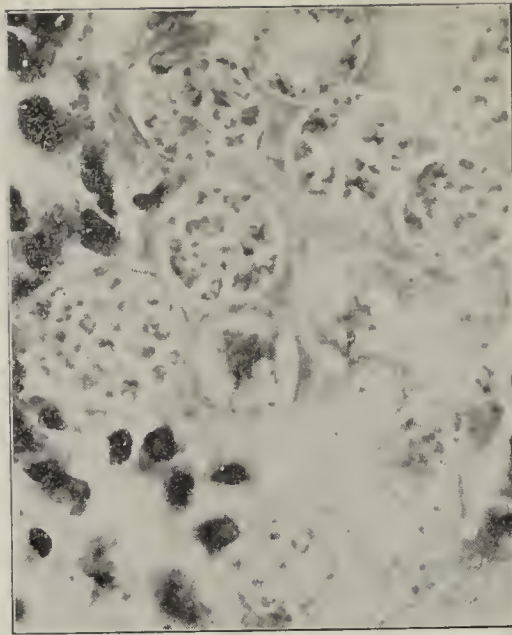


Fig. 12.—Sporulating parasites. Case 5, 1/12 hom. immersion.

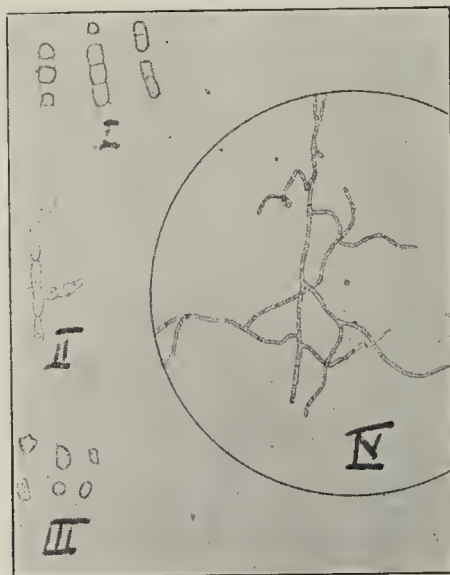


Fig. 14.—Development of parasite on artificial media. I. More unusual forms of sporulation. II. Yeast-like form found in old pure culture. III. Involution forms of spores. IV. Young mycelium showing septate and cylindrical hyphae.

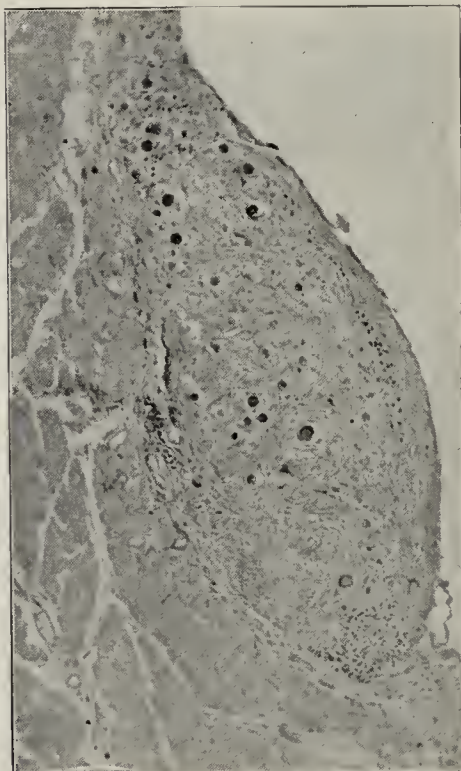


Fig. 17.—Nodule with many parasites on lower surface of diaphragm of guinea-pig after intraperitoneal injection. High power.

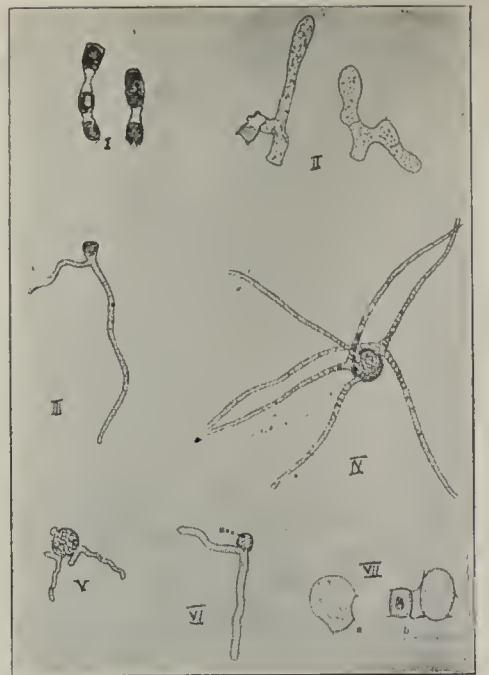


Fig. 13.—Development of parasite on artificial media. Taken from Ophüls paper, Jour. of Exp. Med., vi, 1905. I. Spores in ends of hyphae. II and III. Germination of spores. IV and V. Development of hyphae from spherical forms of parasites. VI. Development of hyphae from spore formed by endo-sporulation in tissues. VII. Development of spherical forms in tissue from spores formed in cultures.



Fig. 15.—Photograph of culture of *Oidium Coccidioides* on slanting agar-agar.

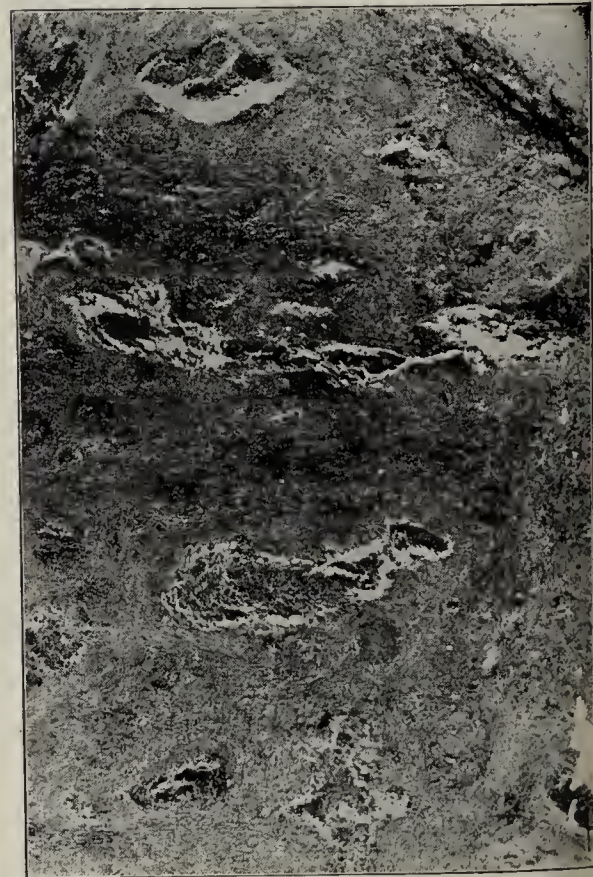


Fig. 16.—Lesions in omentum of guinea-pig after intraperitoneal injection. Low power.



before, the disease seems to be almost limited to California. Most cases have come from San Joaquin Valley, but some have been observed in people who have never been in that part of the country. There has not been an epidemic outbreak in any place as far as is known. The cases have been found at considerable intervals in San Francisco in people coming from the country and had no apparent relation to one another. Several of the patients have been working as day laborers on the railroads, but not all of them, by any means. From what we know from the cultivation experiments it would seem quite possible that the oidium occurred in nature and caused infection occasionally only. Since animals are susceptible to it, it has been suggested that the trouble might be primarily an animal disease and only occasionally transmitted to human beings, but so far it has not been possible to adduce any evidence in support of this theory. I am fairly convinced that the cases are more frequent than would appear now. The resemblance of the disease to tuberculosis is so great clinically and anatomically that the true nature of the cases is recognized only when a careful microscopic examination is made of the diseased tissues or the pus from the lesions.

## SYNOPSIS OF CASES.

CASE 1.—Case of Posadas and Wernicke (*Centralbl. für Bact.* 1892. *Revue de Chirurgie*, March, 1900, etc.) First symptom: appearance of bluish red tumor of size of lentil on right cheek, later large ulcerating nodules resembling mycosis fungoides appeared in various parts of the skin. Secondary involvement of regionary lymph glands. The disease lasted seven years. At autopsy disseminated nodular lesions were found in the internal organs.

CASE 2.—First case of Rixford and Gilchrist (*Johns Hopkins Hospital Reports*, I). Observed 1894. Male, 40 years old. First manifestation: sores on forehead and back of neck, later, disseminated cutaneous lesions resembling hypertrophic lupus. Nine years after first symptoms involvement of regionary lymph glands, death one year later. Lesions found in internal organs at autopsy: chronic abscesses, disseminated nodules, old scars and irregular areas of consolidation in lungs; chronic nodular pleurisy, nodules in diaphragm, circumscribed chronic nodular peritonitis underneath diaphragm and in pelvis, caseation and suppuration in peribronchial and retroperitoneal lymph glands, disseminated nodules in spleen, caseation of both adrenals, caseation and suppuration of prostate, seminal vesicles, both epididymides and testes, chronic suppurative and caseous osteomyelitis of middle of left tibia and head of metacarpal bone of left index finger.

CASE 3.—Second case of Rixford and Gilchrist (*Johns Hopkins Hospital Reports*, I). Observed 1894. Male, 33 years old. First symptom: two small pimples on forehead developing into chronic ulcers, later progressive disseminated ulcerative lesions of skin, early involvement of regionary lymph glands. Night sweats, remittent fever. Duration of disease 3 months. No necropsy.

CASE 4.—Case of Montgomery (*British Journal of Dermatology*, XII, 1900). Male, 21 years old. First symptoms: cough ten months before death. Two months before death appearance of large nodules resembling mycosis fungoides in skin over right eye which ulcerated, later widely disseminated cutaneous lesions. High remittent fever with night sweats. Secondary involvement of regionary lymph glands, rapid increase in pulmonary symptoms. Finding in internal organs at autopsy: large abscess in upper part of right lung extending underneath clavicle into soft tissues of neck. Several smaller abscesses and consolidated areas in right lung. Large abscess in right lobe of liver.

CASE 5.—Case of Moffitt and Ophüls (*Phil. Med. Jour.*, 1900, *Jour. of Exp. Med.* 1905, VI). A. L., male, 19 years old. First symptom: chill followed by pleurisy; later multiple arthritis, osteomyelitis of frontal bone. Slight chills and profuse sweating. Duration of disease: three months. Lesions

found at autopsy. Irregular nodular consolidation with caseation and abscess formation in lungs, also disseminated miliary nodules, and larger abscesses extending into mediastinum and diaphragm. Empyema on left side, caseation and suppuration of retroperitoneal lymph glands, disseminated miliary nodules in liver, disseminated nodules and abscesses in kidneys and spleen, purulent periostitis and osteomyelitis of frontal bone, both tibias. Suppurative inflammation of both knees, right shoulder, both elbows and both wrists. Cultures obtained.

CASE 6.—G. B. (*Jour. of Exp. Med.*, 1905, VI.), old man. No clinical history. Lesions found at autopsy: Old partly healed lesions at apices, chronic nodular pericarditis, disseminated nodules in spleen and kidneys, basilar nodular meningitis.

CASE 7 (New case).—C. M., canner, 19 years, came to City and County Hospital, Sept, 23, 1901, had been in San Joaquin Valley for 12 days the month before, stopping at Bakersfield and Fresno. Before entering the hospital he had irregular attacks of fever with violent chills for four weeks. On entering he had high remittent fever, no plasmodia could be found, leucocytes normal, much headache, marked rigidity of neck, tenderness of cervical vertebræ, constipation. Kernig's symptom was present but not very marked. At intervals the patient was in stupor or at times delirious. December 5, unequal pupils, complete paralysis of left abducens. December 6, paralysis of bladder. December 9, bed sores. He died December 17. At autopsy an old calcified caseous spot was found in one of the peribronchial lymph glands on left side, one old miliary tubercle in the left kidney, chronic caseation in adrenals (tubercle bacilli found in sections, no oidia). Basilar meningitis with many disseminated nodules in Sylvian fissures, very chronic inflammation of pia mater of spinal cord with thickening to 3-4 mm. in diameter. In thickened pia many miliary nodules and abscesses. Marked softening of cord. Terminal bronchopneumonia and beginning cystitis and pyelitis. The case was first regarded as an infection with tubercle bacilli. Later adult and sporulating forms were found in the meninges, no tubercle bacilli could be demonstrated in them.

CASE 8.—Case of Montgomery, Ryfkogel and Morrow (*Jour. of Cut. Dis.*, Jan., 1905). Findings at autopsy: Disseminated cutaneous lesions resembling hypertrophic lupus. No old lesions in lungs but many disseminated miliary nodules which were also present in spleen, liver and kidneys. Chronic caseation of adrenals. Cultures obtained.

CASE 9.—Japanese (*Jour. of Exp. Med.*, VI., 1905). Chronic simple ulcer of foot, caseation and suppuration of inguinal lymph glands and one of cervical lymph glands. This patient was later treated at the City and County Hospital in Dr. Huntington's service for a large abscess of the anterior abdominal wall which extended into the pelvis. The abscess was opened and drained. The patient discharged improved. It has been impossible to trace him since he left the hospital.

CASE 10.—Case of Gardner and Halton. An unusual infection in the bones of the foot. San Francisco County Medical Society, November, 1904. *Cal. State Journal*, 1904. Old man who worked on the railroad in the San Joaquin Valley. In 1900 he had an accident to right foot, followed by an abscess on the dorsum of foot. The abscess was opened and healed. Foot remained swollen and tender. In 1904 abscess formed over fourth metatarsal bone. It was freely opened and considerable necrotic bone and pale granulation removed. Curettings show caseation and formation of tubercle-like nodules. Many adult and some sporulating parasites. Amputation of foot. The patient is otherwise apparently in perfect health. Cultures obtained.

CASE 11 (New case).—D., patient at German Hospital, service of Dr. Weil. Male, German, born 1842. When 16 years old, while still in Germany he had an enlargement of the glands of neck with suppuration which after considerable time healed with formation of large scars. He came to America in 1874, lived in New York until 1877, then came to San Francisco, where he stayed until 1880. Then he moved to Oakland remaining there until 1897, when he moved to Sacramento. He has never lived in the San Joaquin Valley. He worked as baker, millhand and in Sacramento as overseer of large market, where he had to handle poultry, rabbits, etc.



Does not remember having seen many diseased animals. Toward the end of 1903 a large cold abscess developed on left side of his chest which was opened in March, 1904. Two ribs were resected. The wound remained open ever since. Large soft fluctuating swellings developed on both sides of his neck. Dr. Weil curetted the open sinus and removed some diseased bone. Microscopic examination of the granulation tissue showed miliary and submiliary chronic abscesses, some with giant cells in their wall. In these abscesses the parasites were found. Many sporulating forms. Cultures obtained.

CASE 12 (New case).—Chinese patient, of City and County Hospital, June, 1905. The external condyle of the right humerus was resected for caries which involved the joint. Microscopic examination of the specimen showed fibrous thickening and cellular infiltration of the periosteum and adjoining muscle; extensive destruction of bone with formation of granulation tissue full of tubercle-like nodules with large giant cells of Langhans' type. In other places there were submiliary abscesses. One section showed a large area of diffuse caseation. In the latter many large adult parasites and some empty shells. In one of abscesses a typical sporulating form. The patient suffered from a chronic pulmonary trouble with much purulent expectoration, no tubercle bacilli could be found. There was also a paraplegia of both legs. The patient spoke Chinese only, so no history could be obtained. He died within a short time, but unfortunately no autopsy was obtained.

CASE 13.—Parasites described by Wolbach, *Journal of Medical Research*, XIII., 1904.

#### DISCUSSION.

DR. H. A. L. RYFKOGEL, San Francisco, said that Dr. Ophüls has seen 12 cases in such a short time because he was looking for them. It may be demonstrated later that in California and in certain other parts of the universe the disease is fairly prevalent. Dr. Ryfkogel mentioned a case in which he was able to make the bacteriologic diagnosis. The clinical diagnosis had been made previously by Dr. Montgomery. For a number of years the case had been diagnosed as one of tuberculous disease of the skin. At first, Dr. Ryfkogel was not able to find the parasites in the cultures, and Dr. Flexner and Dr. Opie also tried to get them, but failed. Finally, Dr. Ryfkogel succeeded in finding them, as he realized after studying the sections made by Dr. Montgomery that the parasites were in the dense fibrous layers of the skin, and that none was on the surface. He found that in this case it was impossible to produce the disease experimentally by subcutaneous injections. Dr. Ophüls had the same experience with the cases he studied. It was easy to inoculate animals intraperitoneally. Of 100 animals inoculated, all developed caseous abscesses in all parts of the body, but only two out of the 100 developed pulmonary symptoms. These two died of miliary coccidioidal tuberculosis of the lungs, none of these abscesses being present. The original case suddenly developed symptoms that led to a diagnosis of pneumonia, and from this complication the patient died. There were no bone lesions, but the skin lesions were very extensive. There was enlargement of the suprarenal capsules with caseation, the size being that of a large orange. There was an acute miliary tuberculosis of the lungs, due to the fungus, not to the tubercle bacillus.

### THE OCULAR ORIGIN OF "MIGRAINE."\*

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PHILADELPHIA.

If one looks into the etymology of the words megrim, hemicrania, the megrims, or migraine, he finds that the words are in origin identical; moreover, the complex, nowadays designated by these silly and meaningless terms, is made up of a hundred symptoms having nothing

to do with half-headedness; and most of them are of vastly more importance than half-headedness, or even than pain on or in one side of the head. If one glances at the literature of the history of "migraine," he finds that scarcely any two authors understand the same thing by the word. If one consults present-day textbooks and monographs on the subject, there is the same confusion and misunderstanding. If one should ask any score or hundred of physicians for a definition and clinical picture of the disease, there would be the same astonishing indefiniteness and contradiction in the answers. If one should ask as to the etiology, there would be the most numerous, amusing and disorderly array of a hundred causes. If one seeks to learn what organs are affected, the answers, if any are hazarded, would be found equally wide of the mark. The affection in all its forms and types is tremendously common, and yet about it exists the most amazing ignorance and opposition of view. As to therapeutics—well, professional powerlessness, utter and absolute, is confessed. Up to now our impotence has been as complete as our ne-science.

Unwary authors sometimes speak of a "typical case of migraine," without explaining what they mean by the term. Text-books, dictionaries and professors seek, indeed, to indoctrinate the student with ideas of the typicalness of various diseases, even of "migraine," but woe to the practitioner who tries to find a case in actual life. In a broad way, and serving as a suggestive and useful distinction, however loose, all diseases may, in truth, be divided into those which usually run a typical course and those which are rarely or never typical. The more uniform and similar the course of any disease in different patients the more certainly it may be ascribed to a single, simple cause, acting on a single organ or set of organs. Such diseases are those which are highly infectious, such as yellow fever, typhoid fever, smallpox, etc. Even here, of course, the seed is not all and the soil of no importance, for the typical picture always has some slight or great variations in the outworkings of large numbers. Of the atypical diseases, migraine is, by all odds, the leader. Any detailed description is at once false and impossible. No case-history is like that of another. This is, first, because its cause, eyestrain, is of a thousand different kinds and intensities, two cases never being alike; and, secondly, because vision is bound up in some way with almost every physiologic function and necessity; it is united with every nerve-center, every bodily and psychic activity. Thus the infinitely varied morbid cause or seed is planted in an infinitely varied soil. So important is the eye itself to life and to the organism that the morbid reflex is usually not allowed to wreck itself on the eyeball, but starts at first to morbidize the cerebral organs. Hence, headache is, of all the symptoms of so-called migraine, the most constant and frequent. The low degrees of ametropia, especially astigmatism, never to be quite overcome, but the attempt to do so never to be avoided, harm the general system worse; the high defects harm the eye the most.

In a rough way we may say that the symptoms most bespoken in this disease may be grouped in six classes:

1. Periodicity, or alternation of attack and freedom from attack: but no two cases showing the same law either as to length of time between attacks, or during which the attacks last.

2. Scotoma scintillans, if occurring, always preceding the headache; half of the time not followed by headache or other symptom.

\* Read at the meeting of the American Academy of Ophthalmology and Otolaryngology held in Buffalo, N. Y., Sept. 14-16, 1905.



3. Headache, insided, outsided, one-sided, both-sided, front-sided, back-sided, top-sided, bottom-sided, of a hundred different kinds, intensities, and characteristics, and ascribed to a thousand different causes.

4. Nausea, retching or vomiting, of all possible irregularities, regularities, intensities, lengths, present in a minority of cases; the vomiting, when occurring, clearing up the crisis in a majority of cases, and followed by a re-establishment of temporary health. The nausea, patients say, is worse than the vomiting.

5. Psychic and nervous symptoms, such as dejection, often proceeding to profound depression and even to suicidal tendencies, together with nameless and indescribable sufferings, each person's descriptions differing from another's, but all agreeing in seeming exaggeration, with possible insomnia, "hysteria," "neurasthenia," "nervous break-down," etc.

6. Physical symptoms accompanying the attacks, or following them, or replacing them during the intervals between, such as anesthetics and hyperesthesias of many kinds, extents and intensities, paralyses, functional cardiac diseases, aphonia, influenzas and "colds," digestive disturbances and dyspepsias, skin diseases, "rheumatisms" and localized pains, spinal or shoulder pains, neuralgias, and many other symptoms.

With one or more of these classes of symptoms absent, with two or more classes mixed in a limitless number of combinations and degrees, it is evident that there can be no "typical case," and the attempt to set the confines and describe the symptoms implicated is highly absurd. All late authors lessen the difficulty, first by a vagueness, which is a crying *confessio ignorantiae*, and then they cut out of the list Classes 5 and 6, i. e., the psychic and physical concurrents and consequents; usually, also, they do not know what to do with the pestiferous scotoma scintillans. As the periodicity is never alike, is, indeed, if present, infinitely variable, this also has to be ignored. This leaves simply headache, combined with nausea or vomiting, which, of course, should simply be called "sick headache." But never did two patients have the same kind and degree and continuousness either of headache or of stomach rebellion, and we are landed in a farcical *reductio ad absurdum*. But the solemn neurologists do not know it, and they keep crying that any described case is not migraine, not "typical," doesn't fit in their boxes, is hysteria, nonsense, a contemptible oculist's whimsy. Some of these gentlemen assume the air of Mark Twain's jumping frog, make great exertions, but they never get "farrarder" by one inch. They fling a bombastic word, "psychosis," "dementia præcox," "hysteria," "neurasthenia," etc., at the poor patient, order her to the sanitarium or to Europe, prescribe bromids, placebos, or the rest-cure; they then prepare the next edition of their text-book in which ignorance of nervous diseases vies with therapeutic nihilism. If the oculist says he knows a cause and a cure for many cases, Dr. Dana will inform him that "the only real mental affection connected with eye strain is the symptom-complex with grandiose ideas on the part of ophthalmologists." Dr. Fisher will also add:

The oculist is not expected to have such a knowledge of these diseases, either pathologically or clinically, as would make his opinion of any special value, and, therefore, his statements and opinions should be taken only in such a sense as from his limited horizon of observation a partial understanding of these conditions renders possible.

Shakespeare and Molière in collaboration could not do justice to the antics of some of our modern neurologists, neither to some of our defunct commercial medical

journals, whose ghosts are sometimes draped so realistically by their publishers that one would almost think them really medical and as much alive as the famous Mr. Partridge and his almanac. The *Medical Brief*, the *Medical Mirror*, the *Philadelphia Medical Journal*, the *New York Medical Journal*, the *Medical News*—how from their graves they hate and belabor the oculists! The *News*, even after its death, was heard to gibber that at least 20 per cent. of our citizens have gastric ulcer which the surgeon should excise at once. Think of 16,000,000 American citizens being ordered to be gastrotomized in the next 24 hours! But that, of course, is better than spectacles!

When one carefully observes this attitude of mind it becomes evident that these opposers and ridiculers are most anxious to find that the sufferers from migraine, epilepsy, neurasthenia, hysteria, melancholia, indigestion and headache are, thank God, incurable. Their fury in ridiculing the refractionist, their blindness to his truth, their immoral misrepresenting and misreporting him, their editorial malevolence, are indicative of "much." If they had a spark of true scientific spirit, they would be glad to examine a theory and the facts supporting it which might bring some light into their darkness as to the origin of "migraine." If they had the least therapeutic zeal they would like to cure some of their patients of diseases they have all admitted incurable. If they had the least pity in their hearts of human suffering they would grasp at even a slight possibility of lessening the agonies of millions of their fellow-citizens. But of some neurologists and editors of defunct commerciomedical journals one scarcely expects humanity or medicine. What, then, shall be said of oculists who join them? Nothing, except to wonder what kind of refraction they are doing, not to have seen every day their patients cured of these diseases by the glasses ordered. Were there a scintilla of the true investigator's spirit in their minds they would themselves put on their own noses the glasses that we say cure these patients, and test the theory. In a week they would have all the migraine needed, at least, to reduce even them to silence. I will guarantee to produce by this laudable human vivisection experiment, in the skeptics and cynics, any desired degree of "neurosis," "migraine," "neurasthenia," "hysteria," "melancholia," "dementia præcox," "degeneration," "nervous break-down," "neurotic predisposition," "katatonic state," "major psychosis," "melancholia of involution," "psychical tonus or contracture," "forme fruste," "manic depressive insanity," "confusional psychosis," "pseudoneurasthenia," "mysophobia," "topoalgia," "neurasthenical syndrome," and the rest. And all with a pair of 0.75 D. cylinders! The committee appointed must be composed of non-presbyopes and made up equally of neurologists, the editors of defunct commercial medical journals, and ultraconservative "ophthalmologic surgeons."

There is hardly a case of severe eyestrain reflex that, viewed in the life-history, does not show a persisting morbid cause acting on the organism, as it were, from without. Balzac said that when he did not have head misery he had digestive wretchedness, and *vice versa*. In the majority we see this cause attacking one organ after another, upsetting the normal functions of the mind, brain, stomach, liver, heart, lungs, skin or eliminative organs, and all according to the kinds of ametropia present and the amount of work demanded of the eyes. Eye-rest at once gives relief. When presbyopia is added, some one organ is often incapable of further



normal function, and there is an end of life. Of what use are the empty words, "neurosis," "neurotic inheritance," "psychosis," etc., in such cases? Their users are tragical jokers both with science and humanity. Every good refractionist knows that the little fallacy underlying their bad logic is that, in the past, accurate refraction has not been secured for the sufferers, or that, rarely, prevention has been ignored until chronicity has made cure impossible. Not even a pair of spectacles can raise the dead.

It all comes back to the test of facts. I have epitomized a few random notes I happen to have of cases reported by good physicians of the cure of migraine by glasses. I could doubtless have gathered hundreds more if time had permitted.

For instance, about seventy years ago Piorry caught a glimpse of the true relation of the eye and megrim; he thought that "monophthalmalgia," or "iralgia," affections of the peripheral nerves of the eye were the cause of migraine.

To Dr. William Thomson, of Philadelphia and of America, is undoubtedly due the credit of first demonstrating in a general way the causal relation of eyestrain to these nervous and migrainous disorders. This part of the history I have elsewhere indicated and epitomized. In 1876 Mitchell, in reporting Thomson's cases, might have honored himself and the profession by seeing that migraine is due to eyestrain. He came near it; but finally and clearly he balked, and neurology again failed to realize its possibilities.

About the same time Dr. R. Brudenell Carter, in his treatise on "Diseases of the Eye," 1875, reports the case of a patient with palpitation of the heart,<sup>1</sup> headache and sickness (Anglice, nausea and probably vomiting), attributed to disease of the brain; he was first sent to Australia without betterment; he gave up business and a proposed marriage, his "prospects in life blighted." A pair of glasses cured him of all symptoms.

The first physician to lay down clearly the proposition that sick headache is due to eyestrain was Dr. G. C. Savage.<sup>2</sup> To him, therefore, all honor. He was an American. He announced that he had discovered the "real cause" of sick headache to be hypermetropic astigmatism, and that its successful treatment consisted in the use of proper glasses. Savage made a minor and natural mistake in limiting the cause of migraine to "hyperopia and astigmatism, either alone or combined," but he did not commit the egregious blunder of rushing to tenotomy; he did not even speak of heterophoria. The brilliancy of the discovery and the bravery in announcing it, on Savage's part, almost, if not entirely, counterbalance his subsequent silence, mysterious and insoluble, of twenty-five years, on this revolutionizing subject. Savage describes the circumstances that led up to his discovery and the rationale of the method of the cure of sick headache by glasses. His own is the first case reported. [It is, indeed, a pity that every physician in the world is not a sufferer from the disease. He could, of course, be cured with ease, and the generation-long shame of ignoring and opposing a truth of enormous importance would end as suddenly as yellow fever in Cuba.] Savage's mother had had as violent sick headaches as her son, but age, of course, had cured her. Atropin was as effective in our colleague's case, and

glasses made the cure permanent. His sister, too, was cured in the same way, and also his preceptor, Dr. Clark. Savage comments wisely on the false views of the authors of text-books of medical practice on the subject and on their utter ignoring of the matter; he adds: Although sick headache is as common as it is dreadful, Bartholow and other writers on the practice of medicine have not said a word about it.

In 1883 Lauder Brunton, not a crank oculist, wrote<sup>3</sup> as follows:

But frontal headache is not the only one which may arise from abnormal conditions of the eyes, for megrim or sick headache is very frequently associated with, and probably dependent on, inequality of the eyes, either in the way of astigmatism, myopia or hypermetropia.

In 1883 Lauder Brunton, not a crank oculist, wrote<sup>3</sup> fact that "correction of the eyes by cylindrical glasses relieved not only the headache, but also the intermediate dyspepsia, insomnia and irritability of temper liable to occur in patients between the attacks of megrim."

In 1886 Dr. Ambrose L. Ranney<sup>5</sup> said that "the symptoms of sick headache are reflex in character, to a large extent, and are due primarily in almost every case to some optical defect."

In 1887 Dr. George T. Stevens issued his noteworthy book, "Functional Nervous Diseases," etc., in which he made what I judge is the beginning of a huge mistake in saying that "unlike the ordinary forms of headache migraine does not so frequently yield to simple measures of adopting glasses to correct refractive errors." The common inaccuracy at that time in correcting errors of refraction may, at least partially, excuse this error. It is noteworthy that of five cases reported in this book the first four were reported as cured without tenotomy. It is, I think, unfortunate that the operation was not also omitted in the thousands of cases since.

The next, and of all hitherto the most scientific, demonstration of the ocular origin of "migraine" was made by Dr. G. Martin.<sup>6</sup> He reports in all 352 cases, with details, of the ametropia, etc. (mostly low degrees of astigmatism, of course)—a truly noble work. One's patriotism suggests the wish that he had been an American.

In 1889 George M. Gould<sup>7</sup> reported the cure of cases of chorea, severe dyspepsia, cardiac palpitation, sick headache, sexual disorders, etc., due to eyestrain, and in January, 1890, others of similar nature,<sup>8</sup> such as stammering, paralysis, anesthesia, chorea, gastric disorders, aphonia, etc. In August, 1890, he wrote,<sup>9</sup> "Sick headache, there can be little doubt, is very often, if not generally, due to eye strain, etc. In 1891, in reporting<sup>10</sup> on 833 cases of headaches, this man found 73 cases clearly to be classed as sick headache, and he then said, "Ninety or ninety-five per cent. of cases are due to the eyes." He now says 99 per cent.

Dr. George E. de Schweinitz, in an address before the Medical and Chirurgical Faculty of Maryland, April 26, 1900, said:

It is unquestionably true that fully 75 per cent. of ocular disorders depend on anomalies of the refraction, accommodation and motility of the eyes. Correction of such faults is followed by the greatest good to the eye and to the general organism in which the strain has been interpreted by symp-

1. It is remarkable how often eyestrain is found to produce tachycardia or other functional cardiac symptoms. I think that exophthalmic goiter is usually, if not always, due to the same cause.

2. Medical and Surgical Reporter, July 29, 1882.

3. St. Bartholomew's Hospital Reports, vol. xix, 1883, p. 336.

4. Medical Times and Gazette, March 21, 1885.

5. N. Y. Med. Jour., Feb. 27, 1886.

6. Ann. d'oc., 1888.

7. Med. and Surg. Reporter., Feb. 9, March 9, 1889.

8. Am. Jour. Med. Sci., January, 1890.

9. Med. News, Aug. 23, 1890.

10. Journal A. M. A., Sept. 19, 1891.



toms not necessarily suggestive of their origin. When one comes to think about them, these symptoms stretch out into an extraordinary train, but we have ceased to wonder, and as a matter of course investigate or cause to be investigated the eyes whenever searching for the etiology of headache of all kinds, vertigo, nausea, pseudo and habit chorea, neurasthenia and other disease phenomena of similar manifestation. We have learned that many so-called gastric troubles, tachycardia, flatulent and other types of dyspepsia, indigestions, night terrors, especially as they occur in children, may have a like origin, and we have found out that pains strangely and persistently situated in the nape of the neck, between and under the shoulder blades, at the end of the spine and deep in the mastoid may owe their origin to the same cause. These facts are widely, I think I may say universally, known, although, curiously enough, many of the most important of them find no place in the most used text-books on general medicine.

Dr. James Hinshelwood<sup>11</sup> writes:

Such headaches due to errors of refraction may be extremely severe, sometimes accompanied by vomiting, and may even interrupt the patient's work (sic!). They resemble an attack of megrim, but they differ from true megrim in their bilateral distribution, and in the absence of any of the higher visual phenomena, such as fortification figures or defects in the visual fields.

One is glad to have the testimony, all the more convincing because of the writer's residence in an etymologie and elinical antiquity.

Dr. S. W. S. Toms<sup>12</sup> reports a case of "typical" sick headache in a man of 26 existing since he was a school-boy, with vomiting, prostration, fainting attacks, facial pallor, small, thready pulse of high tension and frequency, the attacks lasting from one to three days. There was numbness of the extremities, scotoma scintillans, etc. For eight months after Dr. Toms ordered glasses the man had no attack; then there was one, due to bent spectacle frame; later he broke his frame and there was another attack. Other cases similar in nature are reported by Dr. Toms.

Dr. Peter A. Callan,<sup>13</sup> of New York, writes of migraine: "I have frequently found that correcting 0.25 D. of astigmatism has given complete relief." He cites one case of "a lady, ten years ago, who had suffered long and frequently from migraine, who was cured by wearing glasses." He concludes, from an extended experience of years, with hundreds of cases, that he is "forced to regard eyestrain as the cause in over 75 per cent. of all the cases of functional headache and migraine." This was in 1891; in a personal letter Dr. Callan says that years before this he "claimed that eyestrain is the cause of migraine, and acted accordingly.

Sydney Stephenson<sup>14</sup> reports a case of headache, four times a week, usually lasting all day, and "now and then terminating in vomiting. In fourteen months after glasses had been prescribed there had been only a few slight attacks. Another case reported in the same article was that of a medical student with such severe headache and nausea that his parents thought to put him to another occupation. He was entirely cured by glasses. Both these patients had unsymmetric astigmatism. In a second article<sup>15</sup> Mr. Stephenson says "megrim is an affection that in my experience is often connected closely with ocular defects." "This," he adds, "is no new observation."

The following cases are reported by Stephenson:<sup>16</sup>

Let me quote the following case where the sequence of cause

and effect appeared to be singularly free from fallacy: A very intelligent medical friend had suffered slightly from megrim since he was 7 years of age, but as he got older, and especially as he was reading for his professional examinations the bouts had become severer and more frequent. He was affected, in fact, with classical "blind headache." The attacks began with a colored scintillating obscuration of central vision, and as this passed away, as it generally did in five to ten minutes, intense unilateral headache supervened. The attacks were always associated with nausea. They were brought on by (a) indigestion (b) straining the eyes, as with the microscope. There was a family predisposition to megrim; the patient's mother and sister suffered severely from the affection, and two of his children were also affected. The headache, as a rule, did not last for longer than an hour, but on one occasion it persisted for four days without intermission. General remedies did little, if any, good. At last, at the age of about 39 years, the slight hypermetropic astigmatism (0.5 D.) was corrected with spectacles for constant wear. The result was almost magical. The headaches became fewer in number and milder in character, and this has continued until the present time, some fifteen years after the glasses were prescribed. It may be added that severe headaches can still be induced by attempting to use the eyes without glasses.

In the next case the relief afforded by weak glasses was very prompt and striking: Grace C., aged 22, consulted me in November, 1902. She was a fine, robust-looking country girl, but had always been subject to headaches, which had become worse during the last two years. The pain, which was ushered in by ocular spectra, affected the frontal region, and generally lasted a whole day. It was followed by vomiting. She generally had two or three such headaches during the week. The eyes were stated to ache and to get red after close work. The headaches were definitely induced by reading or working. General medical and dietetic treatment had proved useless. On examination no defect of the external ocular muscles could be found; there was 1 D. of hypermetropia in the right eye and 0.75 D. in the left eye. Spectacles correcting this small amount of long sight were ordered for constant wear. After six weeks' use of glasses Miss C. reported that there had been no return of the headache, and that there was no aching, etc., of the eyes.

Stephenson correctly contends that migraine is not very rare in childhood. He cites the following case:

I have met with fairly typical attacks in children as young as 6 years. The following case, although occurring in an older child, may be quoted because one or two unusual symptoms were present: George D., aged 10, had suffered from three attacks of megrim, the first in the autumn of 1900. The attacks commence with an alteration in speech and a numbness of the right arm, and are followed by persistent vomiting. There is a strong family history of typical hemicrania, preceded by hemianopsia, in the mother and several of her people. The patient, on examination under atropin, was found to be affected with an extremely low grade of hypermetropic astigmatism, and the weakest cylinder of the trial case (+ 0.25 D.), with its axis horizontal, was ordered for constant use. In the result, the megrim disappeared completely, and had not returned when the patient was seen a year afterward.

Dr. George H. Thomas,<sup>17</sup> of Minneapolis, says:

I have come to a settled conviction that . . . among these neuroses [due to eyestrain] I would place in order of frequency neurasthenia (which might include insomnia, irritability, weariness, and mental confusion), nervous dyspepsia, vertigo (including some forms of ear sickness and sea sickness), and, finally, migraine. Every oculist has had cases of migraine which have certainly been permanently relieved and sometimes completely cured. I could quote from my records typical cases, etc. Why eye-strain produces in one person headaches, in another blepharitis; in one nervous dyspepsia, and in another general nervous prostration; in one migraine, and in another epilepsy, is still a subject confined to the realm of theoretical speculation, logical and convincing as that might be made to appear. What we do know, however, is that there

17. Northwestern Lancet, June 1, 1902.

11. Glasgow Medical Journal, November, 1900.

12. Med. News, Nov. 3, 1900.

13. Journal A. M. A., March 28, 1891.

14. The Medical Press and Circular, Feb. 4, 1903.

15. Ibid., Feb. 11, 1903.

16. Med. Press and Circ., February, 1903.



is a large amount of clinical evidence, which is growing larger every day, which shows that when certain patients with a great variety of neurotic symptoms are relieved of their eye-strain, in many of them these symptoms also disappear.

Mr. N. Bishop Farman<sup>18</sup> describes his own case of migraine "neurovascular storm," "associated with the visual centers," and caused by incorrect glasses.

Dr. Zimmerman,<sup>19</sup> in his elaborate study, excludes from his table cases of hemicrania without nausea or vomiting, and also, most strangely, twenty-five cases of bilateral headache in which nausea and vomiting appeared. I say "strangely," because the etymology of the word, half-headedness, has long been put aside as having anything significant of "migraine." Dr. Zimmerman then tabulates what he calls his "true migraines"—"9 cases caused by eyes," 8 cases cured by glasses," and "3 cases improved by glasses."

Drs. S. Solis-Cohen and A. A. Eshner, general practitioners of Philadelphia, were the first in any American text-book on medical practice (issued in 1892) to acknowledge frankly that migraine may be due to eye-strain. In 1904 Dr. Cohen<sup>20</sup> has said further:

The dependence of migraine on eyestrain as an exciting cause in a large number of cases can no longer be denied by the most doubting Thomas. . . . Unquestionably it is a truth of vast significance. Unquestionably physicians have not yet fully realized that significance.

Dr. George F. Libby<sup>21</sup> epitomizes the reports of ten cases suffering from nausea and headache combined, in which "correction of the refractive error gave relief in each case." In three cases with nausea unassociated with headache, relief was obtained in two cases, the third not reporting.

Dr. A. L. Derdiger<sup>22</sup> reports a severe case of chorea of fifteen years' continuance, with migraine symptoms, completely cured by glasses relieving her unsymmetric astigmatism. Another of Dr. Derdiger's patients was a lady, aged 24, with atrocious migraine for five years, the crises occurring once or twice a week. The patient's symptoms would make the neurologist cry hysteria! with a loud voice, and consign her to the rest-cure, or to the bow-wows. I, therefore, must quote her own description of her hypochondriac symptoms:

I have been a sufferer for years; in one day I have about fifty diseases, my head and stomach especially. I can not eat. If I eat the lightest food, then I have indigestion; so I don't eat at all. I can't sleep, and if I do sleep for a few minutes I have such horrible dreams; I dream I am here, there, and everywhere. If I sleep a little I am always moaning, for pains are all over my body. First my back, I can't stoop, then my chest, all down my sides, my shoulders, my legs; then the pain goes toward my stomach and head, and the pain stops there. I have been to vegetarians and they told me not to eat meat, so I have not eaten meat for years. I have been to Christian scientists, and they have prayed with me, aloud and in silence, and kept it up for a long time, until I lost courage. I have taken all sorts of massage and tried all sorts of remedies for years. I see there is no improvement, but the reverse. I can't even wash a cup.

I have taken treatment from mental scientist and electric doctors, and all kinds of doctors, for a long time, but the pain became so severe that I can't stand on my feet but a few minutes before everything turns black before me. I get dizzy, buzzing in the ears, my sight grows dim, the heart palpitates, my whole body quivers, a cold sweat breaks out all over me. I feel deathly sick to my stomach, the bowels get loose, and the

pain becomes so severe in my head and stomach that I am obliged to fall on the bed; sometimes I stay in bed a few hours, other times two or three days. I always thought that I had a complaint in my heart, but the physicians have examined me in private and at the hospital and said my heart was well. Even when I wash myself the pain I have is terrible; sometimes I feel so heavy that I can't move myself, and I also have a burning in my body. This burning kills me altogether, for it leaves me very weak. I have been taking music lessons, but after a half-hour practice I have such pains that even the nails of my fingers ache. After singing awhile the letters become blurred, my voice becomes husky, and the eyelids twitch so that I tremble all over.

With each attack she was forced to go to bed, and intense nausea and vomiting was always present. Three mydriatic testings were required to bring out the unsymmetric astigmatism and anisometropia, the right axis at 105°, the left 90°. She was completely cured by her glasses. Dr. Derdiger's third case was one denominated "classical neurasthenia," also cured by ocular treatment.

Dr. J. Herbert Claiborne<sup>23</sup> says:

I can cite several cases [of migraine] in young adults, in whom the recurrence of the periodic attack and all the accompanying symptoms have been absolutely prevented by the correction of an ocular defect. . . . I reiterate the statement that I have had a number of cases in my practice in which the recurrence of sick headache has been absolutely prevented by the corrections of refractive errors.

Mr. Simcon Snell<sup>24</sup> says:

Many instances of this disorder [migraine] in which the classical symptoms are present will be relieved by giving attention to ocular errors. Two medical friends who have been closely associated with me have experienced an almost entire absence of the disorder since their astigmatism was corrected. . . . Vomiting and nausea are also symptoms. . . . It is well known that they are prominent and well-recognized symptoms of some eye diseases. . . . The remedy for the condition met with in these cases is attention to the eyes.

Mr. Snell describes a number of illustrative cases, one of which was of a very severe migraine, cured by glasses.

Dr. Myles Standish, after quoting a number of statements which he characterized as dogmatic and misrepresenting, from reviews in *THE JOURNAL* of the American Medical Association, the *Ophthalmic Review*, the old-time *Medical Record*, the *Medical News*, etc., said before the Boston Society for Medical Improvement, Dec. 5, 1904:

After having listened to the above extracts, I think you will readily agree with me that it ill behooves the authors of these editorials and book reviews to accuse Dr. Gould of extravagance of statement. . . .

It must have happened to every oculist who has prescribed glasses for patients suffering from migraine that when the patients returned after two or three years they related that they had been entirely relieved until quite recently, and that the return of the migraine and other nervous symptoms made them think that their glasses should be changed. After examination a change usually seems advisable, and they will probably return again two or three years later and repeat that they were immediately relieved by the glasses prescribed and that their symptoms have only again recently returned. Such cases are by no means uncommon. . . .

You will have noticed that in the extracts I read you in reference to migraine great stress is laid on the fact that migraine is often inherited, but, gentlemen, are not eyes inherited? It is very common to find similar refractive errors running through a whole family, and I myself have cognizance of one well-known family in which there were twenty cases of convergent strabismus in three generations.

18. Med. Press, Nov. 18, 1903.

19. N. Y. Med. Jour., Nov. 21-23, 1903.

20. Science, April 29, 1904.

21. Colorado Medicine, March, 1904.

22. Chicago Med. Recorder, 1904.

23. Journal A. M. A., Dec. 10, 1904.

24. Biographic Clinics, Gould, vol. iii.



Dr. Allen Greenwood,<sup>25</sup> of Boston, says of the backward school-child whose objective symptoms are those of eyestrain that "frequently the complaint is of increasing headache so that on arriving home the little sufferer has to be put to bed with what is called sick headache."

Dr. Edwin E. Jack,<sup>26</sup> of Boston, says:

In just what proportion of cases of migraine the nerve storm is caused or precipitated by ocular strain I do not know, but I have no doubt of the connection in very many, and it would seem to me a grave omission in all such cases not to put the eyes into the best possible condition for work, even when there are no local symptoms. . . . Experience teaches that nausea, dizziness, dyspepsia, "the blues," nervousness and irritability, insomnia, brainfag, neurasthenia and a general inability to take up the burdens of life, may all be influenced, aided or brought about by the ever-present effort of the eyes to overcome an imperfect shape or balance. To one who has seen many times the mental wreck which eyes can cause, such a connection is far from incredible and, indeed, does not seem unusual. It is, of course, hard for many to see this standpoint. The man who reads in a moving, joggling car, with his glasses askew, and has always done so with no hint of discomfort, can not understand why I, many times under similar circumstances and in a very few minutes, have nausea and an upset stomach. This would easily prove to me, even if I were not an oculist, that the eye can affect the stomach, and experience teaches me that it can be a factor in other things as well. It would be easy, I think, to demonstrate some of these symptoms by wearing prisms placed in a certain way, or by the use for a while of cylindrical lenses with wrong axes.

Dr. Edward Payson Morrow<sup>27</sup> says:

It is fairly well understood that headaches, vertigo, confusion of ideas, nausea, and many allied symptoms, as well as functional disturbances of remote organs, may have their origin in eyestrain.

Dr. Frederiek E. Cheney, an oculist of Boston, says in a personal letter:

As to sick headaches, I certainly expect to cure the greater proportion of them.

The editor of the *St. Paul Medical Journal*<sup>28</sup> says:

That headache, insomnia, night terrors, nervous dyspepsia, sick headache, migraine, and a host of other similar symptoms result from eyestrain, and are relieved by proper glasses, every physician, and especially every oculist, is well aware.

Dr. S. D. Risley, Philadelphia, has reported cures of "typical migraine" by means of glasses, and expresses himself as generally agreeing with the thesis.

Dr. W. H. Carmalt, New Haven, asks, "What ophthalmologist has not had the same or similar experiences?"

Dr. A. G. Bennett, Buffalo, "heartily indorses such conclusions."

Dr. W. F. Southard,<sup>29</sup> San Francisco, writes:

There is no specialist who has kept an accurate record of his cases for a series of years but will bear Dr. Gould out in his conclusions.

After a half-century of personal experience in conscientious refraction work Dr. John Green says:

To me the central and very significant fact is that the prostrated sufferings, always alleviated by rest from eye work and always recurring with the resumption of studious pursuits, as portrayed in the several biographies from which you have culled, are such as ophthalmic practitioners recognize as dependent, in many persons, on common ocular defects, and as preventable or curable by properly directed optical treatment. . . . It is surely not an extravagant contention that eyes which do not perform their function perfectly in all respects

and under all conditions, or whose use is attended or followed either by local disturbances or by headache, nausea, insomnia, or other reflex manifestations, ought, without exception, to be promptly and critically examined. That such examination will very often bring to light a previously unrecognized ocular defect, and so point the way to urgently needed relief through wearing properly chosen and properly adjusted spectacles, needs only to be stated to command assent. The knowledge that relief from headache may come through wearing glasses is becoming more and more widely diffused; but comparatively few physicians have learned, as yet, to recognize the protean forms which reflex disorders of ocular origin may take on, or to estimate at its true value the service which a wise and conscientious ophthalmic specialist may be able to render.

The investigation and treatment of functional disorders dependent on structural imperfections of the visual organs call for the exercise of the minutest care, and often of almost infinite tact and patience. That the essential qualifications are sometimes conspicuously lacking in men eminent for their achievements along other lines is also true. Careless or perfunctory refractive work by an ophthalmic specialist will yield no better results than similarly defective work done by persons of inferior scientific attainments and of vastly less reputation.

At the 1905 meeting of the American Academy of Ophthalmology and Otolaryngology, either publicly or by personal communication, many members expressed themselves as assenting in a general way and in varying degrees to the proposition that "migraine" or sick headache is caused by eyestrain. Dr. Carhart of New York said that when we are able to overcome the total ocular defects we can cure all cases. Dr. Weeks said that perhaps 75 per cent. of cases are curable by ocular treatment, but that the claim of a higher percentage was not justified. Dr. Baker of Cleveland said, "Let us be honest and frank. We all cure such cases every day."

Mr. C. Ernest Pronger,<sup>30</sup> Harrogate, England, considers extensively the cases of headache with nausea, retching or vomiting, and reports many cases of typical migraine—if the word may be used—or sick headache; many had been treated by other physicians for years, with no relief until proper glasses were ordered. It is noteworthy how often the attacks recurred when the glasses were not worn, or were broken, until the patients learned the lesson. Mr. Pronger suggests that suicide is frequently due to eyestrain, the melancholia, nervous debility and insomnia being so frequently associated with the symptoms.

Brav<sup>30</sup> reports three cases of persistent vomiting in school children, associated with headache, dizziness, convulsive movements, etc., completely cured by correction of astigmatism, and he concludes that in school children vomiting is very often caused by astigmatic errors of refraction.

Dr. A. Ernest Gallant of New York (personal communication) thus writes:

I most emphatically know that, in women at least, not less than 25 or 30 per cent. of sick headache depends on eyestrain, and in my own practice in the neighborhood of 300 have been cured by wearing glasses when fitted by competent men. I learned to look for this condition after reading your first paper in the *Medical News* some years ago, and have thus relieved many whom others have failed to cure. This fact can not be too strongly impressed on the minds of students, and must be hammered into the graduates of former years, etc.

Another general physician, Dr. H. Jarrett, Camden, N. J., says:

It has been my personal observation with several hundred people to find headaches as well as gastric disturbances entirely relieved by proper refraction or wearing appropriate glasses. I may go still further and speak of the vast number

25. Boston Med. and Surg. Jour., Feb. 23, 1905.

26. Boston Med. and Surg. Jour., Feb. 23, 1905.

27. Cleveland Med. Jour., April, 1905.

28. St. Paul Med. Jour., March, 1904.

29. Pacific Medical Journal, April, 1904.

30. N. Y. Med. Jour., Aug. 26, 1905.



of nervous patients in whom the neurotic symptoms have entirely disappeared by relief of eyestrain or ocular treatment.

Dr. Howard F. Hansell, Philadelphia, writes:

I believe that sick headache is one of the symptoms of eyestrain, and I have known patients that were cured by ocular treatment.

Drs. Stockton, Starr, F. Park Lewis, Pohlman, Phillips, Hubbell of Buffalo, Jackson of Denver, Ellis of Los Angeles, Roberts of Pasadena, Westcott of Chicago, Willetts of Pittsburg, Lovett of Langhorne, Pa., Ball, Sherman of Cleveland, M. N. Bemus of Jamestown, N. Y., Spalding of Portland, Maine, Alleman of Brooklyn, N. Y., Pyle and Thorington of Philadelphia assent to the following: "I believe that sick headache often depends on eyestrain, and have known cases that were cured by ocular treatment."

Subnormal accommodation, I suspect, is far more common than is supposed, and I have suggested that it largely accounts for our failures, as oculists, to cure migraine. I have reported a number of cases in which correction of this weakness, besides the distance glasses, as bifocals, alone enabled me to cure in many most distressing cases of sick headache. One was that of a boy of 12, with most alarming and continuous vomiting. Despite my best distance-correction, the pernicious vomiting came on daily when he began to study. By adding 1.50 D. to his distance glasses as a (premature) presbyopic or bifocal segment, there was instant and permanent relief. I have prescribed bifocals in a healthy child of 9 years of age, in which the premature presbyopia was from 1.50 to 2.00.

I could give the details of perhaps a thousand cases of "migraine" or sick headache cured by glasses. I should say that 90 per cent. of cases are immediately curable, and a large proportion of the rest curable in time, and so soon as the secondary systemic functional effects have been overcome. A few cases are incurable, because these secondary effects have become organic or too chronic to allow any cure. There are also rare cases in which mental reaction has become impossible.

Of the skeptics, cynics, ultraconservatives, who smile derisively at all this, I wish simply to ask by what right, ophthalmic, neurologic, humane or human, by what logical or scientific right, they dispute the testimony of Piorry, William Thomson, R. Brudwell Carter, Savage, Lauder Brunton, Hewetson, Ranney, Stevens, G. Martin, Gould, de Schweinitz, Toms, Callan, Stephenson, George H. Thomas, Farman, Zimmerman, Libby, Derdiger, Claiborne, Snell, Myles Standish, Allen Greenwood, Edwin E. Jack, E. P. Morrow, Cheney, Burnside Foster, S. D. Risley, Carmalt, Bennett, Southard, John Green, Carhart, Weeks, Baker, Brav, Pronger, Gallant, Jarrett, Hansell, Stockton, Starr, Lewis, Pohlman, Phillips, Hubbell, Jackson, Ellis, Roberts, Westcott, Willetts, Lovett, Ball, Bemus, Spalding, Alleman, Pyle, Thorington and others? These men report many hundreds, doubtless could report thousands of cures of severe or "typical" migraine "by means of the relief of eyestrain." Are these men unworthy of belief? Are they not as honest and as scientific, as good physicians as the deniers? The conclusion must be that if the deniers have not seen such results they have not done the kind of work which produces the results. Negative testimony is in such cases utterly valueless as against the positive testimony of those who have seen the results. Conform to the rules of science, play the game fair, and the exhibits will prove the thesis. If it is said, "True, but exaggerated," then is the admis-

sion more condemning than the pooh-pooh or the denial. "How true?" we then ask them. Demonstrate the limit; verify the little admitted! Show the exaggerators up as pseudoscientists, and even as liars. Convince the poor, tormented millions you can't cure, that the hope held out to them is a delusion. How they will thank you! And remember that if you err too much or too little, by so much as a grain in getting your exact pound of flesh, woe to you! There is this hour more personal wretchedness and torment caused by "migraine" than by all the combined diseases of the world. It not seldom causes death, indirectly, secondarily, but still absolutely. If you fail to save one life that might be saved, what is it but murder? But prolonged suffering for a lifetime, and of the most atrocious kind which migraine produces, is worse than death. If relying on you, if by neglect, if by a glib and spurious science, one sufferer fails to find a possible cure, yours the infamy! God may not exist, and professional ethics may prove a delusion, but justice will look out for the man who takes the health and happiness of his brother in his hands and wrecks them with the sneer of callous ignorance!

## RESPIRATORY MOVEMENTS OF THE BRONCHIAL TUBES.\*

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CHICAGO.

Last summer while doing bronchoscopy on a child about 2 years of age for the removal of a foreign body from one of the branches of a main bronchus, my attention was arrested by the rhythmical dilatation and contraction of the main bronchi and their branches during inspiration and expiration. This movement was so great that in inspiration the diameter of the tube was sometimes more than twice as great as in expiration. Similar movements were shortly afterward observed in the trachea, also in another young child, although I had not observed these movements in three adults on whom I had done the operation. From this fact I surmised that the movements were not present in the larger bronchi of adults for the reason that they were prevented by the greater rigidity of the cartilages, but it seemed probable that they extended throughout the smaller bronchi at all ages. A more recent operation on a boy of 13 showed that the respiratory movements, even of the main bronchi, were very well marked at that age. I did not notice such movements in a girl of 17, but in that case I unfortunately did not observe whether or not they were present in the first divisions of the bronchus. Last August, aided by a student of medicine, Mr. W. W. Hamburger, I made some experiments on a dog in the physiologic laboratory of the University of Chicago to acquire further light on this subject. The animal was of medium size, weighing 6.5 kilos, and was about 10 months old. It was thoroughly anesthetized by morphin and ehloretone. The anesthetic was administered by a stomach tube, and consisted of ehloretone gram 1.3 and morphin gram, 0.3 dissolved in 50 c.c. of a 50 per cent. alcoholic solution.

Mr. Hamburger did tracheotomy. On inserting the bronchoscope we found that the main bronchi and all of their visible branches expanded and contracted regularly with inspiration and expiration, the diameter of the tube in contraction during expiration being only from two-fifths to one-half of that at the end of inspiration. We placed two ligatures on the right vagus and

\* Read before the American Climatological Association, Detroit, June 28-29, 1905.



cut between them. We then found that the movements of the bronchi still continued, though apparently within a narrower range; but on stimulating the distal end of the divided nerve with a weak electric current, the contractions were more pronounced, and they continued for several seconds until the stimulation was discontinued.

In this experiment, by stimulating the vagus nerve, the caliber of the bronchus was reduced from one-fourth to one-third of its diameter during inspiration. These observations indicate that while the movements were in part passive—that is, the result of the bellows movement of the chest wall, which, as Professor Stewart states, is well understood—they were also in part dependent on muscular contractions resulting from the action of the vagus nerve. A more recent experiment of my own on a smaller dog, apparently 2 or 3 years old, showed that the movements of the main bronchi continued at that age and that the contraction of the muscles in the first branches were in some instances so great as to cause complete collapse of the tube.

I was unable to find references to this action of the bronchi in any of my own medical works, but Prof. George N. Stewart of the University of Chicago and Prof. Jacques Loeb of the University of California kindly gave me several references to the mostly brief paragraphs or sentences referring to this subject in physiologic writings. Professor Stewart, in a personal letter, says:

Longet<sup>1</sup> showed that the vagus contains motor fibers for the bronchial muscles as early as 1842. Donders<sup>2</sup> stated that in deep respiration the bronchi became wider and shorter in inspiration and narrower and longer in expiration. Einthoven<sup>3</sup> and Beer<sup>4</sup> have investigated carefully the innervation of the bronchial muscles. More recently, Dixon and Brodie<sup>5</sup> have shown that the vagus contains both constrictors and dilators<sup>6</sup> for the bronchial muscles, which can be excited directly and reflexly. Whether this mechanism is in action in normal respiration is not discussed, to my knowledge, by any of these recent authors, and the whole question . . . has been rather neglected by systematic writers. Such direct observations as you have made have not found their way into the physiologic literature, if any are recorded, and yet they have a distinct interest for physiologists. In the paper just cited, Chauveau<sup>7</sup> is quoted as stating that "in the horse the bronchioles show some tonus which disappears on section of the vagus, for he found that if the vagus be cut on one side, the vesicular murmur on that side disappears, and it is weakened on the opposite side."

Dr. J. Gordon Wilson of the Hull Laboratory (Department of Anatomy), University of Chicago, has taken up the investigation of this subject with me, and has kindly furnished me an extended abstract of Einthoven's article.<sup>8</sup> This article extends through eighty pages and appears to cover everything that is known on this subject. Dr. Wilson writes:

The movements of the bronchi have been investigated repeatedly, but the results are conflicting. The results of Einthoven, as well as those of Dixon and Brodie, were obtained by artificial respiration. Their experiments were directed to measuring the air-volume of the lungs during the phases of respiration under specified conditions; thus Dixon and Brodie enclosed a lobe of the lung in a metal oneometer and so measured alterations in volume during respiration. The bronchoscope offers another point of attack. It affords an opportunity of directly observing the movements of the

bronchi under what must be regarded as more normal conditions. It may be regarded as satisfactorily shown that constrictor fibers for the bronchial muscles run in the vagus nerve. But so many anomalous conditions have been observed after stimulation of the peripheral end of a divided vagus nerve that many have concluded that not only constrictor fibers for the bronchial muscles are present, but that broncho-dilator fibers must also lie in this nerve. Einthoven denied the presence of such dilator fibers, but the recent work of Dixon and Brodie seems to show that such fibers must be present to explain the results obtained. Whether or not this explanation is entirely satisfactory still remains to be seen.

Einthoven especially has pointed out the important part these muscles may play in disease, especially in asthma. But he concludes that "the significance of the bronchial muscles in normal respiration is small; and what use the bronchial muscles have, what causes their presence and development, we venture no conjecture."

Dr. Wilson suggests that "although the bronchoscope has its limitations, since the finer bronchi are beyond our view, yet there are other points which it may enable us to investigate. Among others it should be possible to observe whether tonus exists in the bronchial muscles, disappearing on section of the vagus, as is claimed by Chauveau and denied by Einthoven and by Dixon and Brodie. It should be possible to observe the effects of peripheral stimulation on the bronchi and the immediate action of the most active drugs."

I can hardly approach this subject except from a clinical standpoint, but Dr. Wilson has taken up the investigation with me, and I hope that we may accomplish something. In the meantime, I hope that research workers will also take up this work by which some valuable facts should be discovered.

The first question suggested to my mind is, what influence has this action of the bronchial tubes in the production of the physical signs heard over the lungs?

The statement of Chauveau just cited offers a possible explanation, entirely different from that generally accepted, for the production of the vesicular murmur.

I have seen several cases, most of them in the last stage of diphtheria, where, although the respiratory movements seemed normal and the bronchioles and air cells appeared to be free, the vesicular murmur was absent and the signs impressed me as due to paralysis of the lung itself. Although I could not understand such a condition, I have cautiously suggested it to two or three medical friends, but without obtaining any information.

I have recently examined a patient who has been subject to asthma all her life, who said that she had had one, two or three attacks every day or night for years. In this case, in an interval between paroxysms, the vesicular murmur was not more than from one-sixth to one-fourth as loud as normal in either lung, although there were no râles and no signs of vesicular emphysema or other disease of the lungs. The question arose in my mind whether the feebleness of the vesicular murmur was not due to deficient innervation of the bronchial muscles, and whether the attacks of asthma might not be due to irritability resulting in excessive paroxysmal action of the contractile muscles analogous to the action of the myocardium in palpitation; and somewhat analogous to the excessive contraction of the abductor muscles of the vocal cords that close the glottis, which seem to retain their function longer than do the muscles of abduction, in some cases of paresis of the recurrent laryngeal nerve.

This action of the bronchial muscles probably has much to do with the production of râles in bronchitis. We are familiar with the contractions occurring in inflamed muscular fiber, and this may explain more sat-

1. Comp. Rend. vol. xv, p. 500. 1842.

2. Zeitsch. Nat. Med., iii, p. 292. 1853.

3. Archiv. für die ges. Physiologie, 1892, vol. 51, p. 367.

4. Archiv. für Physiologie, 1892, suppl., p. 101.

5. Jour. of Physiology, 1903, vol. xxix, pp. 97-173.

6. Einthoven denies the presence of broncho-dilators.

7. Semaine Médical, 1889, p. 147.

8. Pflüger's Archiv., 1892, p. 367.



isfactorily than has been done heretofore the multitudinous more or less persistent râles heard in acute bronchitis, whether these râles be dry or moist.

I have often asked myself how air can be drawn into bronchial tubes filled with mucus, but I thought I could understand how it could be forced out if it once got in; however, by the same reasoning I was unable to satisfy myself why all of the smaller bronchi and the air cells did not on the advent of inflammation of the bronchial tubes become speedily filled with secretion or else collapsed. The theory that the ciliary motion on the surface of the mucous membrane toward the larger tubes carried the secretions upward and outward never appeared to me satisfactory; but if my hypothesis is correct, it explains how the pumping action of these tubes, in connection with the movement of the air, can readily accomplish this result. If experiments should ultimately show us that this contraction of the bronchi in expiration begins at the periphery and works toward the larger tubes, as from analogy we may readily believe, we will then know how the secretions are evacuated from the air cells and the smaller bronchi. The same line of thought brings us to a new viewpoint in studying the sudden development and subsidence of râles in asthma. The respiratory movements of the bronchi and their dependence on muscular activity explain the sudden accession of attacks of asthma resulting from irritation of the pneumogastric nerve, and also show us why inhibition of this action quickly relieves the distressing dyspnea.

We are taught that the bronchial breathing heard in pneumonia is the normal sound of the tubes better transmitted to the surface in consequence of the solid medium. This has never been to me a satisfactory explanation, but I can now understand how the consolidated lung by preventing the bronchi from contracting will yield the characteristic tubular sounds that we find in pneumonia like those produced in a metallic or other rigid tube.

Paresis of these muscles may account for some of the phenomena of pulmonary edema. Impairment of this function may also account for the curious cases that we sometimes meet of functional dyspnea, while lungs, heart and kidneys yield no evidences of disease. The severe attacks of dyspnea in renal disease also may possibly be in part dependent on interference with the respiratory movements of the bronchi.

Dr. Norman Bridge informs me that from personal experience and from the testimony of intelligent patients he several years ago became convinced that the bronchi were relatively collapsed in expiration, and that as a result, the phlegm could be raised at the end of expiration by a gentle explosion of cough and with not more than a quarter of the usual blast of air of a coughing effort. This indicates the importance of this function in relieving the distress of some persons afflicted with pulmonary tuberculosis, especially when from weakness they have difficulty in expelling the sputum.

The difficulties experienced in discovering small objects in the bronchi through the bronchoscope, even under bright illumination, are doubtless largely due to the action of the bronchial constrictor muscles, which may possibly completely close the tube in which the foreign body is ensconced. A recent experiment on a dog appeared to demonstrate the correctness of this hypothesis. In that case, after demonstrating the bronchi and their movements to a class of students, I dropped a pin, head downward, through the bronchoscope into the lung. Although it was very easy to see a pin that had been dropped into the hollow of my hand tightly closed about the end of the bronchoscope, I had very great difficulty in

finding the pin at all in this experiment; indeed, I searched for it with the greatest care for fifteen or twenty minutes, but was unable to see it. Finally, I passed down beyond the bronchoscope an instrument termed a pin finder, which I had devised for the special purpose of bringing a pin or other small object into the center of the lumen of the bronchus. Turning this gently about a few times, I thought that I felt the pin; then, crowding the bronchoscope down a little farther so as to encompass the upper portion of the pin finder used in the search, I withdrew the instrument, and inserted a small electric lamp, which enabled me to see about one-fourth of an inch of the pointed end of the pin projecting into the lower end of the bronchoscope, while the remainder of the pin was completely hidden apparently by complete collapse of the bronchus.

The experiments made by Dr. Wilson and myself have been done on dogs, anesthetized with either morphia or chloroform, or both. The experiments are only in their initial stage, and not yet sufficiently numerous to enable us to arrive at definite conclusions. They bear out my observations, however, about the rhythmical dilatation and contraction of the bronchi during respiration. In quiet inspiration the smaller tubes can be seen to dilate to twice the diameter they have during the respiratory pause; during the expiration following they almost close.

Stimulation of the peripheral end of the sectioned vagus nerve produces constriction; at times the immediate result appears to be a dilatation—a result which Dixon and Brodie obtained also. Similar results have also been observed after stimulation of the mucous membrane of the nose. We hope to continue these investigations and, later, to be able to report the result more fully.

We believe that the action of remedies may be profitably studied through the bronchoscope in the living animal, and that as a result of such study we shall doubtless obtain much more intelligent and effective therapeutics in some affections of the heart and lungs.

Important observations on the effect of drugs on the bronchial muscles have been made among others by Einthoven, and by Dixon and Brodie. The latter investigators classify certain drugs as broncho-constrictors, others as broncho-dilators.

As a result of their investigations, Dixon and Brodie have arrived at the following conclusions, among others:

1. The inhalation of ether or chloroform for anesthetic purposes abolishes the effect of the vagus on the bronchioles. This is due to the paralysis of the nerve-endings by direct absorption through the mucous membrane.

2. Reflex bronchiolar constriction is best obtained by exciting the nasal mucous membrane. Little or no result has been obtained by stimulating the sciatic, central end of the vagus, superior laryngeal or cornea.

3. Gradual constriction of bronchioles followed by dilatation is usually seen postmortem.

4. Muscarin, pilocarpin and physostigmin excite the vagal endings and induce typical bronchiolar constriction, the effect of which is abolished by atropin.

5. Barium, veratrin, bromin and the salts of many of the heavy metals (e. g., gold) produce constriction, which is not influenced by atropin.

These facts are suggestive in the therapeutics of many cases in which expectoration is difficult.

6. Inhalation of CO<sub>2</sub> leads to constriction of the bronchioles, which is not altogether central in origin.



7. Chloroform, ether, urethane, lobelia and atropin induce dilatation of the bronchioles when constriction is present. The dilatation produced by lobelia is very transient, while that by atropin is permanent.

These facts should aid us materially in relieving spasmodic asthma.

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## A CASE OF IMPERFORATE RECTUM WITH ABSENCE OF THE ANUS.

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Oct. 25, 1903, R. K., male, was born under my care. His mother had already given birth to four other children, all perfectly formed. He was born at full term, head presentation, R. O. A. No anus at all was to be seen. The raphe ran from the base of the scrotum to the tip of the coccyx. There was phimosis and the second and third toes of both feet were webbed. There was a slight dimple in the median line of the back over the center of the sacrum. The base of the penis was drawn toward the scrotum, making it much longer anteriorly than posteriorly. The mother is disposed to attribute these malformations to a rather severe felon she had seven months before the child's birth.

When the boy was 30 hours old he was held in the exaggerated lithotomy position, and, without the use of anesthesia, a trocar, one-fifth inch in diameter and two and one-half inches long, was thrust by Dr. J. A. Hawkins into the perineum where the anus should have been and in the direction in which the rectum should have been, into the hollow of the sacrum. When the trocar was about all introduced, lack of resistance was noticed, the stylet was withdrawn and meconium came out through the canula. As soon as the meconium ceased to flow, the canula was withdrawn, the bowel was washed out with an enema containing olive oil and the opening was enlarged with a knife sufficiently to allow the introduction of the little finger. The rectum could easily be felt at the bottom of the wound. The bowel seemed to be firmly attached to the surrounding tissues, so that it was not thought best to attempt to pull it down and attach it to the external wound. The bowel was situated about two inches from the perineum. A soft rubber catheter, 20 French, was inserted through the wound into the rectum and left there, secured with a safety pin. Absorbent cotton was placed over the perineum, held in place by a diaper. The rectum was so firmly attached to the surrounding parts that it was not at all displaced by these manipulations.

In five hours the baby was resting quietly. The next morning the catheter was withdrawn and some meconium was discharged. The bowel was washed out and the little finger was inserted into the rectum, causing some bleeding. The rectum at this time seemed to have descended a little toward the perineum. The catheter was reinserted and left in. On the evening of this day the baby refused to nurse, his temperature was 102 and he was in a state of collapse. The next morning he was better and tried to nurse. The catheter was withdrawn, the bowel was washed out and the wound was dilated with the little finger, causing some bleeding. Same procedure in the evening.

On the following day the mother's milk supply failed and the baby was put on modified milk.

At the end of the fourth day no bleeding was caused by the dilatation with the finger. On the fifth day the baby passed feces for the first time. The wound was thus dilated with the finger night and morning for eleven days. At each insertion of the finger the rectum seemed to have descended nearer and nearer to the perineum. The catheter was kept in the wound for only five days. On the eleventh day the use of the finger as a dilator was stopped, meatus sounds, 30, 35 and 40 French, being used instead.

The baby did not do very well on the modified milk, and for several weeks we despaired of raising him. At the end of a month the sounds were used but once a day, then every other day, then once a week, and finally but once a month. At the end of two months the rectum had descended almost to the perineum.

Now that the boy is over 20 months old, the mother says that the movements from his bowels are the same as those of her other children when at his age. As a rule, he lets her know when his bowels are to be moved.

On examination the anus is somewhat funnel-shaped. The sphincter is in good working order; in fact, practically perfect, but is about one-half inch higher up than normal. A person examining him now, not knowing what the condition at birth had been, would find his anus about the same as that of any other child. The dilators are used now once a month, but they cause no pain. It is probable that their use might safely be discontinued.

This case belongs to the third species of Bodenhamer's<sup>1</sup> classification of the congenital malformations of the rectum and anus. In all the cases of which I have read I can find no one treated exactly as was this one. We were very fortunate in the outcome, and probably would not be so successful again. Bodenhammer advises against the use of the trocar in these cases, but recommends dissection with the knife until the rectum is found and then its pulling down and attachment to the external wound in the perineum.

Jacobi gives a case in which he put in a trocar and meconium oozed from the wound. He then put in a dilator and dilated the wound, but in two days death resulted from peritonitis. A postmortem showed that the trocar had passed into the bowel, but also into the peritoneal cavity, into which the meconium had escaped, giving rise to peritonitis.

He also says that there are several ways in which this malformation may occur. The anal orifice in the fetus is formed by an invagination of the outer surface, the tube thus formed meeting and uniting with the rectum. The septum between the two tubes becomes absorbed and the lumen of the tube is complete. Now, sometimes the septum does not become absorbed. It may exist at the anal orifice itself, obstructing the bowel at its very entrance; or, again, the anus itself may be normal, yet this septum may exist unabsorbed some distance up the bowel, an inch or an inch and one-half. Here the ends of the tubes have met and united, but the septum has not been absorbed.

Again, the two tubes may not meet at all, but may be separated altogether by areolar tissue (as in my case); or, again, instead of meeting end to end, they may meet sidewise and so touch only at one point, as in the case given above, in which the trocar entered both the bowel and the peritoneal cavity.<sup>2</sup>

The great objection to the method of simple puncture and incision in complete obstruction is that it exposes the tissues, especially the peritoneum, to septic infection. In my case antisepsis was as carefully carried out as possible. The fact that the gut was so firmly attached to the surrounding tissues greatly aided the good result. Here some of the fibers of the sphincter and levator must have been present and some of the areolar tissue between the bowel and perineum must have become absorbed, allowing them to come together.

My case well supports Bodenhammer's dictum, that in the newborn time and long experience have taught us that nature is more capable of greater adaptation than in adults, and that in the young child the original defects of development are subsequently compensated, if art will only give a helping hand in accomplishing her purpose. The surgical treatment of these malformations has been most exhaustively treated by Rudolph Matas.<sup>3</sup>

1. Bodenhammer: A Practical Treatise on the Etiology, Pathology and Treatment of the Congenital Malformations of the Rectum and Anus. New York, 1860.

2. Medical and Surgical Reporter, vol. xlviii, 1880, p. 337.

3. Amer. Jour. Obst., vol. xxxvi, 1897, p. 628.



## THE PSYCHOSES OF HEART DISEASE.\*

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The task of classifying the psychoses caused or aggravated by disease of the heart is not easy. Eliminating organic disease of the brain, it is probable that disease of the heart is responsible for more cases of psychic disturbance than is disease of any other organ. It is notable that but brief attention is accorded to this etiologic phase of insanity and allied psychoses by textbook authors, probably for the reason that heart disease is in most instances regarded as a result or simple complication and not as a cause. A further explanation of the possible oversight rightly to place heart diseases in the etiology of mental disturbances is that, primarily, the psychic phenomena of the milder forms of heart trouble, such as palpitation, are usually insufficient to constitute insanity and are looked on as unimportant. Secondly, the severe forms of heart disease producing active mental disturbance, incapacitate the victim for undue violence, weaken his power of decided physical activity, and constitute an excellent reason for his treatment in the wards of a general hospital where his mental infirmities are regarded as subordinate to his physical ones, with the result that, while the latter are carefully considered, the former are usually regarded as of small consequence. I do not at all take issue with this method of caring for such cases, believing that it affords opportunities for treatment that are as good as, or better than the public asylum, in which the organic phenomena are not unlikely to be subordinated to the purely psychic, with the result that the latter, or symptom, is treated, while the former, or cause, is apt to receive scant attention; and in the forms of psychosis due to severe heart disease, it appears that treatment directed at the physical infirmity is after all the essential thing, so that such cases are valuable more for comparative and etiologic purposes than for therapeutic reasons. But in the milder forms such reasoning is distinctly bad, for the mental disturbance must not only be carefully analyzed, but treated coincidentally with the cardiac disease, whether that be organic or functional. And it is important to trace the relationship between the two, as to which is cause and which effect; for it is certain that if cardiac disease can cause mental disturbance, no less can mental disease cause cardiac disturbance, as witness the irregularities and palpitations easily produced in neurasthenics by suggestion.

It is possible to divide the psychic disturbances of heart disease according to their etiology into those due to:

1. Local sensations usually not painful, whereby the patient becomes aware of some cardiac abnormality, as in palpitation, irregularity, tachycardia, bradycardia or excessive loudness.
2. Local pain, as in angina pectoris, endocarditis, pericarditis, or compression from pericardial effusion.
3. Disturbances in circulation.
  - a. Vasomotor constrictions.
  - b. Feebleness of heart's action with cyanosis.
4. Secondary lesions in the brain.
  - a. Embolism from valve lesions.
  - b. Edemas and effusions from incompetency.

From the standpoint of symptoms the psychic phenomena of heart disease may be divided into:

1. States of fear or apprehension, usually accompanied by more or less panic, and alternating with some depression and irritability, without being accompanied by active delusions or hallucinations.
2. Delusions founded on misinterpretations of local cardiac phenomena, such as pain.
3. Active hallucinations and delusions from circulatory disturbances involving sensory organs.
4. Dementias from secondary lesions in the brain.

In such classifications as the above it must be remembered that one division may shade into another imperceptibly. Any of the symptoms of the second classification may occur with any of the causes of the first, and, indeed, the symptoms of any of the various subdivisions may be associated with one another with kaleidoscopic possibilities. And yet it may be said that as a result of Class 1 of the first classification the symptoms of Class 1 of the second are the symptoms most likely to be encountered. In like manner the second class of each classification will most frequently be found related, and the third and fourth classes likewise, but to a less extent. It will be found, however, that the symptom of fear is commonly found in all the subdivisions and classes.

To Division 1 of the first classification belong all those cases of cardiac palpitation and irregularity witnessed in neurasthenics. In these cases the heart usually presents no evidences of abnormality when the patient is at ease, except that it is somewhat hypertrophied and rapid. Attacks of palpitation come on without warning or apparent cause. At other times disturbances of rhythm result from excitement, emotion, or gastric disturbances. Often at night the patient awakens with a violent start, finds his heart beating like a trip hammer, rises to a sitting posture, grasping his chest, and becomes apprehensive, irritable, excited, incoherent and irrational. Following such an attack he develops what might be called cardiophobia, living in constant fear of a recurrence, and not infrequently working himself into a state of excitement resulting in severe tachycardia or palpitation, with an intensification of the fears and doubts of preceding seizures. He demands close attention, sympathy and repeated assurances of safety, and is afraid to be left alone. After an attack the patient is sleepless, morbidly depressed, emotional and irritable.

CASE 1.—J. M., aged 26, born in U. S., farmer, entered sanitarium in June, 1904. A typical neurasthenic. Physical appearance rugged. No evidences of organic abnormality except increase in rapidity and loudness of heart sounds. While on half-rest treatment, was awakened one morning from nap by violent palpitation, accompanied by great terror and anxiety. I saw him within ten minutes and found his pulse 140, heart slightly irregular, no murmurs. Face was pale, terror stricken and wet with perspiration of fear. He insisted he was going to die and demanded attendance and encouragement for one-half hour, when his heart having ceased to beat so violently, he became calm. He had numerous similar attacks during his stay with us.

CASE 2.—C. L., aged 38, born in U. S., politician and postmaster. Physical appearance remarkably healthy. Heart sounds accented and frequency from 92 to 100, ordinarily. Saw preceding case in attack described, and within twelve hours experienced seizure bearing striking similarity. The attack was repeated about every third night, usually around 2 a. m., and patient refused to go to sleep without first being visited, when assurances that he was all right and free from

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session,



danger calmed him. The next day he was always more restless and emotional than before the attacks, and for months lived in terror of them. He has since recovered sufficiently to perform his official duties.

In the first of these cases the cardiac disturbances acted as a stimulus to the excitable nervous system and bore the very distinct relation of a cause for the intensified psychic phenomena. In the second case apparently suggestion produced palpitation and thus the heart trouble might reasonably be regarded, at least in part, as due to the psychic disturbance.

Not only may these disturbances of rhythm with abnormal mental phenomena be witnessed in ordinary neurasthenics, but also in pronounced degree do they occur in the cases of so-called Pennsylvania heart of Stockton. These cases are seen in their most classic aspects in lumbering regions, where men subject themselves to great strain for long periods, achieve cardiac hypertrophy, and follow it with complete cessation from hard work. As a result the heart becomes irritable and subject to attacks of palpitation and rapidity. The seizures in many instances are accompanied by minor disturbances of mind as witnessed in the following case:

CASE 3.—L. L., lumberman, aged 44, born in U. S., admitted to county hospital in 1895. Physical appearance robust. All organs normal except heart, which was hypertrophied and rapid, about 120 per minute. On exertion he developed palpitation and became excited and apprehensive. Following attacks he was irritable and quarreled with nurses and attendants, patients and physicians. Was unruly and refused to obey orders. Finally dismissed for insubordination. Was at all times fully aware of his physical infirmity and its dangers, and when free from attacks, tractable and obliging, but declared that he could not control actions described with seizures.

In another subclass of cases there is more pronounced cardiac disturbance and likewise more marked mental phenomena. A typical example of such was Case 4.

CASE 4.—C. J., aged 28, born in Germany, cook. Admitted to County Hospital, Feb. 13, 1896. Present illness began five days ago with vertigo, pain in chest over heart, and dyspnea. The slightest exertion causes patient to become so weak and tired that he is obliged to go to bed. He states that effort is followed by coughing spells, which last until he has had a rest of several hours. Examination: Heart is enlarged, 92 per minute. While undergoing examination heart suddenly became exceedingly rapid and irregular, first sound being bell-like in tone. There is no murmur. Patient grasps chest, breathes hard, face expresses intense fear, actions emotional, articulation indistinct and sentences incoherent. Following this, he was seized with convulsions, from which he could be aroused by sharp orders and threats. The seizure thus presented many of the classic phenomena of hysteria, with decided departure from customary hysterical or normal mental actions. While under care, these attacks were repeated a number of times and it was noticeable that the cardiac disturbances preceded the mental in every instance. The administration of nitroglycerin was uniformly followed by prompt improvement in pulse and mental symptoms. There was at no time pain in the region of the heart. With rest and nitrites the patient's condition was such that he was able to resume work in a month. The visiting physician, a well-known consultant in New York state, diagnosed this case as "nervous heart" and later "neurosis of the cardiac ganglia," a striking commentary on the possibilities of nomenclature to conceal ignorance of exact conditions.

Passing on, one comes by natural processes to false and true angina pectoris and in these cases witnesses some of the most interesting but distressing phenomena of mind associated with heart disease. The following case is unique in my experience:

CASE 5.—Male, aged 37, single, admitted to Manhattan State Hospital May 15, 1897. Born in Ireland. Foreman of

excavating gang. Temperate. Family history good. Repeated attacks of articular rheumatism. On admission, was excited and hysterical. Burst into tears when being questioned and said: "I am worrying for the sins I have committed. Adultery and other sins, sir." Appearance depressed and melancholy. Body somewhat emaciated. Pulse weak and running 160 to 180 per minute. Apex beat diffuse and two inches to left of nipple in greatest intensity. Relative cardiac dullness much increased. At apex, sounds were loud and bell-like. There were no murmurs, but sounds were transmitted to axilla, and all over chest were heard with metallic intensity. When patient moved the heart became irregular and more rapid, and this was always accompanied by mental excitement. While under care, patient experienced a number of attacks of mild cardiac pain with what he called "rheumatism" of his left shoulder, and at such times always became emotional, hysteric, incoherent, irrational and finally maniacal, but amenable to some degree of control. An ice bag to the chest, rest in bed and the use of heart tonics and vaso-dilators invariably produced quiet.

Eliminating those cases of true angina pectoris in which during the attack there is fear of death—which is well founded and therefore not properly to be regarded as abnormal—there are yet some cases of angina pectoris in which the repeated attacks have produced psychic disturbances such as are illustrated by the following:

CASE 6.—P. C., aged 32, admitted to County Hospital March 28, 1896. Alcoholic and heavy smoker. Had grip and pericarditis two years ago. Entered for treatment of acute bronchitis. While convalescent, developed attacks of angina pectoris with terrific pain. He was often able to inhale as much as 1 dram of nitrite of amyl without relief, which finally came only with chloroform anesthesia. Attacks were accompanied by terror, excitement and incoherence of speech, and following these he became offensive and obscene in language, threatening and unreasonable until sleep came on, from which he awakened quiet, tractable and with but partial remembrance of the events of the seizure.

Misinterpretation of local cardiac sensations and delusions built thereon was well witnessed in two cases in which the pathologic conditions were similar. The mental phenomena were fairly typical of two somewhat opposite phases of insanity, yet bore in each case striking relationship to the degree of acuity and character of the general symptoms.

CASE 7.—J. K., aged 62, laborer, admitted to County Hospital February, 1896. Examination showed consolidation of posterior portion of base of left lung, which was diagnosed as bronchopneumonia. Heart 84 to 92. Temperature 101 to 102. Mental disturbance pronounced, but differed from ordinary febrile delirium to such an extent that he was looked on by the visiting physician as an insane case in which the lung trouble was simply an accident. He was confused and incoherent in speech, muttered constantly, was sleepless and declined food. He refused to lie down, declaring that a huge vise was clamping his heart and that he must sit up to watch it. Also that electric currents were coming up through his bed magnetizing the vise. His facies was typical of a low form of acute mania, and his general conduct corresponded. He died at the end of a week, and necropsy disclosed an unexpected purulent pericarditis, with about four ounces of pus. There were numerous adhesions binding the apex of the heart to the pericardium in front. The fluid, although small in quantity, really distended the sac, and it was easy to understand the production of symptoms, resulting almost logically, one might say, in his delusions.

CASE 8.—W. L. L., aged 62, German, admitted to County Hospital May 15, 1905. There were the characteristic physical signs of bronchopneumonia of left base. Within a week he became depressed and melancholic and suffered from insomnia. Talked to himself and ate but little. After two weeks was able to be up about ward and appeared to be influenced by hallucinations of sight and hearing. His heart



was about 116 to 120, and during the night he frequently complained that weights were put on his chest whenever he lay down to sleep. The mental state was one which I have since frequently observed and considered as mild simple melancholia. He died suddenly forty-four days after first visit. Necropsy showed purulent pericarditis with 16 ounces of pus and enormous distension of pericardium. The lung was not involved except by compression.

In Cases 7 and 8 sepsis unquestionably influenced the mental state, yet clearly the cardiac lesions were responsible for the character of the resulting delusions.

The preceding cases illustrate throughout phases of mental disturbance dependent on abnormal sensations in the region of the heart, and except in the last two cases, recognized by the patients as due to disturbance of that organ. But there is a distinct class of cases in which, though the heart is diseased, the patient is unaware of it, and yet has pronounced mental symptoms directly traceable to the organic heart trouble and in no sense due to the secondary organic consequences thereof. Of such are the following:

CASE 9.—W. M., aged 19, male, well educated. Mental trouble, judging from history, dated back one month, when he left home for a neighboring state to seek work. He was there arrested, charged with insanity and brought to our sanitarium in November, 1904. On admission, he was depressed, melancholy, delusional, and suffered from auditory hallucinations. There was a faint murmur over the aortic area, probably due to slight stenosis, but not at that time regarded as of importance in relation to the mental phenomena. With rest, patient became cheerful and improved. After a few days he complained of cold and numbness in extremities and hands and feet were found blue and cold to touch. The heart murmur was louder than at first, the melancholic depression greatly aggravated and accompanied by suicidal tendencies. Regarding the cyanosis as due to vasomotor disorder, belladonna was administered. There was prompt disappearance of the peripheral cyanosis, an improved pulse and a return to a more nearly normal mental condition. Withdrawal of belladonna was followed after a few days by return of the cyanosis, this time with a feeling that the hands were dead, and accompanied by aggravation of mental symptoms with hysterical outbursts. Belladonna again relieved the cyanosis, and its disappearance was followed by decided mental improvement. After four months patient showed evidence of beginning dementia with continual auditory hallucinations.

This case I regard as one of dementia præcox, having an hereditary basis, with the cardiac disease as the distinct exciting cause of onset.

During the time Case 9 was under care we had another patient with a double mitral murmur, whose mental phenomena were typical of acute mania.

CASE 10.—Mrs. H., aged 56, married, no hereditary influence. Recently removed from the East to Oregon. Had lost her home in fire previously, had brooded much over this misfortune and weight was considerably reduced. One week before admission to the sanitarium, she became suspicious, quarrelsome, and finally, while laboring under a delusion, assaulted her husband. On admission she was maniacal, incoherent and sleepless. Was anemic and had temperature of 101. The heart was exceedingly irregular with double mitral murmurs and typical gallop rhythm. There was no edema and no evidence of focal cerebral involvement, such as might have been due to embolism. Patient was put in resting sheet and fed through nasal tube. No improvement for several days. Digitalin was then administered by hypodermic, and as the heart's action gradually became steady, the mind improved coincidentally. She had several relapses with excitement, increase of delusions, vivid hallucinations of sight and hearing, and the performance of irrational acts. In each instance these attacks were preceded or accompanied by recurrence of the cardiac irregularity; in several instances the attacks were directly traceable

to undue physical activity. With tonic treatment, in addition to the digitalis, cardiac compensation was restored, and in six weeks the patient was taken home by her friends, quiet, tractable and orderly.

The relation of the heart and mental diseases was here unmistakable. The shock of loss of home followed by transplantation can scarce bear the relation of more than predisposing elements. Loss of appetite followed, then dilatation of a weak and diseased heart. Insomnia and the mental phenomena were the logical outcome. There was striking contrast in the symptoms of these two latter cases, in that the outbursts of excitement in the vigorous and independent old woman were substituted for the hysterical, helpless attacks of the constitutionally weak natured boy. In his case also there was an astonishing relation between the asthenic cardiac disease, the feeble circulation, and the slow, depressed, and confused mentality. While in her case there was exhibited a violent, restless, active and racy mind which but kept pace with the irregular riotous circulation, and galloping, tempestuous heart.

Coming to the last class are first, those cases of embolism in which valvular vegetations are the cause of organic brain lesions. Such cases are too frequent and well recognized to need comment and it is safe to pass to the remaining group, in which the secondary results of heart disease, the arterial dilatations and tortuosities, edemas and toxemias, result in mental disturbances which, were they not associated with unmistakable heart disease, would be classed as true insanities.

The variations in these cases are numerous, but in the main certain more or less distinctive symptoms are recognizable. The first of these are ocular and auditory hallucinations. The former are doubtless due to tortuous retinal arteries, often albuminuric, and are of a vividness comparable only to the hallucinations of sight in acute alcoholism, in which the immediate cause, i. e., arterial dilatations in the retina, appears to be identical. Occasionally the auditory hallucinations occur independently, but for the most part they are founded on the ocular misconceptions and interpretations, and on both a series of delusions is based. The remaining cases illustrate this well.

CASE 11.—C. N., aged 37, German, was brought to County Hospital Jan. 21, 1896, because his family found it impossible to keep him longer at home owing to outbursts of excitement and violence. On admission, he was suffering from endocarditis with insufficiency, and had dropsical limbs. Mental phenomena were insomnia or restless sleep, from which he was disturbed by haunting dreams. He insisted that he had just seen his wife enter dormitory and heard her speak to the nurses and other patients. Declared that she refused to speak to him, but waved her hand derisively, and on this basis built up an elaborate system of delusions of her infidelity and persecutory attitude toward himself. This statement, with slight variations, was repeated daily until death occurred two months after admission. Contradiction invariably resulted in violent excitement, accompanied by incoherent, abusive and blasphemous language, followed by great exhaustion.

CASE 12.—M. G., aged 46, German, admitted to County Hospital July 22, 1895. Had double aortic murmur and mitral insufficiency. With the gradual development of dilatation and edema, patient became restless and irritable. He complained of strange visitations, claiming that he saw people in the ward who went out through the windows, hooting and shouting at him. On this he constructed a series of delusions of persecution involving other patients, nurses and physician. He lived nine and one-half months after admission, alternating but little from a steady and gradual progression of heart symptoms, with as regular an accompaniment of the



mental phenomena, until about one month before death, when he became partially demented.

The gross postmortem findings in the two immediately preceding cases were edema of the limbs, abdomen, and brain. The heart conditions substantiated the findings of the physical examinations.

CASE 13.—W. B., aged 44, German, formerly a hard drinker, was brought to sanitarium because his family was unable to keep him at home, as he was noisy, excited and delusional. Had well-recognized heart disease. On examination he was found to be suffering from general edema. Heart dilated with loud mitral insufficiency murmur. He slept badly, groaning and muttering. Usually awakened with a start and an appearance of fright. Spoke of seeing people in the room and heard them talking about him, but, as a rule, indistinctly and not unpleasantly. Unwilling to take medicine for fear of poison. Very irritable, cross at times, confused. Was under care seven weeks, and died two days after an embolism of the left middle cerebral artery, this being confirmed by autopsy.

Throughout the histories, in the interests of brevity, all extraneous matter has been omitted. In some of the cases cited there were possible hereditary and other etiologic elements. It is not my intention to regard such details slightly and in every instance the aim has been to describe both heart and mental symptoms in a manner to best show their relationship to each other. It is not contended that the heart disease in every case was the sole cause, but rather that it was the exciting cause, except wherein the cardiac troubles were rather the effect, and to this attention has been called. Especial insistence is placed on the relationship of mental improvement to therapy directed against the heart trouble. In selecting the histories, only cases under personal observation were used, and no reference has been made to the cases of heart disease occurring in the chronic insane, for there is no reason why insanity should protect against such accidental complications. Also less than one-half the actual histories preserved with a view to presenting a paper on this subject have been used, for the reason that in many cases the relationship between the heart and mental disease was obscured by some other trouble, as in one case of alienation due apparently to aortic aneurism and endocarditis, in which there was a history of syphilis. In the absence of positive knowledge to the contrary, it was assumed that there may have been a syphilitic cerebral lesion. An extremely interesting case under care as this paper is being completed has also been omitted. In this case the patient came under care with highly acute maniacal symptoms. His heart was examined, as well as his active movements would permit, and no murmurs discovered. When, after a week, the excitement somewhat subsided, it was noticed that his respirations were rapid and his lips cyanosed. Examination revealed a loud mitral insufficiency murmur and great dilatation. From his wife a history of articular rheumatism was obtained, together with the statement that he had been rejected for life insurance three times because of heart disease and accepted on different occasions by three other companies. Under the circumstances it seems probable the murmur depended in part on dilatation under the strain of the maniacal excitement and thus was a pure and simple complication. It is noteworthy that even here, as soon as the lesion was discovered and digitalis used, the cyanosis disappeared, the murmur softened, and the improvement in the expansive and confused mentality was markedly accelerated.

All the cases cited, with one exception, were ob-

served in a general hospital or private sanitarium. During a residence of nearly two years in one of the largest of our state hospitals, over one-half of the time on the receiving service, I observed but few of these cardio-mental cases. The obvious deduction is that such cases, as suggested in the beginning of this paper, are usually treated by the internist and not by the alienist, and I am sure that, as a result, the psychic side has been minimized. I do not regard any of these cases as unusual, rather believing them typical examples of comparatively common disease forms, and I desire only to recall your attention to them as being almost as much within the province of the psychiatrist as the internist, and to commend them for closer observation than the literature indicates they have received.

## DEFECTS OF WILL FROM A MEDICAL STANDPOINT.\*

HOWELL T. PERSHING, M.D.

DENVER.

At first my subject may seem too intangible to be of importance in practical medicine; but one has only to think of his cases of alcoholism to realize that complete recovery or absolute ruin may be determined by the operation of the patient's will. Analogous cases in which a morbid appetite needs control at once suggest themselves, and when we further recall the many disturbances of voluntary action from which hysteric and neurasthenic patients may suffer the great importance of the subject is manifest. But, granting the desirability of remedying defects of will, some may ask whether we have any definite knowledge of the nature of volition and of its defects, such as a physician can utilize in the actual treatment of patients. I am convinced that there is a great and growing fund of such knowledge which, if carefully considered by any physician, will help him to be a better therapist.

The will, of course, is not to be regarded as a mysterious metaphysical entity, or even as a faculty, but as a cerebral process, accompanied, it is true, by consciousness, but nevertheless a nervous mechanism whose operation is modified by various conditions in health and often very seriously deranged by disease. Recent knowledge of the localization of motor, sensory and psychic functions in the cortex makes it possible to form a fairly definite and highly probable hypothesis as to what the mechanism of volition is and to deduce from it important clinical precepts.

The essential effect of willing is to cause motion, and when we inspect our own minds we find that a voluntary motion is always preceded by the idea of the motion. Now, ideas have definite locations in the sensory centers of the cortex, each according to its kind, ideas of form and color in the visual centers, of sound in the auditory centers, and so on, and each idea is the memory of a sensation. The ideas of motion are located in the kinesthetic centers in the posterior part of the Rolandic region and are memories of the sensations caused by motion. The memory or idea of any particular motion is the cause of that motion being repeated.

Suppose, for example, that one sees an orange on the table and picks it up. Something like the following must occur in the brain: Nerve currents, starting from the eyes, reach the visual center (V, Fig. 1), and these

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



arouse sensations of form and color, which, in association with certain ideas of distance, solidity, weight, etc., constitute the visual perception of the orange. Association impulses then pass from the visual center to the kinesthetic center for the right hand (K), arousing in it the memory of past sensations caused by the motion of grasping a similar object. If the idea of this motion is strong and vivid, that center (K) is correspondingly excited and sends association currents forward to the motor centers (M), and these centers, becoming active, send currents down through the pyramidal fibers which cause the muscles to contract. I say something like this must happen, for the sketch, of course, is far simpler than the reality, and the processes of association, which I have represented as direct, are probably roundabout by way of the higher centers of Hughlings Jackson or the association centers of Flechsig. Flechsig thinks that the prefrontal and parts of the parietal and temporal regions of the cortex are central stations which connect the motor and sensory centers somewhat as a telephone central connects the scattered subscribers; hence, he has called them association centers.

Jackson's earlier theory of a higher representation of motions and sensations and Flechsig's seem to me to be in essential harmony with each other and with the facts

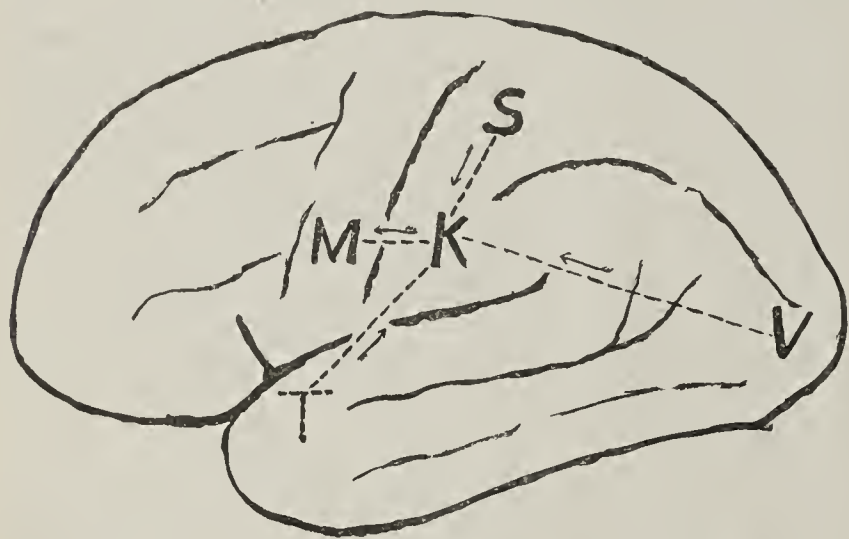


Figure 1.

indicating that the prefrontal lobes are essential to the higher mental operations. They are also in harmony with the theory of a concept center in the temporal lobe, as held by Dr. Mills. Nevertheless, for the sake of clearness, we may provisionally represent association impulses as passing directly from one center to another.

We see, then, that voluntary motion is ideomotor action and is brought about by a chain of cortical reflexes; that activity of the kinesthetic center is essential and results, on the side of consciousness, in the idea of the motion to be performed, and, on the physical side, in the excitation of the appropriate motor centers.

Other reflexes are subject to both acceleration and restraint, and so it is with volition. Suppose that perception of the orange revives in the center (which we will call T) the memory of its aspect, agreeable to taste. Then the idea of grasping it is strengthened by accelerating impulses passing from T to the kinesthetic center (K) and the motion is made more prompt and certain. Suppose, on the other hand, that the sight of the fruit revives the memory of colic. The center for abdominal pain (which we may represent as S) then sends inhibiting impulses to K, which weaken the idea of grasping, and perhaps S may also excite in the adjacent center K' the idea of withdrawing the hand, so that two opposing motions are begun in the muscles. When both ac-

celerating and inhibiting impulses thus act on the kinesthetic center at the same time or in rapid alternation, their joint result is arrested action of indecision until one or the other finally predominates.

The action of this volitional reflex and the effect of its accelerating and restraining impulses is subject to many modifications, depending principally on habit, instinct, emotional state and stage of mental development.

Habitual acts are more readily caused by the exciting idea than others and are harder to restrain, because the nervous paths have been facilitated. Instinctive acts occur even more readily, because they have been habitual in the race and the brain paths are especially prepared for them at birth.

Certain emotions, such as joy and anger, set the ideomotor regions of the cortex in a quiver of excitement and favor immediate action in response to ideas, with no time for restraining impulses to interfere. We see extreme illustrations of this state in certain stages of intoxication by alcohol or ether and in an attack of acute mania. Grief and despondency, on the other hand, weaken the ideomotor regions and favor all restraining impulses, so their tendency is to indecision or absolute inaction. The extreme illustration of this state is found in melancholia, more particularly in melancholia attonita. The effect of fear varies: ordinary ideomotor action is depressed by it so that we can say one is paralyzed by fear, but the instinctive motions of defense or escape may be enormously accelerated by it, as may well be seen in melancholia agitata and the active phase of alcoholic insanity.

In immature minds the ideas necessary to the execution of complex and difficult actions and those necessary for the restraint of simple and instinctive actions are weak or absent.

From this statement of fact and theory a rule may be deduced which has a great many practical applications. The idea of an action tends at once to cause it; think strongly of a certain word and you will find your tongue stirring to utter it, of a blow and you will find your fist clenching. If the action is desirable, first make the idea of it as definite and vigorous as possible and then favor its effect on the motor centers by accelerating ideas and by raising the emotional tone. If the action is undesirable try to prevent the idea of it from occurring at all, and only as a second choice rely on restraining ideas or depressing emotions.

All prohibitions of specific acts have the disadvantage that they must first awaken the idea of the act and so tend to cause it. Restraining impulses may come into play, but the mechanism is started and they may be too feeble or too late to arrest it. Better incite to doing what will exclude the wrong. The reformed alcoholic or drug habitué or young man trying to avoid sexual errors should not keep repeating vows or assurances that he will not offend again. A wise physician will often make light of his patient's past sins in order that forgetting them he may "press forward toward the mark of his high calling." Rewards are far more efficient than punishments; they fix attention on what is desirable and at the same time raise the emotional tone. They have an especially important place in the treatment of nervous children. Give a child a reward for speaking correctly, for sleeping soundly, for having a nice, dry bed, for easy and graceful motions, and it will succeed vastly better than punishment for failures.

The treatment of hysterical paralysis is a most interesting application of the general rule we have deduced.



We remember the admirable epigram: "She says, 'I can not;' it looks like, 'I will not;' but it is 'I can not will.'" Now, if we inquire in what respect the will is defective we come on the great fact that the paralyzed limb is always more or less anesthetic to touch, pain and temperature, and more particularly to kinesthetic impressions. There is convincing proof that this loss of sensibility is cortical; the sensory center K, while not organically damaged, has been so depressed that it is no longer sufficiently excited by the sensory currents coming up from the affected muscles and joints. Still less is it excited by association currents from other cortical centers; the patient can not revive the idea of the motion; an essential part of the process of volition is absent. It is inexcusably coarse work simply to tell such a patient that the paralysis is hysterical and that she could move the limb properly if she only wanted to. She feels that this is not true, and it really is not.

After such a thorough examination as will in itself inspire confidence we should proceed, according to a definite plan, first to raise the emotional tone by a highly favorable prognosis; then to excite the depressed sensory centers by electrical stimulation and passive motion of the affected limb; then to further awaken the lost idea of motion by encouraging the patient to aid rhythmical passive motions by voluntary effort. Often there are inhibiting ideas of pain or danger that will arrest the desired motion, as we will know by seeing the opposing muscles contract; these ideas may be dispelled by repeated assurances and other appropriate methods. The one fundamental thing is to reawaken the lost sensations and ideas in the kinesthetic center.

Of the opposite hysterical phenomenon, spasm, I shall not speak further than to say that the general spasms and some of the localized ones are not voluntary motions, but instinctive reactions constituting part of an emotional process. They may, however, be counteracted by strictly voluntary motions which tend to exclude them, as well as by rational attempts to improve the emotional state. Some of the localized spasms are voluntary, although not desired by the patient, inasmuch as they depend on a fixed idea of the abnormal posture and are to be corrected by dispelling the idea.<sup>1</sup>

In strictly neurasthenic states, although we never see such paralyses or spasms as are common in hysteria, the disagreeable sensations and the limitation of spontaneous mental action, due to exhaustion, lead to several distinct forms of deranged volition.

(1) Ordinary duties become excessively difficult, because the normal pleasurable sensations attending mental work have been banished by fatigue and in their place unpleasant feelings have become associated and exert an inhibiting effect. Williams James gives a vivid account of how a college professor will pass the forenoon doing a multitude of trivial things, "anything rather than do the one thing he ought to do, prepare for a lecture on formal logic, which he hates." The remedy for this state is rest, especially from the distasteful work, together with measures to invigorate the nervous system generally.

(2) Actions of various kinds become associated, perhaps accidentally, with a definite, although utterly irrational feeling of fear, which inhibits the action. Thus a tired neurasthenic will often walk a long distance, seeing himself passed by car after car, each of which he thinks of boarding, but does not do so on account of

fear. One of my patients, secretary of an insurance company, is often unable to sign policies in the presence of the clerk who is waiting for them. He has a feeling like that of stage fright, his hand trembles and he makes a specious excuse. Alone he does much better, but is still troubled. Similar cases could be multiplied indefinitely. The treatment of such a condition, in addition to those measures favoring rest and recuperation which are generally required in neurasthenia, should include special means of securing emotional tranquillity and repeated encouragement to attempt graduated exercises in doing those things that have become associated with morbid fear.

I have already considered this at some length in a paper read at the New Orleans session.<sup>2</sup>

(3) In some cases the weakening of spontaneous cortical activity and the tendency toward unpleasant feelings and ideas cause the accelerating and inhibiting impulses of an every-day action to be so evenly balanced that indecision is indefinitely prolonged. Thus a neurasthenic will start out to get his breakfast which he very much needs, but can not choose the restaurant, some trivial objection to each, in turn, being sufficient inhibition, although the idea of getting breakfast can not be dismissed.

(4) The weakening of spontaneous mental activity explains another form of defect in which the patient feels an impulse to do unimportant and useless things, such as counting, touching posts or other objects, jostling a stranger in the street, etc. In a healthy brain such ideas, no doubt, occur from time to time, but are immediately crowded out by other interests. In the neurasthenic the idea of the action has the center of the field of consciousness, and no other has sufficient vigor to crowd it out. As long as it remains without the motion being performed there is a feeling of unrest and distress; once the action is performed there is relief, and the brain is free to act in some other way. The familiar case of Dr. Samuel Johnson going back to touch the post he had passed is an illustration. The remedy for such defects of will is not to tell the patient, what he already knows, that the impulse is irrational, but to cure the neurasthenia and especially to restore the normal spontaneity and tone of feeling. As to the impulses themselves, they are generally to be resisted by an attempt to become interested in other things, but the patient must not be too strenuous in his resistance; excessive struggles not only lead to exhaustion, but fix the intruding idea more immovably than ever in the exhausted cortex. Where no grave question of conduct is involved, it may be better to yield and forget. Oscar Wilde's scandalous saying that the only thing to do with a temptation is to yield to it at once and so deprive it of its power of torment was, no doubt, suggested by the distress attending this form of arrested volition. One of my patients, a very intelligent lady, once had an impulse to stop and count all the objects in a jeweler's window, but was determined not to be so foolish and walked on. The window was in her mind all day, and late in the evening, restless and unhappy, she concluded that there could be no peace of mind for her until she went back to the window and counted, which she did, at great inconvenience to herself and her husband.

(5) The last form of disturbance of will in neurasthenia is typified in such a case as this: A father sees his child and a carving knife at the same time, and the

1. Pershing; *Hysterical Movements*, Journal A. M. A., Feb. 11, 1905.

2. Pershing; *The Treatment of Emotional Disturbances*, Journal A. M. A., Jan. 30, 1904.



thought comes, "What if I should cut my child's throat?" No doubt, equally perverse thoughts come to healthy persons, but they are not taken seriously and are quickly displaced by the flood of normal mental activities and so forgotten. But in the irritably weak brain there is an excessive emotional reaction; the patient feels his heart bound and then stop, he trembles and is bathed in sweat. He has the sensations of fear and, as he interprets it, he is afraid that he may murder his child. The intensity of his horror fixes the incident in his memory; the same idea is recalled again and again until everything seems to be associated with it. The patient feels that the idea of the action tends to cause it and has no confidence in the restraining influences. Such cases are extremely difficult to treat successfully and will generally tax all the resources of the most skillful neurologist. The important elements of treatment, in my opinion, are (a) the thorough mental and physical examination that will prevent the physician from mistaking melancholia or any other disease for neurasthenia and at the same time make the patient feel that his case is understood; (b) positive assurance that the dreaded act can not be committed; (c) general measures toward the cure of neurasthenia, especially rest, food, tonics, cultivation of normal interests, perhaps change of scene; (d) the skillful use of opium in order to secure emotional rest, with all possible precautions in view of the danger of a habit.

It is evident that what has been outlined in this article might be greatly amplified and also that much not touched on might have been included, but I think enough has been said to show that the modern psychophysiologic theory of volition has important applications in practical medicine.

#### DISCUSSION.

DR. D. R. BROWER, Chicago, said that the relation of the will in these mental cases has always been a matter of very great consideration to him. He thinks that the great majority of mental cases begin in will disturbances, and that the failure to recognize this beginning is one reason for the want of success in the treatment. After the case has progressed for a time the will defects are overwhelmed by the emotional defects. He agreed with Dr. Pershing as to the correction, so far as practicable, of these defects. Dr. Brower's experience, like Dr. Pershing's, has been that opium given so that the patients do not know they are taking it is one of the best agents in giving tone to this apparent defect, provided the opium is properly guarded by other agents to prevent interference with the important function of elimination. Dr. Brower is quite sure that in the past he has overlooked the beginning of many cases, because he has failed thoroughly and carefully to consider the importance of this matter.

DR. H. A. TOMLINSON, St. Peter, Minn., said that probably inadvertently Dr. Pershing failed to refer to that portion of the cerebral cortex that is anterior to the precentral fissure, the center for general inhibition. It is both interesting and instructive in studying the comparative physiology of the nervous system, and especially the evolution of its functions, to note that the primary function of the nervous system is motor; that is, the generation of motor impulses in response to the afferent stimuli resulting from the irritability of the dermal layer of cells. Also that these impulses have for their object the approximation of the animal to food substances, or the avoidance of obvious sources of danger. As the number of animals in a given area becomes greater, the sources of danger more numerous and less easily avoided, and the competition more keen, the necessity for an inhibitory or dirigent apparatus arises; which is identical with what we call the volitional function in the higher animals. Passing from this primitive association of functions, and ignoring the primary function of reproduction, to the complex functional arrangement and association in the human nervous system, there is evident an enormous elaboration of these simple processes, with their correlations in the different cortical areas in the central

portion of the cortex, which Dr. Pershing calls the kinesthetic centers, into which stimuli are received, and from which motor impulses are transmitted, and which the environment of the human being has made necessary. The great complexity of the environment, however, makes necessary another functional area, which has to do with the relation of impressions from without; the inhibition and direction of the resulting afferent impulses. This is the process of volition, and, so far as we know, this function resides in the cortex of the frontal lobes, anterior to the precentral fissure. The association and continuity of the cortex of the second and third frontal convolutions with the ascending frontal; and the association of these convolutions with the operculum, inferior parietal lobule, and the anterior portions of the first and second temporal convolutions, shows how the function of inhibition is intimately connected with the higher activities, and dominates those impulses that control the relations of the individual with his environment. There is negative proof of this relation in the progress of the processes of cortical degeneration, which begins first in the frontal lobes, then the areas referred to above, and next the paracentral lobule and the angular gyrus. In cases of defective development, too, it is in the area of the prefrontal lobes that the deficiency is most marked, and the reversion in type most conspicuous. Just in proportion as these parts of the brain cortex are lacking in development, or are degenerated, will the changes described by Dr. Pershing be apparent. Now in order to get a definite idea of the pathology of these conditions, where no gross lesion exists, we must study the circulation in the cortex, especially the lymph and venous circulations, and their influence in the production of autointoxication. It is an interesting hypothesis that circulatory disturbances following autointoxication result in the breaking up of the normal relation of impressions, and that the consequent futile activity of the kinesthetic centers brings about extreme fatigue of the cortical cell, therefore imperfect reconstitution, and the subsequent neurasthenia that shows itself in volitional aberration.

DR. G. R. CLARK, Dearborn, Mont., called attention to the fact that in the insanity of adolescence many of the patients exhibit peculiarities, for example, an impulse to touch certain things, or to go upstairs backward. This only occurs at times, but it is one of the characteristic signs of the disease. Such a patient may be sufficiently cured to pass out into the world again, but during the course of the disease his mind has acquired a sort of mental habit for the reproduction of that particular mannerism. The clearing up of the symptoms is remarkable, but after a few months or years of the old associations and the old manner of thinking the mannerisms will return. Dementia præcox may be secondary to certain vasomotor conditions; the nervous system may have lost its power of stability. When these patients are 50 years old or more they are likely to acquire new mannerisms, and anything which tends to destroy the physical health to a certain extent brings back this old tissue instability. Dr. Clark referred to a certain form of dementia præcox seen in school children in which the child is supposed to be only dull and stupid, he is punished for a condition for which he is not responsible.

DR. J. ALLEN GILBERT, Portland, expressed his disappointment that Dr. Pershing did not take up the subject of the will more as the will. It is a psychologic subject through and through, and the more Dr. Gilbert studies the more he is convinced that any arbitrary division or classification of psychic functions will lead us into trouble. Neurologists forget at times, he said, that there is no emotion without will and no will without intellect, and no intelligence without emotion and *vice versa*. In other words, psychic activity, as such, is unitary. The more he studies physiologic psychology the more he is convinced that it is utterly impossible to use any classification which bases physiologic psychology strictly and solely on a material basis. He referred to Ziehen's "Physiological Psychology" as a work most heavily laden with inconsistencies and contradictions. Haeckel's "Riddle of the Universe," by which so many physicians swear, he considered likewise overburdened with self-contradictions. Professor James, who might be considered the father of the theory of emotions based on material processes, has retracted his own theory as erroneous and untrue to the facts. Dr. Gil-



bert is as yet unwilling to admit that psychology has no place other than as a corollary to physics.

Dr. H. T. PERSHING said that of course he realized that in bringing up such a subject he was opening up an enormous field where one might easily go astray. He was forced by time limitations to give only the barest details of the subject and there were many things which he had to omit entirely. Many of those perversions of the will are the reversions to the primitive type of the child; thus Dr. Johnson touched his post as he went along, just as the boy at certain intervals kicks at everything he passes. In reply to another criticism Dr. Pershing said that the nature of consciousness is a subject on which he is always willing to talk, but it is a subject that can hardly be included in a discussion on medicine. Consciousness does exist and it is interfered with in disease of the brain; and the effect of disease on the consciousness varies according to the location of the lesion in the brain. Therefore, whatever the metaphysical implications one can not fail to see the practical relations of these facts. He said that the assumption that the mind is a unity seems to him false; the mind is as complex as the brain, and very far from being a unity. Dr. Pershing would deny the assertion that there can be no operation of the will without operation of the intellect. He was surprised to hear that Professor James has gone back on his theory of the emotions, but even if he has, Dr. Pershing will believe that the theory is well sustained. It does not depend on James alone, but on Lange and other psychologists as well. James, however, gave it a particularly happy expression in his text-books on psychology.

Dr. J. H. McBRIDE, Pasadena, Cal., declared the mentality of the patient and the physical environment are vital matters. Medical men have not given this subject the attention it deserves. In all forms of nervous diseases, the mental influences that are brought to bear on the patient are important, or may be important elements in the treatment. So far as the will is concerned, he is inclined to shy at it. The discussion of it furnishes a certain amount of mental gymnastic, but he is not certain that we are further benefited. Huxley, who was fond of psychologic subjects, said that when, in his discussions, he got to the will, he always quit.

## A STUDY OF PERFORATION IN TYPHOID FEVER.\*

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This subject is of interest to every physician and surgeon on account of the great prevalence of typhoid fever as a disease and the apparent unavoidable frequency with which this extremely fatal complication of intestinal perforation occurs.

It has been estimated by Briggs that more than 16,000 perforations of the intestines due to typhoid fever occur annually in the United States alone. I am inclined to think this statement rather too high, however. From some carefully prepared statistics made by my colleague, Dr. J. Alison Scott, in reference to the frequency of this disease in the United States during the year 1900, based on the United States Census Report, he found that 35,379 persons succumbed to the disease. From the analysis of autopsies of 10 large hospitals it would appear that one death in every four was due to intestinal perforation. Assuming, therefore, that one death out of every four is due to perforation, 8,844 perforative cases occurred throughout the entire country in the year 1900. Assuming that the mortality of all the operative cases is 75 per cent., timely operation in these 8,844 cases might have yielded 2,211 recoveries. These are important figures and mean the loss or saving of many lives.

### CAUSES.

The causes of perforation are numerous. Among them may be mentioned race, sex, age, season, geographical location, stage of the disease, severity of the attack, intestinal parasites, etc.

*Race.*—It would appear that the white race is more disposed to perforation than the negro race, but this is a questionable statement as a larger percentage of cases occur among the white race, and consequently more perforations are found in them.

*Sex.*—The male sex is more liable to suffer perforation than is the female, the ratio being about 4 to 1. Fitz collected 100 cases of perforation in which 71 of the patients were males.

*Age.*—Typhoid fever is as a rule a disease of youth or early adult life and therefore the largest percentage of perforations will naturally be found at what is considered an early age. In 279 cases where the age was known over 12 per cent. occurred in patients under 15 years of age; 54 per cent. occurred between 15 and 30 years of age, and 33 per cent. occurred in patients over 30 years of age. Two of my own cases operated on were children under 12 years of age.

*Season and Geographical Location.*—These are not important factors. In the summer season more perforations occur simply because typhoid fever is apt to be more prevalent at that time of year. The majority of my own cases, however, occurred between the months of February and June.

*Stages of Disease.*—It would appear from a careful analysis of a large number of cases that the third week in the disease is the most usual time for perforation. It may occur, however, at any time during the height of the disease, as pointed out by Dr. Osler; it may have occurred before the patient feels at all sick, as has been noticed in a number of ambulatory cases operated on; it may occur during convalescence, when every danger of the disease is supposed to have passed.

*Severity of the Attack.*—There is no doubt that certain epidemics of typhoid fever are more virulent in character than others; the invasion of the Peyer's patches in such cases seems to be much deeper and more extensive, and perforation is much more likely to occur than in the cases of milder type.

*Intestinal Parasites and Exciting Causes.*—Intestinal parasites may be a predisposing cause and even rarely an exciting cause to perforation. Many of the earlier reported cases of perforation in the stomach were due to intestinal worms, and it seems possible that these parasites may be an exciting cause to typhoid perforation. Virulent cocci or bacilli may produce a secondary infection, resulting in inflammation and necrosis. A severe inflammatory process of an ulcer thus infected may lead to perforation. The exciting causes of typhoid perforation are, however, generally mechanical. Anything which sets up an unusual peristaltic action is likely to cause solution of the continuity of the already diseased intestines; undue or involuntary contraction of the abdominal muscles, straining at stools or urination, sudden spasm, cough, the struggle or spasm incident to a cold bath, should all be mentioned in this connection. There is no doubt that irritating particles of food, for instance, apples and other articles brought to the patients by their friends, should be classed as exciting causes. When, however, perforation occurs while the patient is sleeping, and without exciting cause, it is generally supposed to be due to excessive necrosis.

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



## PATHOLOGY.

The pathologic lesions in typhoid fever are especially prominent in the last three feet of the ileum, although extensive lesions may also be found through the colon even down to the sigmoid, as was noticed in a case operated on at the Pennsylvania Hospital. In the beginning there is a congested condition of the mucosa and follicles of the lower ileum. The accumulation of cells in the lymph tissue may be so extensive that the adjacent mucosa becomes infiltrated, and the blood vessels becoming more or less compressed cause the follicles to assume a white or anemic appearance. There may be an appreciable round-celled infiltration. If the so-called medullary infiltration does not result, coagulation necrosis becomes discharged in the bowel. The process is aided by the direct action of typhoid toxins and also by the ischemia produced by the choking of the vascular channels and partly by the direct action of the typhoid toxins. Recently these toxins have been regarded as agents producing the agglutination or thrombosis of the erythrocytes in typhoid. The thrombosis predisposes to sloughing. When the medullary infiltration involves the entire thickness of the bowel it is evident that a perforation will occur when the necrotic area is separated. The sloughing may involve only the mucosa, or, as is more common, the tissues down to the muscularis. The slough is cast off about the end of the second or beginning of the third week of the disease. Separation begins at the end of the necrosed area, but it is rare to find an entire Peyer's patch that is completely sloughed away, or to find a perfectly ovoid ulcer directly opposite the mesenteric attachment. When the ulcer fails to heal and gradually deepens as it approaches the peritoneal coat, it may induce more or less plastic peritonitis which, when found on the surface of the bowel, is always suspicious of an incipient perforation. After its removal a small opening into the bowel can be detected, varying in size from the point of a pin to the size of a lima bean. Nature not infrequently attempts to close these openings by the wall of the bowel agglutinating itself to another portion of the bowel or by a tag of omentum which has become adherent around the opening. A specimen in the Pennsylvania Hospital Museum shows perfectly where a typhoid perforation was closed by this means, the patient dying of a subsequent illness.

If the process be not arrested at this point, an abscess will form; and cases have been reported in which an abscess was not opened for two or three months subsequently, the patients ultimately recovering. If, however, no adhesions form, then perforation into the free peritoneal cavity takes place, and general peritonitis results. Even in cases of perforation arising after this manner, the size of the bowel opening may be great, or several small perforations may form in the floor of the same ulcer. At times it almost seems as if the stage of medullary infiltration persisted throughout the disease, since in cases of perforation from ulceration the surrounding parts of the perforated Peyer's patch sometimes are so thickened and friable that it becomes impossible to make sutures hold; whereas, at other times the bowel has become so thinned by extensive ulcers that it appears like paper. At times, too, it is impossible to tell whether the perforation has arisen from sloughing or from progressive ulceration.

As to the form of the perforation, the larger circular lesions are, as has been stated above, generally due to sloughing; the smaller, or cribriform, to ulceration;

and the oblong, slit-like perforations have been thought to be due to traumatism.

The perforation is usually situated on the part of the bowel diametrically opposite to the mesenteric attachment, where the lymph glands of the intestine are found and where the blood supply is poorest. Occasionally, however, an ulcer will perforate between the layers of the mesentery and a retroperitoneal abscess will be formed. Such a lesion may be mistaken for a suppurating mesenteric gland.

In 190 cases in which the site of perforation is mentioned, it was found within 12 inches of the cecum in 140, or 73 per cent.; and in only 4 cases, or 2.1 per cent. was it more than three feet distant from the ileocecal valve. In seven cases only was the colon perforated, five times the ascending colon, once each the transverse colon and the sigmoid flexure. Meckel's diverticulum was perforated three times, and the appendix eight times.

## BACTERIOLOGY.

With regard to the bacteriology, it has been found that in cases where the typhoid bacillus alone is the infecting cause, the usual lesions are a low-grade peritonitis, frequently lemon-colored exudation, few adhesions, and not much lymph. Where the streptococci or the staphylococci abound the lymph is more abundant, and adhesions are the rule if the peritonitis has lasted more than a few hours. The prognosis is much more grave in the streptococcic infection than in the typhoid.

## SYMPTOMS AND DIAGNOSIS.

In what may be called a typical case, the symptoms are well marked and easily distinguished, but unfortunately such a case is the exception. It is well known, however, that not infrequently a case may present all the clinical evidences of perforation, submit to operation and no intraperitoneal irritation whatever be found. On the other hand, patients may die without any abdominal symptoms of importance, and at autopsy a perforation may be found. Nevertheless, there are certain classical symptoms which must be carefully borne in mind and which must be thoroughly analyzed in every case of suspected perforation, for without doing this errors will be made in the diagnosis.

*Pain.*—Pain is a very frequent and common symptom of perforation in typhoid fever. It is usually of a stabbing character, situated most frequently in the lower right quadrant of the abdomen, but is also sometimes felt in the epigastrium and umbilical region, not unusually in the bladder, and, in the male, at the end of the penis. These facts should not be overlooked in patients who are apathetic or who are so far advanced in the typhoid disease that they feel no pain. Thus, it often happens that the first evidence of perforation is a distended abdomen with movable dullness in the flanks. The pain of perforation is usually severe and sometimes will last for a while and then disappear without any apparent reason, but as a rule it is a constant symptom throughout the onset of the perforation. I recall a case where the first sign of perforation was a violent attack of pain, causing the patient to scream out and draw his legs up in bed. This lasted for but a short time and then entirely disappeared, so that this symptom was entirely absent later on, leaving only a muscular rigidity on which to base the diagnosis. On the other hand, it must be borne in mind that pain is such a constant and varying thing during a typhoidal attack, due to ingestion of imperfectly digested food,



flatulence, or to a dozen and one causes of irritation within the lumen of the gut, that this symptom must always be carefully guarded.

The greatest care must be exercised in patients who are suffering from pleural irritation. A short time ago I saw a case where violent pain and muscular rigidity were dependent upon a diaphragmatic pleurisy. It was with some difficulty that this condition was isolated, but when treated by straps all pain and symptoms subsided in a short time. The muscular rigidity incident to the pain was very marked and deceiving. I recall two other cases, one in which there was violent pain, collapse, sweating, and all the symptoms of a perforation, caused by the sudden passage of a renal calculus. In the other the patient was a negro suffering from an acute pleural pneumonia. He had all the symptoms of perforation, but it was thought that these were caused by the pleural condition. Later, however, operation was decided on and revealed a perforation in the intestine, which had been the original cause of the symptoms, not the pleural condition as was supposed. This mistake resulted in a great loss of time, which, of course, materially influenced the prognosis. Therefore, I emphasize the fact that the greatest care must be exercised in regard to this very important symptom of pain.

*Sweating.*—Either alone or accompanied by the pain of perforation, and followed by a fall in temperature, sweating is in itself always a significant fact. The sweating may be profuse, involving the whole body, but is more often confined to the head and neck. The fall in temperature is a question over which much discussion has arisen. In my experience I regard it as a most valuable sign, and where it has not been recognized, I believe it is simply due to lack of careful observation on the part of the nurse or attendants. Therefore, all cases of temperature should be carefully recorded from time to time, and any variation, especially a fall, should be a source of warning and the medical attendant should at once be notified. A fall in temperature is, of course, a very frequent accompaniment of intestinal hemorrhage during typhoid fever, but the hemorrhage as a rule is painless and is usually evident in the stools in the course of an hour or so.

*Vomiting.*—This so frequently occurs in severe cases of typhoid fever without any exciting or apparent cause, that it can not alone be considered indicative of perforation, but where it occurs for the first time and especially where it either precedes or follows pain, it should not be lightly passed by. If at all violent in itself it may cause a perforation, and in many instances follows it.

*Rigidity.*—Rigidity of the abdominal muscles is the most valuable of all signs in the diagnosis of intestinal perforation. This is a rigidity which is reflex, and hence involuntary, and depends for its production on the overflow of stimulus received from the lumbar cord from the inflamed peritoneum and is usually observed in the right rectus and oblique muscles of the abdomen, although it may extend over the entire abdominal surface. Voluntary rigidity of the abdominal muscles is often present in typhoid fever, due to the endeavor of the patient to protect the sore and swollen intestines from pressure and unnecessary manipulation on the part of the attending physician or surgeon. I would say here that the sense of rigidity, which is conveyed to the hand of the examiner, is of varying quality, depending on the examiner's delicate sense of touch, and what may be regarded by one as distinct rigidity may be re-

garded by another as unappreciable. I do not think that all physicians realize what is meant by a surgeon as abdominal rigidity. Some will press the fingers deep into the patient's abdomen, as though they were attempting to palpate the lumbar spine, and then declare they can not detect any rigidity, whereas the skillful examiner, who is endowed with this valuable gift, *tactus eruditus*, will detect—seemingly by a mere touch of the finger tips—the slightest rigidity which may be present, and which may have escaped the grosser sense of touch of the less skillful examiner.

*Tenderness.*—Tenderness is by no means so valuable a sign as rigidity, for not only may tenderness exist where no perforation is present, a fact which every physician of experience well knows, but it may also be absent when perforation does exist, as was exemplified in the last case on which I operated. The explanation of this may be found in the apathetic state of the patient, the typhoid toxins having entirely benumbed his sensibilities.

*Pulse Rate.*—Along with the cardinal symptoms which have just been mentioned, namely, pain, rigidity and tenderness, there is, in the vast majority of cases, an increase in the pulse rate. The usual pulse rate in typhoid fever ranges from 80 to 100 beats per minute, but after perforation this pulse rate usually rises rapidly from 120 to 140 in a surprisingly short space of time, often within 10 or 15 minutes after the onset of the pain.

*Countenance.*—The change in the facial expression, which follows intestinal perforation, is most important. Almost at the very moment of perforation there is a distinct change of expression difficult to describe, but yet easily recognized when once seen. It is not the peritonitic facies which closely approaches the Hippocratic in type, but is distinctly characteristic of the shock of perforation. It is what the French call an "abatement" of the countenance, consisting in a general weakening of the expression.

*Dullness on Percussion.*—This is a very uncertain sign, and palpation of the liver dullness on which so much reliance was placed in former years is even more elusive. Mere intestinal distension frequently produces palpation of the hepatic dullness, and even when air is free within the peritoneal cavity the liver dullness may persist. Dullness in the flanks can not be considered as pathognomonic of fecal extravasation, since when the colon is freely movable liquid feces within it may give rise to a similar condition.

*Examination of the Blood.*—This procedure, which has been so frequently discussed, is very deceiving. In the last two cases operated on at the Pennsylvania Hospital the leucocyte count was only 5,000, and it would, therefore, seem in these cases as though the patient's exhausted condition prevented a leucocytosis. During typhoid fever the number of leucocytes is physiologically diminished, and although an extremely high leucocytosis may render positive the diagnosis of perforation, a low count should under no circumstances be interpreted as showing that no perforation exists, since the patient in the latter case may be completely overwhelmed by the typhoid toxins and no leucocytic reaction be possible. Kast and Gutig have recently shown in typhoid fever complicated by secondary infections, that the leucocyte count is much lower than in such infections which occurred alone and not as a complication of typhoid fever. Observations made by Longeope on the bone marrow in cases of typhoid fever have shown



that when the disease is complicated by a severe secondary infection there appears to be an actual inhibition of the formation of polymorphonuclear leucocytes in the bone marrow. A wave of leucocytes has been described as reaching its maximum soon after perforation, then subsiding. A differential count has been claimed by some to be more reliable than a mere enumeration of the white cells, as a rule, as in commencing peritonitis there is a disproportionate increase in the polynuclear neutrophils. Therefore, in drawing conclusions from any leucocyte count in typhoid fever, the normal leucopenia of this disease should be borne in mind.

Crile's observations on the increase of the blood pressure at the onset of peritonitis is an interesting one. This, however, I think has been long recognized as a clinical fact, but I have had no opportunity to employ this method of diagnosis in any of my cases.

#### DIFFERENTIAL DIAGNOSIS.

From what has previously been stated, it would appear that in a typical case of typhoid perforation, little difficulty would be experienced in making an accurate diagnosis. It so often happens, however, that the surgeon is called to see a case in consultation with the physician, and they see the case possibly for the first time and where it is impossible to obtain a satisfactory history. In this class of cases much difficulty has been experienced in elucidating what are the real factors to depend on in making an accurate diagnosis.

Monroe has expressed himself as having had difficulty in making a positive diagnosis where hemorrhage was concerned, finding it difficult to determine whether the true condition was responsible for many of the symptoms that present themselves. The collapse is likely to be the same in either case; yet hemorrhage is, as a rule, not attended with pain and absence of rigidity. The escape of blood from the bowel will soon determine the cause of the trouble. However, in one of my own cases both conditions existed, as was proven by laparotomy, the bleeding point ligated and the perforation in the bowel closed after the establishment of an artificial anus.

From appendicitis it may be impossible to make a positive differential diagnosis. In the latter, however, the pain is, as a rule, not so severe and the temperature shows no sudden drop, the pulse not so rapid and the faces not so strikingly changed, and there is also usually a history of previous attacks. In all cases, however, operation is indicated.

Peritonitis due to pelvic or ovarian disease can usually be eliminated by the history and a careful vaginal examination.

Affections of the gall bladder occur often during typhoid fever from infection of the typhoid bacilli finding its way into the gall bladder. This condition is not uncommon.

The pain in the region of the gall bladder, sometimes jaundice, without a fall of temperature, little shock, and the physical signs of tenderness, pain, rigidity and dullness, with a possible palpable mass in the region of the gall bladder, all aid in determining the character of the invasion.

Gastric and duodenal ulcers may perforate during an attack of typhoid fever. The local signs here are our chief aid in diagnosis, which will point to a perforation, with all the rapidly accompanying signs of interperitoneal irritation simulating a ruptured typhoid ulcer.

Iliac thrombo-phlebitis, with pain and swelling in the groin and along the course of the vein, will aid the careful observer in determining the character of the pain, as not that of perforation.

Suppurating mesentery glands or splenic infarcts may give rise to peritonitis during the course of this disease, and the symptoms are those of peritonitis pure and simple, and are not characteristic of typhoid perforation. When pain exists, the greatest care must be exercised to determine its origin if possible. The last two cases I saw presented all the typical signs of perforation, namely, intense pain, rigidity, with a hard, muscular abdomen and with a slightly anxious expression. Owing to the hard muscular abdomen the bladder could not be palpated; otherwise urine was passed with a fair degree of regularity every few hours, and a tentative diagnosis of perforation was made and permission for operation obtained, when, as if by magic, on the removal of 188 ounces of urine by catheter prior to operation, all the symptoms of typhoid perforation immediately subsided and all symptoms of interperitoneal irritation also disappeared. In the second case, all the symptoms were equally prominent and it was with difficulty that a diaphragmatic pleurisy was determined, but with the fixation of the side, etc., soon all the symptoms which were so characteristic of perforation disappeared.

#### PROGNOSIS.

The prognosis of intestinal perforation in typhoid fever is exceedingly grave, although there is no doubt that occasionally patients will recover where a perforation takes place in some quiet nook in the abdomen where nature closes it with a fold of omentum which rapidly seals in the offending perforation, thus permitting the case to go on to a favorable termination. This is proven by a specimen which is now in the museum of the Pennsylvania Hospital of a patient who died of some subsequent disease.

But recovery without operation is exceedingly rare and is hardly worth considering. Among 567 operations for typhoid perforation, to which I have reference, about 24 per cent. left the surgeon's hands well, leaving a mortality of 76 per cent. If from this number we were to exclude many cases in which the patient had really recovered from the operation, but died some weeks later, and not from the original typhoid perforation, this death rate would be materially reduced. But even this improvement, I am convinced, would be more than counterbalanced by the large number of fatal operations which have never been reported. Indeed, it seems to me that the surgeon who can cure one out of five of his patients is to be congratulated, since he is thereby sure that he has saved at least one individual from death, which would irretrievably have overtaken all the five if he had held his hands and refused the one hope offered by medical science of to-day.

It would seem as the result of my deductions from a large number of collected cases that the prognosis is more favorable in girls between the ages of 10 and 15, where the perforation occurred during the first week of the disease and when the constitution was still strong, or where the convalescence was pretty well established, and where the operation was performed immediately after the symptoms of perforation were recognized. It is certain that an early diagnosis, with prompt surgical intervention, is of prime importance if the desired results are to be attained.



## OPERATION.

The operation for intestinal perforation is probably too familiar to everyone here to-day for me to take up too much of your time in discussing its technique at length. Yet, I think it is important to insist on performing it as soon as possible, and to shorten the time consumed in its performance to the utmost of our ability. I never wait for the shock to pass before opening the abdomen. The time which elapses from the first suspicious symptoms establishing the diagnosis, obtaining the consent of the patient and the family to operation, and in transporting the patient from the typhoid ward to the operating room, is all too great, and I look forward to the time when the consent for the operation will be given in all our large hospitals when the patient is first admitted. The surgeon who waits until the shock of perforation has passed will await the onset of diffuse peritonitis, with the death of his patient. The less time that elapses between the occurrence of the perforation and its repair by suture, the better it will be for the patient.

I have always employed general anesthesia in these operations and see no reason to change, although it has been found that the use of a local anesthetic is preferable in some cases. The operation usually lasts not more than 15 to 20 minutes from beginning to end, and the total unconsciousness on the part of the patient is more valuable by far in the rapid completion of the operation than any of the advantages, imaginary at best, which are claimed for the local anesthetic. It should not be forgotten that ether is a heart stimulant, and even a patient apparently moribund may improve so much under its administration as to render its employment justifiable. In other climates and higher altitudes I have no doubt that with care chloroform can be safely employed, but certainly in the middle and northern parts of the United States nothing is more satisfactory than ether.

In cases in which the diagnosis remained uncertain, but in which the symptoms did not ameliorate, I think an exploratory laparotomy is to be earnestly recommended. Experience shows that even if no perforations exist, most of these cases are nevertheless materially improved by the intervention; while in not one of the reported instances do I think the operation can be said to have in any way hastened death. I operated on two cases, in neither of which was there perforation found, but which went on to a favorable termination.

There are few surgeons at the present day who advocate other than the right iliac incision. Those who still employ the median incision must, I think, have a somewhat limited experience. The incision which I prefer is through the outer half of the right rectus muscle. It is straight, simple, direct and economical of time. The deep epigastric artery is not apt to be severed, with ordinary care and using the handle of the scalpel and not the blade to separate the muscular fibers. It is this route which gives direct access to our landmark, the cecum, and that portion of the gut which is most affected. It affords sufficient room for exploring nearly the whole abdomen and can be extended in either direction at need, and offers excellent drainage facilities.

When the peritoneal cavity is opened the cecum should immediately be located, when the vermiform appendage is at once recognized and can be removed if necessary. If the extravasation is free, no packs are required. If, however, peritonitis is fairly well circum-

scribed, the affected areas should be walled off with large pads. The ileum is next drawn into the wound and carefully examined. For this examination it is of very great advantage to have two pairs of eyes, as it passes rapidly through the surgeon's hands, one watching the upper and the other its lower surface. It is usually inadvisable to replace the gut at once on withdrawal, as this consumed valuable time which is better spent searching for the perforation until found. If there still appears to be reason to consider a perforation present, the everted parts should be re-examined, commencing at the highest part withdrawn and ending at the cecum, the coils being replaced as the return is made, but the highest coil being kept out of the belly until the others have been replaced as the starting point for another search, which should proceed upward along the ileum with like maneuvers, until there appears no further prospect of finding a perforation, and this probability decreases and the area of greater inflammation is left behind. If fecal extravasation is free, a medium or large-sized hole may be expected. If lymph abounds and clings to the bowel in patches, frequently beneath one of these patches will be found the pin-head lesion, as a dark spot occupying the middle of an intensely congested Peyer's patch.

As soon as the perforation is found it should be sutured and the toilet of the peritoneum should not be commenced until further soiling of it has been prevented. In about one in eight cases more than one perforation is present, and hence diligent search should be made of all inflamed areas and every spot threatening perforation should be investigated. Inversion of the perforation with Lembert's sutures of black silk is usually best done in the long axis of the bowel, as there is less risk of producing stenosis of its lumen. Sutures applied transversely to the bowel are, however, more prone to tear out as the intestinal coils tend to resume their normal convexity.

Excision of the ulcer is not only useless, but harmful, as it consumes unnecessary time and may cause hemorrhage. If the perforation is so large as to preclude suturing, an omental flap should be adjusted over the defect, or if this or some similar device fails, an artificial anus should be established. Excision of the affected bowel by an end-to-end anastomosis is too severe an operation to be undertaken, and in every instance reported where it has been performed has proved fatal. The formation of a fecal fistula, on the other hand, is easy of execution, being possible merely by the judicious disposition of gauze packs, and if it were not for the impossibility of adequately draining the peritoneum through a wound in which feces are constantly discharging, it might be a procedure to be highly recommended.

My preference is distinctly for suture of the perforation first, then for suture of the omental flap, and then, all else failing, the establishment of a fecal fistula.

The toilet of the peritoneum must next engage the attention of the surgeon, and is a matter much in dispute in cases of peritonitis from any cause. Where on opening the abdomen it is found to be filled with fluid and escaped feces, there is no doubt in my mind that thorough irrigation with hot saline solution is the most efficacious and rapid means of cleaning the abdominal cavity, and I am sure that if rightly done it offers the patient the best chances of recovery. However, in cases where there is little or no escape of intestinal contents, where lymph has been thrown rapidly over a



small perforation, I think that often judicious dry sponging with gauze will be more efficacious, as there will be less tendency to distribute infected material over greater peritoneal areas. But in cases where the infective material is at all widely diffused, there is no doubt that thorough douching with hot saline solution is much the more rapid and efficacious means of removing the *materius morbi*.

To satisfactorily clean the abdomen by irrigation it is not sufficient merely to pour a half tumblerful of cleansing fluid into the abdominal wound and then mop it out again in an aimless manner. The surgeon should be provided with a large tube having a lumen of a half inch in diameter and with multiple perforations. A rubber tube and funnel should be adjusted to this. Through this funnel should be poured gallons of hot solutions, the quantity being more important than the quality, so long as it has a temperature not below 110. This tube is applied first to the pelvis, then to the right and left flanks respectively, and finally, both above and below the mesentery, the surgeon's left hand separating the coils of the intestine, as his right hand manipulates the tube. The funnel should be held two or three feet above the abdomen of the patient, and the irrigation should be continued until the fluid returns clear.

During the irrigation it has invariably been my experience that the patient's pulse improves. This is no doubt due in part to the temperature of the solution employed, but also, I think, is to be attributed to a direct distention of the vascular channels with the saline fluid.

When the surgeon is satisfied that the abdominal cavity is as clean as it can be made by this method, but not before, the tube may be withdrawn, but he should allow the remaining portion of the fluid which has already escaped to remain within the abdomen. Drainage is best maintained by large gauze wicks, placed in those portions of the abdomen where the fluid is wont to accumulate. Usually the pelvis, each loin, and the sutured area should each be drained by a separate large wick of gauze, and the gauze should remain in place from five to seven days at least. Too early removal of the drain is not only very painful to the patient, but renders the formation of a residual abscess much more likely.

The intravenous use of normal salt solution during the operation is one of the most valuable means we have for preventing shock and sustaining the patient during the first few hours after the operation. The greatest number of deaths after operation occur within the first twelve hours, and if by any means life can be sustained until this period is over, the chances of recovery are materially increased. If the administration of saline solution is to be continued after recovery from ether, it is best given by hypodermic or enteroclysis. A pint may be given through a high rectal tube every three or four hours, the fluid being allowed to absorb slowly.

As a rule it is preferable to have the head of the patient's bed elevated, thus favoring drainage from the pelvis along the tracts of gauze. No food should be given by the mouth until the third or fourth day, nourishment being maintained by nutrient enema. The quantity should be small, depending somewhat on the toleration of the rectum. When food is finally given by the mouth, it should be remembered that the patient still has typhoid fever, as well as a sutured area

in the intestine, and it should be of the softest and blandest character.

#### CONCLUSIONS.

1. Perforation of the bowel in typhoid fever is a much more common condition than is generally supposed, being responsible for about one death in every three cases.

2. The most common time of perforation is between the fourteenth and twenty-first day of the disease, and occurs in all grades of severity, from the ambulatory to the hemorrhagic type, and does not seem to be any more common in the hemorrhagic than in the milder types of the disease.

3. The ileum is the most frequent site of perforation, in the majority of instances the perforation occurring within 12 to 18 inches of the ileocecal valve. The next most frequent sites of perforation are the appendix and the cecum.

4. In a large percentage of cases pain is present, although it may be transitory in character. In about one-half of the cases the onset is sudden, severe, and with increasing intensity, localizing itself in the region of the right iliac fossa.

5. Tenderness and rigidity are present to a certain extent in all cases. The latter symptom I regard as a most valuable sign, and it is never wanting except in patients with unusually large and pendulous abdomens.

6. When perforation is suspected the temperature should be taken every hour, as it is only in this way that definite conclusions can be drawn with regard to any marked variation in this symptom.

7. Distention is a late symptom of perforation, usually not making its appearance until some hours after the perforation has occurred. The obliteration of the liver dullness is not regarded as a reliable sign of perforation.

8. The study of the leucocytes is of little aid, although occasionally their increase may make you more positive of the diagnosis. The differential count is of no practical value.

9. Before a positive diagnosis is made, pain caused by a pleurisy, pneumonia, cholecystitis, acute gastrointestinal indigestion, iliac thrombosis, appendicitis, peritonitis, the passage of a renal calculus, distended urinary bladder, or even a hemorrhagic exudate into the abdominal muscles, must be carefully considered. Any of these conditions may cause symptoms similar to those caused by intestinal perforation.

10. Nature may occasionally close one or more perforations, but the only rational procedure where perforation occurs is surgical intervention. No case is too desperate for an attempt, as it has not infrequently been noted that the mild cases succumb and the more desperate ones recover.

11. In cases of doubt where the symptoms point to perforation, the safest procedure is to operate. As a rule, cases operated on and no perforation found seem rather to be benefited than otherwise by the operation.

12. When the diagnosis has been made, I know of no condition, except possibly that of hemorrhage, where speed in operating is so important a factor in securing success as it is in intestinal perforation. Everything should be carefully prepared beforehand and all conditions considered, so that when the knife is once taken in hand things may move with rapidity and without interference. In too many instances it is a race with



death and there are often anxious moments when it is questionable which will win, yet in only 5 reported cases has death occurred before the operation was completed. A death on the table is always a most distressing occurrence in surgery, but doubly so if the surgeon has in any way to blame himself for delays which might have been prevented by care and forethought.

## DISCUSSION.

DR. LAWRENCE LITCHFIELD, Pittsburg, Pa., asked Dr. Harte if he made any blood-pressure records in these cases. Dr. Theodore Janeway has pointed out that the sphygmomanometer is a valuable means of differential diagnosis between hemorrhage and perforation in typhoid fever, particularly if a pressure chart has been kept previous to the emergency. The blood pressure is also at times an important guide in the treatment of these cases. Dr. Litchfield also said that he would like to know if Dr. Harte employs general or local anesthesia in these cases.

DR. CHARLES A. POWERS, Denver, said that in his part of the country such work as Dr. Harte's has stimulated physicians to be on the watch for typhoid perforations and has made it possible to recognize these lesions much earlier than formerly.

DR. MORRIS MANGES, New York, said that he reported 19 cases last year, and in only 3 was there a drop in temperature; in fact, in some cases it rose. He believes that sweating and rigidity are symptoms of considerable value. Dr. Manges thinks that too much attention is paid to percussing the spleen, and that if more attention were paid to the liver and less to the spleen it would be better. He believes that spontaneous recovery is possible. In cases in which there is no perforation, for some reason or other the subsequent course of the case is always improved by operation, and he believes it wise to give the patient the benefit of the operation.

DR. RICHARD HARTE stated, in reply to a question, that he has had no experience with blood pressure, but it is a well-known clinical fact that in peritonitis and in the pre-peritonitic stage there is a disposition for the blood pressure to increase. He has always been in the habit of using ether. Some of his colleagues, he said, have used cocaine, but he thinks, on the whole, that a general anesthetic is much preferable, as the patient's condition usually improves under the anesthetic. In closing the ulcer he uses fine black silk mattress sutures placed parallel to the long axis of the bowel. If the ulcer is very large, sometimes in order to close it stitches will have to be inserted in the reverse way; this has a tendency to shorten the bowel and to make the stitches more liable to tear out. If the condition is very bad he thinks it is safer to establish an artificial anus. There is nothing whatever to be gained by excising the ulcer. He feels confident that in all cases if the temperature is carefully and frequently recorded a distinct fall will be observed, which will assist materially in making a diagnosis. He expressed himself as greatly indebted to the courtesy of his medical colleagues for having allowed him to study their bad typhoid cases with them. This is of great advantage, since these cases so often pass from the hands of the physician to the care of the surgeon, and if the surgeon has been in consultation he may recognize changes which are likely to occur and is thus in a much better position to recognize them when they do occur than if he is seeing the case for the first time.

**Consciousness and Its Degrees.**—At the recent International Congress of Psychology Dr. Paul Sollier said that consciousness is not an autonomous primordial or independent phenomenon that can be isolated, that has an action proper to itself acting on other psychologic manifestations. There is no consciousness outside of cerebral activity. Consciousness is not even an epiphenomenon, as it exists even when we do not see its manifestations. If every cerebral center, taken individually, contributes to the production of consciousness, it may be said that there exists an indefinite fragmentation of consciousness—according to the number of cerebral centers that are brought into play.—*Journal of Mental Pathology.*

## DELAYED UNION AND UNUNITED FRACTURES.\*

CASPAR W. SHARPLES, M.D.  
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Norris has made general and elaborate classifications of these conditions, which are, in substance, as follows:

CLASS 1.—Delayed union, callus forms and union is not rendered complete by ossification.

CLASS 2.—Entire want of union, the ends of the bones are diminished in size, there is motion between the fragments and the limit of this motion is usually small.

CLASS 3.—With fragments small, rounded off, tapering and bound together by fibrous bands.

CLASS 4.—Pseudarthrosis; a dense capsule seems to form around the ends of the bones; on opening this a fluid is found resembling synovial fluid. The ends are eburnated.

By referring to numerous authors along about the fifties, I found a few notes in regard to the causation of ununited fractures. The principal ones correspond very clearly to our present ideas, and I am sure that this quotation from Velpeau places him and his opinion on the causes of ununited fractures among many surgeons of to-day. It is this: "If the fracture, whatever may have been the primitive cause, shall have become reduced to an effect already local and shall have not united, partly because its two fragments have cicatrized separately."

He also quotes the following facts from the "Cyclopedia of the Practice of Surgeons," published about that time, in regard to the result of treatment in these certain cases, which I insert at this point simply as a matter of history.

There were 150 cases recorded, of which 46 were treated with the seton, 36 of which were cured, 3 were partially cured, 5 received no benefit, and 2 died. There were 38 in which resection was tried, 24 were cured, there was 1 partially cured, 7 received no benefit, and 6 died. There were 36 cases in which pressure and rest were employed, 29 were cured, 1 was partially cured, and 6 received no benefit. There were 8 in which caustic was employed, 6 were cured, and 2 received no benefit. There were 11 cases in which friction was employed, and 11 were cured. Eleven cases were treated by the use of iodine injections, hot iron and amputation. Seven were cured, 1 received no benefit, 2 died and 1 remains uncertain.

It is also interesting to note that in 1760 a surgeon by the name of White operated on an ununited fracture of the humerus, in which he parted the two ends of the bone, sawed them off and placed the freshened ends in apposition; and also operated on an ununited fracture of the tibia, in this, however, merely excising the upper end, and in both cases obtained perfect results.

I am sure that these results must seem more or less remarkable to us at the present day, with our extreme ideas of asepsis and the constant fear that exists in our minds lest pus should form in our wounds when operating for these conditions, and our willingness to attribute a failure under these conditions to the presence of such an infection.

Velpeau, in his conclusion in regard to ununited fractures, explains it as his opinion that the seton will only succeed in these cases where the ends of the bone are in actual contact or nearly so, and that in all these cases in which the ends of the bones are not in contact there is no operation that promises better results than resection.

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



In the American appendix to this treatise of Velpeau, Dr. Blackman has given the details of an operation which I believe was devised by Professor Brainard, of Chicago; it is probably our present drilling operation, and in 1854 Brainard published descriptions of seven cases in which six operations had been successful. This drilling was supposed to be of use by bringing surfaces of bone freshened by the operation into apposition.

Local conditions probably have more to do with ununited fractures than do constitutional states. Though just what these local conditions may be, it is not always easy to tell. For a long time the prevailing opinion was that ununited fractures depend very largely on some interposing substance which interfered with repair, such as muscles, tendons, arteries, nerves and fascia. The prevailing idea of such an interposition, no doubt, depends on one or two reported cases of fracture, in which a bundle of muscular tissue had become incarcerated between the fragments, and particularly one case in which there was a fracture of the clavicle that was firmly united, but in which the callus had been thrown out over and around the muscle so that there was a fenestration through which the muscular fibers passed. The possibility of muscular fibers being interposed is very materially lessened on account of the natural contractility of the muscles. We have all noticed in amputation that when the muscular fibers are severed they retract; we also have noticed when, as the result of the injury, a muscle has been ruptured, that usually if the rupture involves sufficient bundles of fibers, retraction occurs so that a depression may be felt, which depression, of course, depends on the extent of the injury and the length of the muscle, as well as its tonicity.

It has also been noticed that, in an injury in which the tendons have been severed, there is a very decided retraction which at times is very difficult to overcome. In the majority of instances of fracture, the muscle itself is not extensively lacerated, though probably there are very few fractures in which some injury does not occur to the surrounding muscular tissues. Also in fracture there is seen a spasmodic condition of the muscles depending on two acts: First, on Nature's effort to fix the ends of the bone to avoid motion between the proximal ends of the fragments, also to save the patient from pain, and, second, on the irritation of the ends of the fragments of the bone in the muscular tissues—itself a sufficient cause of this spasmodic state of the muscles. By this action lacerated muscular fibers would, no doubt, be pulled from between the ends of the bone should they have become incarcerated in the place of being allowed to remain in their false position, and hence later to prevent union. So, also, would the treatment, which should be employed in every case of fracture, that is to overcome the strength of the muscle so far as possible by extension in order to enable us properly to reduce the fracture, tend to withdraw all fragments of muscles that might become incarcerated. This, it strikes me, would apply both to the lacerated muscles and to the muscular fibers that were not lacerated, and I believe, in consideration of the above facts, that muscular fibers and tendons only rarely play any part in the causation of ununited fractures. Such instances as may be demonstrated, either by operation or postmortem, to have occurred, are rather only medical curiosities, and many times I fear that the fibrous tissue that has been thrown out to complete the pseudarthrosis has been confounded, at the time of operation, with the muscular tissue. I know that this idea has been advanced more than once.

Considering the subject of ununited fractures, it, of

course, is necessary that we have some idea of the method of repair of ordinary fractures, in which the periosteum is usually lacerated, but not often torn apart. Its fragments are separated from the bone over a greater or less area and theoretically, at any rate, bands of the periosteum after the injury will, no doubt, maintain the continuity of the membrane. There is also a hematoma of varying amount, depending on the character of the bone that is injured and also on the amount of injury to the surrounding bones. Part of this blood is absorbed and part of it finds its way between the layers of muscles and fasciæ to the surface and is thus removed from around the seat of injury.

The process of repair begins simply by granulations spreading from the shreds or non-lacerated portions of the periosteum and by filling the space between the ends of the bone, which goes to form the provisional callus, completely enveloping the seat of injury. Its shape and size and the relation of the bone ends depend on the amount of displacement, so that the callus is formed gradually by a thickening of the periosteum and granulations from the soft parts of the bone ends and the marrow (which is slower in forming) on the thickness of the periosteum and on the granulations from the soft parts of the bone ends.

The major part of the callus, the periosteal part, first becomes cartilaginous and then bony. That coming from the marrow becomes bone directly without the intervention of callus. The slowest part of the callus to develop is that between the bone ends, inasmuch as the circulation is here very poor and because a certain amount of the thin shell along the surface of the bone has been deprived of its nutrition and has to be absorbed, and this portion of the callus only forms from bone granulation. The final stage of this bone formation occurs in the absorption of the exuberant callus. The process is really incomplete until months after the reception of the injury. From the very nature of events it must be granted that compound fractures are more liable to be followed by variation in the normal process of repair than are simple fractures, for there is more disturbance of the surrounding tissues, and such local conditions must of necessity have their effect on the other bones.

In compound fractures, the violence is, of course, more severe. The periosteum is often times completely lacerated and destroyed, in some cases even sloughing off as a direct result of the injury. The violence done the soft tissues by protruding bone may so destroy the vitality of the tissues that there is an increase of possibility of infection, and it may be sufficiently severe to cause sloughing of the soft parts. Since we have seen that the periosteum plays such an important part in the primary, or in point of time first, location of granulation tissue, it is but fair to conclude that those injuries that cause extensive disturbance and retraction of the normal relation of the periosteum would be less liable to be followed by good results, and this the more so if apposition could not be or were not maintained.

Compound fractures are attended with hemorrhage, as a rule, and this probably acts on the part to delay the formation of granulations which we have seen are so essential to callus formation. I recall one or two instances in which a hematoma had existed for some time, had been evacuated, under other conditions, and in neither of these was there any evidence of the formation of granulation.

A colleague, Dr. Yocum, of Tacoma, called my attention to the fact that all cases of ununited fractures that



he had operated on and drained had done well, and that all cases in which drainage had not been used had done poorly, and on account of this he advocates the use of drainage more frequently. In cases that had come to operation, and by way of emphasis of the correctness of this method of procedure, he had made another observation, which was this: Two cases had been operated on without drainage, with the result that both were failures, but on doing a second operation in each case drainage had been used in both with good results. The drainage used in late operations might act as the seton did years ago. Hemorrhage may also act as a complication on account of its amount, producing pressure enough, unless the hematoma would rapidly absorb, to lower the vitality of the surrounding parts.

In compound fractures it is, of course, desirable not to disturb the parts to any greater extent than is absolutely necessary to enable us to cleanse the wound and to endeavor to make proper apposition of the fragments, and that, of course, can not always be done in some cases, nor can we aid much in the relation of the periosteum to the ends of the bone. Malpositions often cause delay in union, or in others lack of union. It is wonderful what measures Nature takes to provide for and to overcome our many imperfections and lack of skill in providing for union of fractures. None are more wonderful than can be seen in many cases of so-called vicious union where only some small area of the fractured surfaces have been approximated and where the overlapping ends of the bone are firmly united to one another to produce a stiff limb; but it is not always that Nature can throw out enough callus to cover two ends widely separated. It is not an uncommon condition to find the ends of the bones fastened to one another by fibrous tissue and a false joint thus formed, showing more or less motion. At other times the bones may be separated latterly one-half inch or so from one another with overlapping ends. One case that I had the opportunity of examining with the *x*-ray very clearly showed this condition. In it had been a large amount of hemorrhage and, of course, much swelling, and there remains the possibility that the ends of the bones may never have been approximated, in which case Nature never had a fair opportunity to provide callus. The operation showed simply fibrous tissue and the ends of the bones reduced in size. In about three months after the operation there was a small amount of callus being thrown out round one bone and none around the second. Two or three years ago I saw a fracture that had occurred five weeks before, where great violence had been done both to the lower part of the tibia and fibula and to the ankle by being crushed between two logs and, as subsequently proved, there was one fracture in the fibula and two in the tibia, though only one was diagnosed until after amputation. Osteomyelitis started in the ankle bones and in the lower part of the tibia, and there was during the progress of this an evidence of non-union. An operation was done to remove the diseased bone from the ankle and the tibia, followed in a few weeks by the second operation, with consent to amputate if found desirable and agreed to by the consultants, but it was not done at this time on account of the inability of three of us to agree. The pain, fever, chills and sweats returned, and in about two weeks more amputation was done. There never seemed to have been any particular effort at repair excepting in one spicule. This is the only case of the kind that I have seen, and I have not seen mention of another one, but I do not see how the presence of such an extensive disease as existed in this case could have failed to produce delay.

Among other causes for ununited fractures is said to be tight bandaging and the use of the leg too soon after the injury. In all cases in which there has been an injury to the nervous supply there is likely to be delayed union. In no case in which a fracture has occurred in the bone at the seat of a malignant disease is union to be looked for, but should a fracture occur in a subject who is suffering from cancer in some other location, the bones being brittle, union should be expected. Pregnancy and lactation have been assigned as causes of delayed union. Likewise syphilis, and especially so during the chancre period.

After all is said and done, the practical point in these cases is the question what shall be done to make useful limbs for our patients. Medical treatment of ununited fractures has assumed many forms, but it is chiefly dependent on the administration of tonics and the use of such hygienic measures as would tend to improve the general condition of the patient. It, of course, can not be denied that in this state, or in any other below par, the lowered general vitality of the patient decreases the general tone of the body to such an extent that many of the normal functions are not being performed as they should be, so that it would hardly be anticipated that any special call of an unusual nature on the functions of the body for the repair of an injury would be responded to in as satisfactory a manner as it would be with the whole condition up to normal. Otherwise it does not strike me that there is any good to be derived from filling the patient up with medicine under ordinary circumstances. There have been some cases reported, however, in which the administration of thyroid extract is supposed to be of value. This report is based undoubtedly on but few observations which have been made in cases of delayed union, also on a few cases in which there was an absence of a part of the thyroid gland or cases in which that function was interfered with, in which the administration of this material seemed to be of value, and possibly it would also be suggested by the effect of the administration on the gland in producing an increase in the growth of the bones in cretinism. One case is reported in which union was delayed for eighty days, and after the use of thyroid extract, five or six tablets a day, of a grain and a half each, union began and a useful limb resulted. It is not unusual, however, to see cases in which union is delayed such a length of time and a firm limb follow without the administration of any medicine. With its use I have only had one experience, and the result of that was negative. In all cases in which there is a specific infection, treatment for that condition is undoubtedly advisable.

Next to medicinal treatment on the basis of simplicity is to put on the limb a good strong plaster cast and set the patient out with a pair of crutches, with the instructions that he should use his limb, that is, putting a small amount of his weight on it as he walks around from time to time. In many cases this is associated with more or less pain at first, but the patient gradually becomes accustomed to it, so that there is very little inconvenience.

I at present have under observation a patient who had a compound comminuted fracture of both bones of the leg, over eighteen months ago, who is walking around without any support other than a cane. The bones have slipped by one another, and he says that it is with very little inconvenience or pain that he travels. I have seen a number of patients with delayed union, the length of time which has elapsed since the injury varying from two to five months, that have made good recoveries simply by this treatment.



and I believe that before any operating measure of any kind is undertaken that this method of treatment should be adopted and carried out for a period of at least three months, in the hopes that the reactionary effect of the irritation produced by the walking may cause to be thrown out, some inflammatory material or granulation tissue on the surrounding parts, or the periosteum, or between the ends of the bones, or from the medulla that would ultimately be formed into substantial bone. Should this procedure fail, then some operative treatment must be adopted. The simplest of all that is recommended is rubbing the ends of the bones together, but, of course, that would be of no use after the patient had walked around for a number of months, since the bones have undoubtedly had sufficient rubbing. In a case in which the preceding form of treatment has not been adopted, however, this method of making friction might be of use, and this should be followed by the application of a firm cast. The next simplest operation is that of drilling the ends of the bones, which may be done subcutaneously or through an open incision, and this to be followed in turn by fixation in a cast, or by allowing the patient to go around with crutches after fixation, hoping that as before it will excite the formation of a callus and new bone.

The open incision is probably better in some ways, since it gives the surgeon an opportunity to protect the underlying tissues from injury by the drill point, but since it is a fact that ununited fractures more frequently follow compound fractures, I believe that if it were possible to avoid an open incision, it should be done. In many cases it seems that bone operations are necessary, and after all the simpler means have failed, this method should be resorted to, and just exactly the procedures that should be adopted depends on the local conditions. If necrosis exists, all such bone must be removed, and more or less resection becomes a part of the operation so as to bring the fragments into good apposition. One case that I was asked by a colleague to operate on had necrosis of the tibia and of one end of the fibula; all this necrosis was removed, the bones materially shortened and united as an oblique fracture. Infection occurred, but a fairly good result was obtained, and during the progress of this case the wound was treated through a fenestration in the cast. The leg turned in the cast so that the foot described an arc of 90 degrees, the toes pointing inward, and a new cast, after a period of thirty-six hours, was applied, extending above the knee; this held the foot firmly. A good solid leg resulted which he is now using for all practical purposes. Almost any method of treating the ends of the bones can be used that would bring healthy bone tissues in each fragment into apposition. The most common one is to unite the ends of the bones obliquely and use some means of securing fixation.

In some cases, in order to secure this perfect fixation, it might be possible to make a shoulder in each fragment, and so with the two ends of the bone overlapping, as carpenters arrange their heavy timbers, and through this overlapping part to insert some material to maintain the position, either bone pegs, ivory pegs, wire or metal pegs. Silver wire is what I have been accustomed to use. Two or three times it has had to be removed on account of the irritation that it has caused and an existing sinus. I doubt also if silver wire or any more flexible material would produce absolute fixation by itself. Screws and various bracketed metal braces fixing the bone have been devised.

Dr. Leonard Freeman has recently reported a case in

which an ununited fracture of the neck of the femur has been treated by fixation by a screw with good results. Parkhill's apparatus is probably the most commonly used, but the results seem to be the same whether the simplest method of fixation or the most complicated method is used. All of these patients can not recover, no matter how much care and attention may be given to them, no more than we can tell the cause of all ununited fractures.

#### DISCUSSION.

DR. MARTIN, New Orleans, is convinced that many ununited fractures are caused through improper reduction, or the interposition of soft tissues. After the physician has reduced the fracture he should try to get crepitus, as he will then know that there is bony apposition. Wire does not fix the bones. It is impossible to bring the bony ends in apposition sufficiently tight for wire to hold them there. There will always be a certain amount of union. Dr. Martin has been using a wire staple, made of piano wire. This is very stiff and fixes the ends absolutely. He has very rarely had to remove them, but if suppuration occurs this is a difficult matter. He believes that drainage is necessary when one has to sew the ends of the bones. In any event it is always a safe thing. Dr. Martin operated in one case recently in which the injury was so superficial that he had no trouble and got a perfect result.

DR. THOMAS W. HUNTINGTON, San Francisco, said that, with an extensive experience extending over a period of 25 years, he does not recall a case in which delayed union could not be definitely traced to faulty adjustment and malposition. This opinion is based on a large number of cases in which he has operated for the relief of this unfortunate condition. Interposition of foreign material seems to him a consequence of malposition rather than a direct cause of non-union. The point which should be uppermost in the mind of the surgeon is the correct adjustment of the fracture early in its history. In this particular undertaking the aid of the *x*-ray should be invoked as often as possible, and from time to time after adjustment the status of the fracture should be checked up by the aid of the *x*-ray during the course of treatment. It is not uncommon in his experience to find a week after a careful adjustment that displacement has occurred. This happens particularly in fractures of the shaft of the femur in which the adductors displace the lower fragment internally and the opposite muscles acting on the upper fragment displace it externally. After an honest effort for the correction of the deformity by ordinary means, it has been Dr. Huntington's practice to offer the patient a better result by the use of some artificial means such as wire suture. The maintenance of permanent apposition without such interference is often times extremely difficult if not absolutely impossible.

DR. HARRY M. SHERMAN, San Francisco, said that no one has referred to rupture of the nutrient artery of a bone as a cause of delayed union or non-union. Fractures occur at all ages. In a child so injured, when the nutrient artery is torn off, it is possible to have non-union, and union never occurs when this takes place. The lower fragment is deprived of blood in sufficient quantity and atrophies, and one can thrust a scalpel into it; it is so fragile and soft, while the upper fragment is dense and bone-like. Dr. Sherman has seen this occur in cases in which he has operated to correct a deformity of the tibia, and the line of the section of the bone happened to be across the course of the nutrient artery. Reposition in these cases has never been very difficult to secure, and when the fragments were put in place he felt sure there was no interposition of soft tissue. This tearing off of the nutrient artery can occur in an adult, as well as in a child, and then the upper fragment alone makes effort at repair, the lower fragment does not. Surgeons must count the rupture of the nutrient artery as one of the most important causes of delayed union and of non-union. So far as crepitus is concerned, as testifying to the fact that bone is against bone, Dr. Sherman thinks it should be satisfactory to most of surgeons. He does not mean to detract from the value of the *x*-ray, but surgeons can not have *x*-rays in patients' homes as well as in their offices. The



*x*-ray should be used to prove or disprove a diagnosis that has been made by the usual clinical methods. A man who does not make an effort to reset his fracture by the old methods, is robbing himself of all his old intelligence. Surgeons must not dull the edges of their senses by the *x*-ray, as it is said the edges of knives were dulled by the discovery of ether.

Dr. J. S. HUNKIN, San Francisco, declared that the important point is securing immobility at the seat of injury. The usual failure is not in getting the ends of the bone in apposition, but in making the splint long enough and tight enough to hold them there. Surgeons have been led astray by the idea that swelling would promptly follow if the splint were tightly applied. As a fact, swelling does not take place, provided pressure is evenly graduated, regardless of the tightness. Dr. Hunkin puts all fractures of long bones in a tight, snug-fitting plaster of Paris splint, and he does not see non-union. The splint as usually made is not long enough to secure sufficient leverage. Long leverage and close application spells immobility, and immobility means union.

Dr. W. J. MEANS, Columbus, Ohio expressed his surprise at the emphasis placed by Dr. Sharples on the matter of drainage in the operative treatment. It has been Dr. Means' experience that better results follow in cases in which drainage is not used. The question of ambulation is confined chiefly, in his judgment, to cases of transverse fracture in which there is good apposition of the fragments. When the question is only a matter of delayed union due to malnutrition, ambulation produces an irritation that will aid very much toward normal repair. In cases in which the fragments are not in apposition or can be forced out of position, ambulation is of questionable utility. He is fully convinced from an extended experience that the main cause of non-union is a lack of proper apposition. Therefore, the open method of treatment is the proper one in a majority of cases. He suggested that the open treatment should be used in all fractures in which proper apposition of the fragments can not be maintained, and that the treatment should not be delayed for weeks and months to ascertain how much Nature may do toward securing permanent union. This method will not only avoid vicious union, but will save much time to the patient. The method of uniting fragments can not be uniform. It depends on the individual case and the conditions with which one has to deal. One of the happiest results that he has had in several years was in a recent case of non-union of a fractured femur, in which operation was done after a period of ten weeks. He found the fragments over-riding; they were placed in apposition and held there by a notch in the upper fragment and a corresponding projection on the lower fragment. The periosteum was sutured over the ends of the fragments with catgut, and the incision was closed without drainage. The leg was then placed on a double inclined plane without extension. The patient made an uninterrupted recovery, and left the hospital seven weeks later with a perfect recovery. Dr. Means believes that if possible non-absorbable material should be avoided in bone operations. The method he suggests is applicable, he thinks, to a large number of cases of fracture of the long bones.

Dr. C. W. SHARPLES demonstrated his method on the blackboard. He has used silver wire and has obtained good results, but he is sure silver wire does not secure the best apposition. Wherever the periosteum can be saved it should be done. Whenever it is possible to do so, he believes that the best method is to cut a shoulder on each fragment and to fasten these together with some sort of pegs. Surgeons will thus come nearer getting good results than by any other method. More raw surface will be brought into apposition. Fibrous tissue intervening between the ends of the bones and causing ununited fracture is nothing more than an attempt to heal the parts. This is a part of the formation of an ununited fracture. In fractures of the tibia, one needs very perfect apposition. Many cases of fracture have not united well, and yet the result has not been considered vicious union. The part that the nutrient artery plays is important. Dr. Sharples believes that he has seen a case of ununited fracture due entirely to an injury of the nutrient artery.

## A PHILIPPINE FEVER.\*

H. D. BLOOMBERGH, M.D.

AND

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We wish to place on record two cases of an infectious disease, occurring in the Philippine Islands, which is characterized by a remittent fever of short duration and the presence in the blood of a motile hemocytzoon. These cases will be of particular interest to medical officers of the U. S. Army in the Philippines, where yearly numerous cases are recorded in the sick and wounded reports from the various posts as "fever, type undetermined," and this in spite of the fact that careful microscopic examinations are almost universal and that the resources of the Division Hospital laboratory are easily accessible for serum diagnoses.

CASE I.—J. R., private, First Cavalry, Hospital Corps, U. S. Army, admitted to hospital Aug. 1, 1905.

*Family History.*—Father died of diabetes, mother of cerebral hemorrhage. No brothers or sisters.

*Personal History.*—Had diseases of childhood. No pneumonia, typhoid, dysentery, malaria or rheumatism. The patient states that during his two years of service in the Philippines he has always been healthy and well. He is 25 years old.

*Present Illness.*—No premonitory symptoms. Was sick one day previous to admission. Had slight chill, followed by fever, but no sweat. Fever continued to time of admission. Slight headache, no pains in back and limbs.

*Condition on Admission.*—The patient complained of fever and general malaise. He looked sick. He suffered no actual pain. No cough, no expectoration, no dyspnea, no vertigo, no headache, no cardiac palpitation, no nausea and no vomiting. Appetite was poor and bowels were constipated. Patient stated that he was passing normal amount of urine.

*Physical Examination.*—The patient was a well-nourished white man. Skin in good condition. There was no rash present. Face was flushed and conjunctivæ injected. The lungs were clear throughout. Heart sounds were clear and of good quality. Area of dullness, lower border third rib, left parasternal line, to the apex beat, which is visible and palpable in the fifth interspace mid-clavicular line. The liver is not enlarged. The spleen is found between the ninth and eleventh ribs and is not palpable. No tenderness in the abdomen, no masses, no distension.

The laboratory reports show a negative diazo reaction, a faint trace of albumin and no sugar and casts in the urine. The red blood count was 5,344,000, the white blood count was 5,200, the hemoglobin 100 per cent. and the differential unimportant. The blood culture and an inoculation into a monkey were followed by negative results.

After the patient had been in the hospital for three days with a fever suggesting typhoid infection, the fever fell by crisis, whether as a result of the hypodermatic administration of quinin or not we can not say. On August 3 the patient vomited a small amount of greenish fluid, and on the 4th he had a sweat for the first time, which was of slight duration and amount.

Without any complications the patient passed through a rapid and uneventful convalescence and was discharged. (Chart of Case 1).

The interesting point in the case was the finding in the red blood cell of a hemocytzoon entirely different from the hemameba of Laveran. It was lying in red blood cell which was uncrenated and free of vacuoles. The cell was of normal size and color. The organism was approximately 2.5 microns long and 1 micron broad, was unpigmented and refractive to the same de-

\* From the Wards and Laboratory of the Division Hospital, Manila, P. I.



gree as the malarial parasite. By frequent and irregular alternate contraction and lengthening of the longitudinal and transverse diameters the parasite varied in shape between an ovoid and spindle form and at times what was apparently the underlying hemoglobin became visible. After being observed for several hours it became motionless and with the enclosed hemoglobin appeared as an oval-shaped body. In specimens kept over night a few narrow, ring-shaped bodies were found.

Of still greater interest is the motility of these organisms. This was of two kinds. The first depended on a revolution on either one of its two axes. When revolving on its transverse axis, it appears as a refractive dot or as described above. When revolving on its longitudinal axis, it appears as described above or as a slightly curved rod with slightly bulging ends. The change in revolution from one axis to the other was continual and the rapidity was very great.

Inasmuch as the Division Hospital receives a great majority of its patients transferred from various post hospitals, we have seen very few of these cases of fever of short duration, but we believe from what we have learned from surgeons serving in certain posts that there is an unknown fever in the Philippines which lasts between three and ten days in which no malarial parasites are found and which may recover without the use of quinin. The cases which we have reported appear to be similar to those that have been described to us, and if the diseases are identical the reason that the parasite has not been generally recognized is probably on account of the fact that it is found in very small numbers in the blood, no more than one parasite being found in one coverslip preparation, and it being frequently necessary to examine three or more preparations before the parasite is discovered. We have been unable to stain the organism, in spite of the fact that

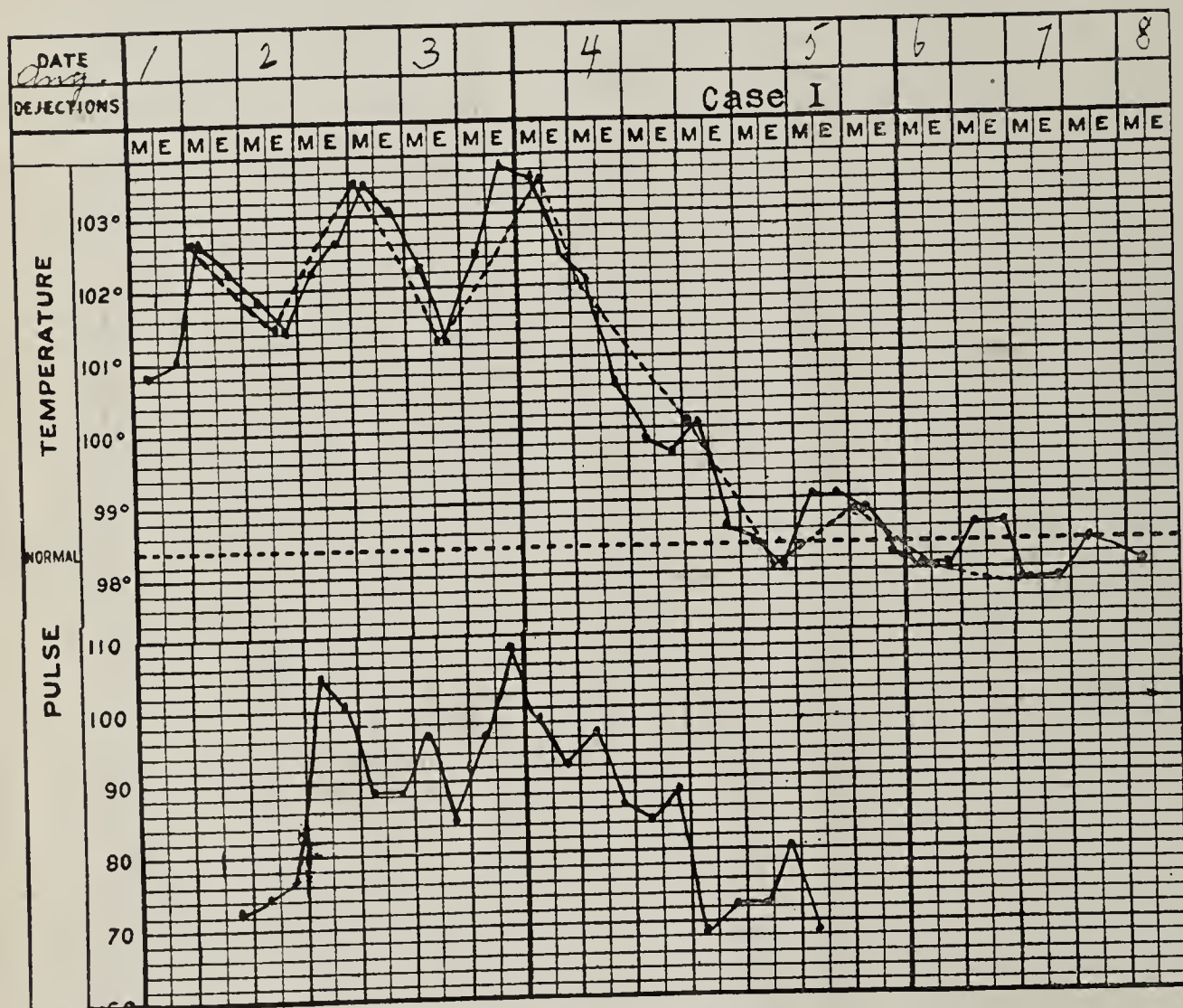


Chart 1.

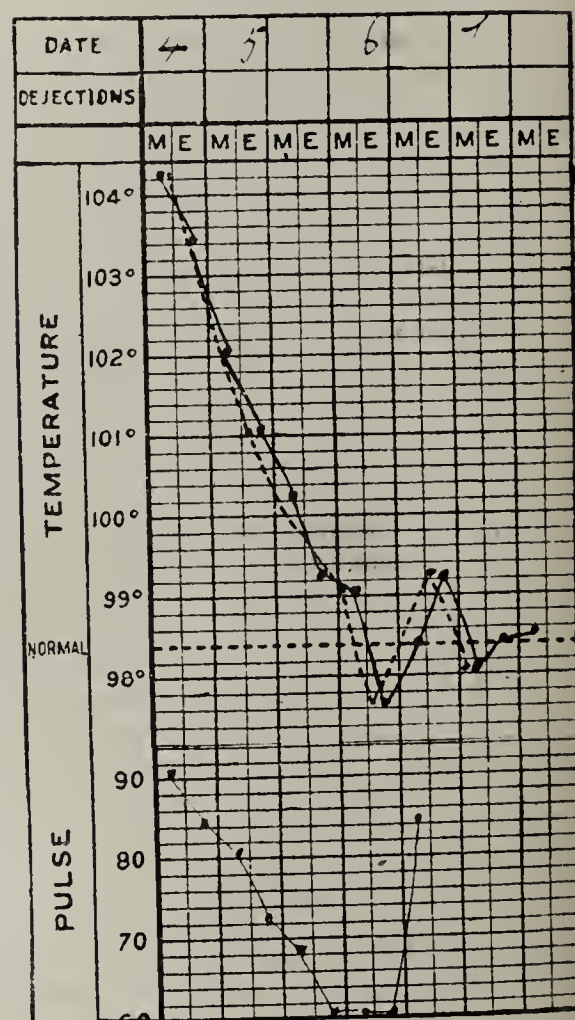


Chart 2.

The second form of motility is the movement of the organism in relation to the containing cell. The organism would not remain stationary in the cell, but moved rapidly from one position to another, while maintaining at the same time its independent motility.

Case 2 is similar to Case 1 in most respects and is reported inasmuch as the temperature fell by crisis without the administration of quinin.

CASE 2.—The patient gave a history of three days' illness, which started with vague chilly sensations, but no rigor, fever but no sweating (Chart 2). He suffered with severe muscular pains. The crisis was followed by profuse sweat. All signs and symptoms in this case improved immediately and the patient was discharged a few days later in normal health.

The laboratory examination showed a slight trace of albumin and unimportant findings in other excreta.

On the day following admission the blood showed a hemo-cytoon similar in many respects to the one found in the preceding case, but smaller, less motile and less refractive.

we have used the various approved methods for staining protozoa, including a Wright stain that readily stains chromatin, but we believed that possibly our attempts were in vain because of the fact that our coverslips did not contain the parasite.

We have described hitherto only the motile parasite. We have, however, found other resting bodies described by Cropper<sup>1</sup> in detail and also noted by First Lieutenant H. M. Smith,<sup>2</sup> Assistant Surgeon, U. S. Army, but these resting bodies are so difficult to distinguish from artefacts and occur so frequently in the blood of residents in the tropics that at present we are unwilling to recognize them as parasites.

Regarding the motile hemo-cytoon, so far as we know, Smith was the first to describe it. Although his cases were included under the heading of estivo-au-

<sup>1</sup>1. Journal of Tropical Medicine, May 1, 1905.

<sup>2</sup>2. Surgeon General's Annual Report, 1904.



tummal malaria, he states that the form of the parasite was so peculiar as to make it difficult to decide whether it was really a malarial parasite or some other organism entirely distinct.

We have attempted so far only to describe a disease and an organism associated with it in the blood. On account of the absence of pigment and ameboid movement and the fact that we could notice no growth nor find any extracellular forms, we believe that this parasite does not belong to the same genus (*Hamamæba*) to which the malarial plasmodium belongs.

## Special Article

### IMMUNITY.

#### CHAPTER XXIX.

##### LEPROSY.

Leprosy existed in Egypt in prehistoric times and extended to another land only when intercourse was established between the two countries. It reached Greece at about 345 B. C., Italy in the first century before Christ, and from the latter country extended to Germany, France and Spain. Crusaders returning from the Orient also brought back the disease in later times and eventually all Europe was infected. Leprosy is known to have existed in Great Britain in the tenth century, and from that country it was carried to Iceland and Greenland. From Germany it extended to the Scandinavian countries, and from the latter to Finland and Russia. It also reached Russia from the South and East, and in the South it was at one time called the Crimean disease. The West Indies and South America probably were infected from Spain, and through these channels the disease was carried to the southern states. The leprosy of the western states seems to have been imported by Norwegian immigrants chiefly. In 1902 the United States leprosy commission found 278 cases in this country. One hundred and eighty-six of these individuals probably contracted the disease in this country, 120 were born in foreign countries and 145 were native born. The disease also extended around the globe in the opposite direction, reaching China, Japan and the East Indian islands from India. The Sandwich Islands became infected in the nineteenth century.

The contagiousness of the disease appears to have been recognized at a very early period. In 636 A. D. leprosy houses were instituted in Italy and other countries, and the practice of segregating lepers soon became general. The hospitals were called Lazarus houses in middle Europe and St. George houses in Scandinavian countries. Pipin and Charles the Great declared marriage between lepers illegal. The rapid disappearance of leprosy in middle Europe during the sixteenth century is ascribed largely to the segregation of the patients.

In 1872 Hansen announced that small rods, sometimes intracellular and sometimes free, were to be found constantly in teased preparations of leprosy tissue.

**Bacillus of Leprosy.** These rods, leprosy bacilli, are now universally recognized as the cause of the disease, and in 1879 they were stained by Neisser and

a year later by Hansen. The organism is non-motile, has about the dimensions of the tubercle bacillus, the same staining reactions, and frequently shows a beaded appearance (degeneration forms (?)). It is said to take up dyes more readily than the tubercle bacillus, but the difference is not so great as to be distinctive. It stains by Gram's method.

Success in cultivating the bacillus has been reported a number of times, but the researches of others have failed to confirm these successes. Up to the present time it is probable that the organism has not been made to grow in artificial media. The resemblance of the bacillus to other acid-fast organisms, which are not pathogenic for animals, and the non-susceptibility of experiment animals to leprosy, are conditions which render very difficult the identification of a culture as that of the leprosy bacillus. Nicolli is said to have

produced leprosy nodules in monkeys by inoculating them with diseased tissue.

So far as known the organism has no natural existence outside the human body, and it is disseminated only by the secretions of the diseased. It is discharged

**Dissemination.** chiefly through the secretions of the nose and the upper respiratory passages, the surfaces of which are so commonly the seat of leprosy ulcers, and also through ulcerating lesions of the skin. Expectoration, sneezing and coughing have approximately the same significance for the dissemination of leprosy bacilli as of tubercle bacilli. Infected droplets of sputum may be emitted by forcible speaking. It is stated that the organisms found in the sputum and nasal secretions appear to be largely degenerated, a condition which may lessen the infectiousness of these substances.

The infectiousness of the leprosy bacillus is of a low character. "Epidemiologic experience teaches that infection occurs only through intimate and prolonged association with the diseased, in which doubtless uncleanliness plays a very important rôle" (Gotschlich).

**Transmission.** A leprosy husband eventually infects his wife, and the children of lepers commonly develop the disease early in life. The high percentage of leprosy which is noted among the laundresses of infected localities indicates that the disease may also be transmitted by indirect contact. Gotschlich throws some doubt on the importance of dust infection since so many of the bacilli found in sputum appear to be degenerated. Nothing is known of the resistance and viability of the organism outside the body.

On account of the early appearance and almost constant occurrence of leprosy lesions in the nasal passages Stricker believes that the latter constitute the chief infection atrium; of this Hansen is not positive. Nasal ulcers may be present in latent or apparently healed cases. Kolle cites a case showing extensive involvement of the spleen and liver in which the intestinal tract was considered the infection atrium. In some instances in which the disease is first noted in the feet, the organisms are supposed to gain entrance with infected soil through abrasions in the skin. According to Cornil and Babès, infection may take place through the hair follicles and sebaceous glands. The theory of Jonathan Hutchinson that leprosy may be contracted through eating diseased fish, or that the latter in some way may render the individuals susceptible to infection, has no foundation in fact. Hereditary acquisition of the disease is of doubtful occurrence, although the bacilli have been found in ova (Babès) and commonly are present in enormous numbers in the testicles. Hansen states, however, that he has never found them in the female generative organs.

The presence of large masses of bacilli in leprosy tissues is a characteristic of the disease. To a large extent they are intracellular, and they are often grouped in such a way as to resemble bundles of cigars. Hansen believes that the bacillus is essentially an intracellular parasite, and that it becomes extracellular only as a result of degeneration and disintegration of infected cells.

**Location of Bacilli.** Unna, on the other hand, considers their location in lymph spaces as most characteristic. They appear to be carried to distant parts through the lymphatics. Certain large vacuolated cells, the lepra cells of Virchow, the *globi* of Hansen, which are filled to bursting with the leprosy bacilli, are characteristic of the disease. Unna and others consider these bodies as zoöglar masses rather than as intracellular accumulations, and Kanthack interprets them as bacillary thrombi in the lymphatic vessels. The nodules, or lepromas, consist of granulation tissue, containing many round and epithelioid cells, lepra cells and occasional multinuclear giant cells. In cutaneous macules columns of round cells surround the blood vessels, there is some proliferation of epithelioid cells and there are relatively few bacilli. The bacilli are most numerous in the nodular lesions, although they are present in large numbers in the secretions of the nose and mouth, as stated. They are found in the Glissonian tissue of the liver, in the pulp and follicles of the spleen, in the glomeruli and interstitial tissue of the kidney when these organs are involved, in the nerves in both the nodular



and maculoanesthetic forms of the disease, and in the vascular endothelium. They have been demonstrated often in the ganglionic cells of the posterior root ganglia and of the spinal cord. Their occurrence in these cells leads Metchnikoff to say that the latter have phagocytic properties.

In view of the chronic course of leprosy and the absence of signs of intoxication over considerable periods, it seems probable that the bacillus secretes little or no soluble toxin. From time to time, however, patients with tubercular leprosy develop fever, which may persist for weeks or months and eventually terminate in death. During such attacks the nodules not infrequently enlarge, become soft and later disappear. Lie conceives that such periods represent massive infection of the blood with the bacilli, and that at this time the latter undergo extensive disintegration and liberate endocellular toxins to which the toxic phenomena are due. It is a remarkable fact that intercurrent infections, as measles and smallpox, and the administration of potassium iodid, cause a similar enlargement, softening and final disappearance of leprosy nodules, accompanied by marked degenerative changes in the bacilli. Hansen is of the opinion that the fever induced by these conditions has an actual curative effect, although its influence is not readily analyzed. He quotes the opinion of Danielsen that potassium iodid may be used to determine the cure of leprosy, which would be indicated by absence of a febrile reaction.

General confidence is not felt in the "leprolin" which Rost prepared from his cultures of the leprosy bacillus (?). His cultures are said to have been mixtures of micro-organisms.

Because of the failure to cultivate the leprosy bacillus, experimental work with the serum and cells of man and animals,

**Susceptibility and Means of Defense.** by which conclusions as to the defensive powers of the body might be drawn, can not be carried out. It seems probable that all men are susceptible to leprosy infection under the proper conditions. Sauton states that

children of from 4 to 5 years are particularly liable to infection. Other conditions which may increase susceptibility are of a conjectural nature. It is possible that leprosy predisposes to tuberculous infection (?).

The condition in leprosy seems to be that of an organism of low virulence against which the body possesses no decisive protective agency. The reactions for the most part are of a local nature, involving the proliferation of connective tissue and blood vessels, and the accumulation of lymphocytes. That phagocytosis by macrophages (lymphocytes, connective tissue, endothelial and ganglionic cells) is a factor which antagonizes the proliferation of the bacilli is suggested by the large number of bacilli which are found in these cells.

The principles of prophylaxis may be illustrated by citing the practices in Norway. Originally all lepers were confined to institutions. At the present time, however,

**Prophylaxis.** ever, only indigent lepers and those who can not be suitably cared for at home are required to enter an asylum, where they live under the best hygienic conditions. Other patients are allowed to remain at home, with the understanding that they sleep alone and, if possible, have separate rooms, that their clothing, linen and eating utensils be used by no one else, and that proper precautions be taken in the washing of linen. Dressings and bandages must be burned. Under these regulations the number of lepers in Norway has decreased from 2,870 in 1856 to 577 in 1900. Banishment to a particular island is practiced in the Sandwich Islands. Segregation of lepers should be brought about in this country.

Carasquilla attempted the production of an anti-leprosy serum by immunizing horses with the blood of leprosy patients. Although a few favorable reports concerning its effects appeared it has not proved of value in the hands of others.

**Truth and the Physician.**—You need not tell all the truth unless to those who have a right to know it all. But let all you tell be the truth.—Horace Mann.

## Clinical Reports

### EPIDERMOID OF THE RIGHT SUBMAXILLARY REGION.

VICTOR SCHRAGER, M.D.

CHICAGO.

The present case is not reported because of its rarity, but simply because of its clinical importance.

*Patient.*—Physician, male, aged 60.

*History.*—In the spring of 1898 the patient noticed a small abrasion on the right side of the lower lip. Previous to that time he smoked cigars excessively. In December of the same year he ceased smoking, and by applying a saturated solution of acetanilid to the abrasion, it soon healed. Encouraged by the healing, he began to smoke again. A few months later, in 1899, there was a recurrence of the trouble. In August, 1900, he consulted a surgeon and immediate excision of the lesion was advised. Feeling some uncertainty as to the nature of his trouble, he had a microscopic examination made, and it was found that it was an "incipient epithelioma." In October, 1900, the epithelioma was cauterized with chromic acid. The ulcer healed, but it left some induration. In the fall of 1902 it recurred. In September, 1904, it was cauterized again with chromic acid and *x-ray* exposures were advised. After fourteen *x-ray* treatments the epithelioma healed very nicely and continued to remain healed.

*Examination.*—In February, 1905, the patient discovered an oblong swelling below the angle of the right inferior maxilla. He came to Dr. Murphy's office for examination, and an oblong swelling the size of an almond was found, situated as stated above. It was firm of consistency, very slightly movable and adherent to the subjacent tissues. Pressure and manipulation did not cause pain. The patient stated that since the appearance of the swelling he had lost some weight and strength. He also stated that the increase in size was very gradual and slow at first, but that during the last few weeks it had increased rapidly. Considering the patient had an epithelioma diagnosed by the microscope, his age, the relative wasting symptoms, the situation of the swelling in the lymphatic area on the corresponding side, and fixity of the swelling, it was concluded that there was epithelial metastasis in a lymph node. The patient being a physician was not surprised by the diagnosis. He firmly believed that he had a recurrence of carcinoma, and for this reason he was ready to give up his practice and to settle all his affairs in view of future unpleasant events. In spite of his age the man was unusually robust and had no other reason for discontinuing his practice.

*Operation.*—May 20, 1905, the patient was operated on. The mass had the appearance of a lymph node and was perfectly incapsulated; it was somewhat adherent to the surrounding tissues and was easily enucleated. The patient left the hospital a few days after the operation. The wound healed rather slowly and left an induration in the scar.

*Microscopic Examination.*—When this specimen was examined in the laboratory an elliptical mass encapsulated in a smooth, intact capsule was found, and a longitudinal incision revealed a whitish pulp containing a cyst cavity in its center. Sections were taken from the pulp and hardened. The microscopic examination of sections showed several undulated layers of epithelial cells, which reproduced perfectly the histologic structure of the skin. Below these layers two three hair follicles and vessels were found; the rest of the tissue was occupied by connective tissue and marked round-cell infiltration. No sebaceous glands were found. A diagnosis of infected epidermoid was made. Prof. Robert Zeit based the diagnosis of epidermoid on the absence of sebaceous glands. Had these glands been present the diagnosis would have been dermoid.

*Remarks.*—This case illustrates the following points:

1. One should not be too positive of diagnosis of epithelial metastasis when a swelling is discovered on the corresponding side of an epithelioma of the lip. Such a mistake may have serious social results, especially in the case of men engaged in active work and of neurotic temperament!
2. The wasting symptoms and the gradual increase in size,



which are classical elements in the diagnosis of malignant conditions, may be explained in this case by the mental worry of the patient, which is liable to reduce weight, and by the beginning of infection of the epidermoid.

3. Every specimen removed by surgeons should be carefully examined microscopically. At the time of the operation the nodule did not impress the surgeon as being malignant, yet a positive diagnosis could not be made at that time. It is of primary importance that a microscope should be resorted to and the final diagnosis based on the histo-pathologic findings only. Had not this specimen been examined microscopically the case would probably have been recorded as one of permanent cure of carcinoma.

In connection with enlargements or tumors occurring below the inferior maxilla it should be remembered that accessory thyroids may occasionally be found there.

In conclusion I wish to acknowledge my indebtedness to Dr. J. B. Murphy for permitting me to report this case.

## UMBILICAL HERNIA PERFORATING THE ABDOMINAL WALL.\*

MYRON METZENBAUM, B.S., M.D.  
CLEVELAND, OHIO.

*Patient.*—Woman, an imbecile, aged 56, about 3 feet 2 inches in height; weight, 135 pounds.

*History.*—For more than twenty years it was known that she had an umbilical hernia. During the past four years the hernia was of such proportions as to indicate that it was formed of a very large portion of the small intestines, with a large part of the omentum. The hernia was never reducible; there always remained a considerable portion of the intestines out of the abdominal cavity. The hernial opening permitted only two coils of the bowel to slip by each other.

The woman aided in performing simple household duties, was able to take care of her person to a very fair degree, but under no condition was it possible to train her to wear an abdominal support.

On the evening of March 19, 1904, the people with whom she lived noticed that her outer skirt was wet and attempted to find the cause. They were resisted with such violence as to compel them to abandon the examination. Early on the following morning I was called, and, on entering the room, was almost overcome by the foul odor, suggesting gangrene.

*Examination.*—The patient was up and about. I induced her to go to bed, and, on removing her clothing, which was thoroughly saturated, the following unusual condition was observed:

The hernia was much larger than usual, causing the abdomen to protrude upward at least ten inches in height. In the region of the umbilicus the abdominal fat has been worn away, so that in this region the bowels were only covered by the skin. Here there was a circular area  $2\frac{1}{2}$  inches in diameter which had become necrotic. At the place where the umbilicus should have been there was a hole fully one inch in diameter, through which the umbilicus and what I thought to be the urachus dangled out on to the abdomen. No attempt was made to reduce the bowel, but a binder was fastened around the abdomen and the patient was removed at once to the Mt. Sinai Hospital for immediate operation.

Up to that time she had not vomited. Her pulse was about 86; temperature normal. She did not seem to be suffering the slightest pain and, judging by her features alone, one would not know that anything was ailing her. She had eaten some breakfast and wanted to engage in her usual duties. The servant was of the opinion that her bowels had moved on the previous day.

From these symptoms I did not consider that there was either strangulation or torsion of the bowel, but that a greater amount of the bowel than usual had been forced through the

abdominal opening, causing a very great pressure on the thin abdominal skin and producing necrosis.

*Operation.*—Within an hour from the time I first saw the patient she was on the operating table. With the kind services of Dr. C. A. Hamann, the following operation was performed and the following conditions observed:

Nearly all the small intestines, together with the cecum and appendix and a large portion of the omentum, comprised the hernia. Loops of intestines were grown together with masses of the abdominal fat and omentum, and in many places were firmly adherent to the abdominal wall itself. It was for these reasons that the hernia was never reducible.

The opening in the abdominal wall was not over  $1\frac{1}{2}$  inches in diameter, so that the cecum, once being forced through, could not slip back into the abdominal cavity. That which I had considered the urachus dangling through the perforation was a Meckel's diverticulum. This was gangrenous and was amputated, as well as part of the omentum. The bowel itself seemed healthy. The fluid which saturated her clothing was peritoneal fluid and serum exudate from the bowel.

After long and tedious work, the various adhesions of the bowel were broken up, but only after unusual effort was it possible to replace the intestines in the abdominal cavity.

*Postoperative History.*—The abdominal opening was closed. The time required for the operation was one hour and forty minutes. The patient was returned to bed, and soon it became necessary to administer artificial respiration and frequently thereafter, for it seemed as though her respiratory center was interfered with in a very marked degree. She rallied from the operation, her bowels moved at the end of twenty-four hours, she took considerable nourishment, and became about as intelligent as ever. On the third day a double lobar pneumonia developed, and she died on the evening of the fourth as a direct result of the pneumonia. Up to this time the abdomen remained flat, with no unusual tenderness or soreness and no evidence of peritonitis.

## GUNSHOT WOUND OF THE BOWELS.

O. S. HUTCHINS, M.D.  
CANBY, MINN.

*Patient.*—June 18, 1905, a girl, 13 years of age, while carelessly handling a 22-caliber rifle, shot herself in the abdomen one and one-half inches to the right and slightly below the middle of a line drawn from the umbilicus to the os pubis. She resided at a farmhouse ten miles in the country. Patient had vomited before I reached her, four hours after the accident, and was in considerable pain with limbs drawn up. There was increased pain on slight pressure over the bowels. Considerable shock was present.

*Operation.*—Preparation for operation was commenced immediately. Under anesthetic, median incision was made into peritoneum. Considerable free and clotted blood was found, which was scooped out. The first loop of bowel in region of entrance of bullet into peritoneum was grasped, pulled out, and six openings in the small bowel were found in searching nearly its whole length. The openings were closed with Lembert sutures of linen (Pagenstecher). The cecum was then examined and a slit one and one-half inches long near the appendix was found penetrating all the coats of the bowel. A piece of feces which projected from the opening was removed with gauze sponge and this opening was closed as before. Drainage was introduced down to the points of suture in cecum and intestines; also into cul-de-sac of Douglas.

*Convalescence.*—Bowels moved on third day after repeated small doses of ealomel followed by enema. Drainage was gradually removed after the third day. Temperature remained from 99 to 101 for three weeks, when swelling developed above the lower third of Poupart's ligament, and in a few days an abscess discharged through the opening left for drainage. After this there was an uninterrupted recovery. Patient was out of bed at the end of the sixth week with small fistulous opening at lower angle of wound, which had completely closed two weeks later. Bullet was not searched for.

\* Read before the Cleveland Academy of Medicine, 1905.



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## NEW OBSERVATIONS ON HYDROPHOBIA.

There are many points of extreme interest in connection with hydrophobia. Thus, the affinity of the as yet unknown virus for the nervous tissue can not but excite our curiosity, but not to any higher degree than does the very highly specialized mode of elimination selected by this virus, namely, by way of the saliva. There has been some doubt expressed as to whether or not the saliva of human beings suffering from hydrophobia contains the virus. There seems to be no question, however, but that in many cases the saliva of hydrophobic patients is virulent. Recently Bertarelli<sup>1</sup> demonstrated such to be the case in an instance of hydrophobia in a boy. It is interesting to note that Bertarelli found the saliva in this case to be virulent after being filtered through a Berkefeld filter No. 5, thus confirming the observations by Remlinger and others that the virus of hydrophobia belongs in the group of filterable virus. So far, the filterability of virus through filters that ordinarily hold back the smallest known bacteria has been explained as due to the minuteness of the organisms or particles concerned, but other explanations have been suggested also.

Tizzoni and Bongiovanni<sup>2</sup> are studying the effects of radium on rabies, and report that the application of radium to the eye of rabbits injected with fixed virus prevents the development of rabies and may even cure animals in which active symptoms of rabies have become manifest. They found also that radium *in vitro* rapidly changes fixed virus to an excellent vaccine. In the rabid animals treated with radium the nervous disturbances subside first, followed by recession of the fever and the loss of weight. The results reported by these investigators exceed those so far attained by any of the other methods of treatment in vogue, which have little or no effect on the march of the fully developed disease.

On the basis of the results of their experiments, the Italian workers express themselves as willing and ready to apply the radium treatment to hydrophobia in human beings. Should their anticipations be realized fully, a great advance will have been achieved in the treatment of this dreaded disease, many victims of which now succumb because for various reasons the Pasteur treatment, which is successful only when applied early in

the period of incubation, is delayed or neglected until too late. The results of the radium method of treatment in established hydrophobia will be awaited with the greatest interest.

## IMPROVED CONDITIONS ON THE ISTHMUS OF PANAMA.

The epidemic of yellow fever in the southern states has diverted attention for a time from that and other diseases on the Isthmus of Panama and from the activities of the sanitary department of the Canal Zone Government. The report of Colonel Gorgas for July was very encouraging, for, with the exception of yellow fever, there were no quarantinable diseases, which include smallpox and plague, with both of which the isthmus is more or less constantly menaced. Of yellow fever there were but 42 cases in a total population of a little over 52,000, including the cities of Colon and Panama, and of these but 21 developed among the nearly 11,000 employes within the zone. There were but 5 deaths from yellow fever during July—just one-half the smallest, one-fifth the average and one-tenth the largest July yellow fever death rate under the French. The August report<sup>1</sup> shows that the yellow fever incidence had dropped to a total of 27 for the month, the lowest number since April. Since the date of this latest official report the yellow fever situation has continued to improve. Thus, a more recent press dispatch states that "Panama is at last free from the yellow fever. There is but one patient under treatment and he is well along toward convalescence. Hardly time enough has passed yet to be sure that there will be no recurrence, but strong hopes are entertained that the epidemic is a thing of the past. As for the bubonic plague, there has been no case since August 26, and the scare is fast dying out." In criticism of this correspondent it should be said that at no time since the American occupation has yellow fever been "epidemic." Perennially endemic before that time, it is to the credit of Colonel Gorgas and his splendid corps that the disease has been kept from endemic down to sporadic. It was never permitted to become epidemic in spite of the fact that thousands of non-immunes have been sent into the Canal Zone. President Shontz of the commission, on his recent return from the isthmus, reported to the Associated Press an improvement in all sanitary conditions on the isthmus and especially in the appearance of the men employed—a change which he attributed in large part to the improved quarters and to the better quality of food supplied under the present commissary arrangements.

But yellow fever is, by no means, nor has it ever been, the greatest scourge of the isthmus. An examination of the French records since 1882 reveals the fact that, in the city of Panama, the deaths from malaria have at all times been many-fold greater than those from yellow

1. Centralbl. f. Bakt., 1905, xxxix, 399.

2. Ibid., p. 473.



fever. Associate this with the fact that the mortality from malaria is over fifty per cent. less than that from yellow fever and it will be appreciated that the incidence of the former is very great. In the report of deaths from malarial fever, however, there is as much evidence of improvement as from the more dreaded yellow fever. Thus, during the first seven months of this year, there were but forty-one deaths from this cause. Contrast this with the French records, which showed 133, the lowest number of deaths from this cause, and 687, the highest, with 497, 481, 562 and 448 as examples of intervening figures, and the results of advanced sanitation become apparent. These results have been achieved by a comprehensive campaign, which has embraced the diminution of the anopheles through drainage, fumigation, the use of oil and the introduction of better water supply; the isolation of malarial patients in screened cages and screened wards; and the prophylactic use of quinin as a ration to the healthy.

The better order of things that came after the reorganization of the commission by the President has been nowhere better exemplified than in the almost unhampered liberty that has been given to the sanitary department. This liberty, we understand, is practically restricted only by the money that may be available for sanitary purposes. If this is the case it is safe to assume that one of the most important and necessary items of expenditure will be for close-meshed wire netting with which to screen every barrack, bungalow, office, residence, shop or other structure to be occupied at night by any person, from the commonest laborer to the governor of the Zone. But just here it should be urged that, if the mean health rate is to be maintained at anything like the standard of effectiveness, military discipline must be enforced, by which practically the entire personnel will be compelled to protect themselves against the anopheles. These Colonel Gorgas has shown to be very generally infected and they are accordingly dangerous to all who may be exposed to their bites.

On the isthmus, as at New Orleans, the campaign against mosquitoes is one of primary importance, with the difference that on the isthmus there is never such a thing as a frost to help out the sanitary officers. Quite to the contrary, the weather and the topography of the country there combine to propagate the troublesome pests every day of the year. The report for August emphasizes the fact that the rainy season has set in and that the utmost vigilance and activity is required to keep breeding places for mosquitoes from forming. It has been found necessary to make the maintenance of such breeding places under certain circumstances a finable offense—an excellent stroke of policy that will insure at least partial co-operation of the populace. The real task remains, however, to be performed by the regular sanitary service and it is against tremendous odds that the mosquito brigades have to contend. Their work is, indeed, fraught with such importance that the re-

port of their operations becomes extremely valuable, the element of novelty adding not a little to the interest. Thus we read that the great administration building has been made "stegomyia proof"; that in this great building all containers have been inspected daily and "no eggs of stegomyia or other mosquitoes were found during the month." We are told that "there is a noticeable decrease in the number of stegomyia present in Santa Ana Park since the same was trimmed out by this department in June"; that "all houses and yards are inspected at least every six days"; that "every room of each house is carefully inspected for mosquito larvæ in water containers placed therein," and that "mosquito larvæ (mostly in the early stages of development) were found in 579 of the houses inspected." Brigades of oilers are at work; drainage brigades are after the anopheles; and still other brigades are fumigating the houses. A dozen tons of sulphur and nearly as much pyrethrum have been used in a single month. Pools, tanks, barrels, and sluggish streams are covered with oil. Thousands of crab holes—propagating places for mosquitoes—have been closed. Cesspools and drains have been cleaned; garbage and vegetation removed. Then, too, the threatened invasion of the isthmus by the bubonic plague has started up the rat-killing business and brigades are out after the rodents, while free rat traps are being distributed to the populace. When, finally, we add to this the treatment of the sick, the ever-vigilant quarantine service, the sanitary construction work and the thousand and one incidental things that must be done in an administrative way, then the picture becomes a little more complete.

We can not refrain from a suggestion to the bureau of vital statistics of the Zone government, and that is to give the adult population and the adult deaths in such wise that the death rate may be designated on an adult basis. This is the point of practical interest in the states where everybody, but especially prospective employes on the isthmus, are concerned about the liability to disease and death incurred by adults who go to the Zone. The summarization, for example, in the last report by simply giving the total number of deaths 265, to a total population of nearly 54,000, is misleading, or at least confusing, and gives the isthmus a less satisfactory reputation than it is entitled to. The impression prevails that these deaths are chiefly among adults, whereas an analysis of the table of "deaths by ages" reveals the fact that 101—nearly two-fifths of the entire number—occurred under 20 years of age. Considering the fact that adults are probably much in excess of sixty per cent. of the entire population, it follows that the death rate among adults must be less than that indicated as the annual average, either for employes of the commission, 35.93 per 1,000, or for the general population of Colon, Panama and the Zone, 64.95 per 1,000.



## IS TYPHOID CONTAGIOUS?

A correspondent calls our attention to an editorial in the *Grand Rapids Herald* with the above caption and to the important difference between its teaching and that of former days in regard to the contagiousness of typhoid fever. According to this editorial, Dr. Vaughan of Ann Arbor and others have advanced the idea that typhoid fever is communicated largely by personal contact. Dr. Vaughan is quoted as having made this statement: "I formerly held the view that 95 per cent. of the typhoid fever was transmitted by drinking water . . . but the experiences and information collected by the commission (appointed by the Secretary of War to study the origin and spread of typhoid in the military camps during the Spanish-American war) led me radically to change my views. I believe now that the spread was largely by personal contact. From the observations made, I reached the conclusion that under the conditions maintaining in military camps, personal contact was responsible for the spread of the disease in about 66 per cent. of the cases."

The view here announced is in harmony with recent knowledge in regard to the elimination and spread of the typhoid bacillus and the communicability of typhoid fever. The commission just mentioned rendered a most valuable service in calling attention to the ease with which typhoid fever may be disseminated by other means than infection of water, which, nevertheless, remains the most common origin of sudden, ordinary epidemic outbreaks of the disease. The report<sup>1</sup> of this commission has been published and should be studied carefully by all that are interested in preventing typhoid fever.

Now, the contagiousness of typhoid fever is not to be so understood that the mere presence only of a susceptible person in the vicinity of a typhoid fever patient is dangerous. We know that typhoid bacilli are eliminated from typhoid patients by way of the feces in all cases, by the urine in a large percentage of the cases (at least 25 per cent.), and occasionally by the sputum. Contamination of the surface of the patient himself and of his immediate surroundings, consequently, is practically unavoidable. When little care is used there is the greatest opportunity for wide dissemination of the bacilli by contact. We know that flies may convey the bacilli and deposit them on various substances, including food and drink, in which the germs may multiply. "Fingers, food and flies are the chief means of local propagation. It is impossible for a nurse to avoid finger contamination" (Osler). All hospitals have "house" infections of typhoid fever in physicians, nurses, orderlies, laundry employes, etc., in spite of special precautions, and not a few deaths among house officers have resulted from typhoid so contracted.

It is unquestionably becoming recognized more and

more that contact infection is an important means of spreading typhoid fever wherever it breaks out. Thus, Newman, in London, lays great stress on direct infection, the importance of which is emphasized also by F. Klemperer in Berlin. In country communities the spread of the disease when once introduced is often explainable in no other way because here we can not always fall back on a common water or milk supply, and country physicians would do well in publishing observations in point.

In view of the comparative ease with which contact infection may take place, it is rather strange that the doctrine denying ease to ease contagion should have survived so long. Undoubtedly, this is due to the fact that all the possibilities of direct and indirect contact infection could be fully recognized only as the bacteriology of the disease became fully understood, and much of our knowledge concerning the elimination of typhoid bacilli, their viability outside the body, their conveyance by flies, etc., is recent.

The practitioner should base his prevention of typhoid fever on the fact that it is caused by the typhoid bacillus and that this is eliminated in virulent condition from all typhoid patients in such manner and number as easily to cause infection by contact as well as through water supply. On this account, it is clear that cases of typhoid fever, in the hospital as well as in the home, should be segregated carefully until such time as neither feces nor urine contain bacilli.

## THE LESSON OF THE EPIDEMIC.

The hopeful prediction of *THE JOURNAL* has been fulfilled. The yellow fever epidemic is so nearly at an end that it can safely be said that science has won a distinct victory after one of its greatest battles. The attitude and the effort of the community have been admirable and thoroughly helpful to the enlightened and vigorous course of the officers of the United States Public Health and Marine-Hospital Service. Action along the lines pointed out by the mosquito theory of infection has proved to be absolutely effective. This is demonstrated by comparisons with the epidemic of 1878. The two epidemics were discovered late in July and they ran a very similar course up to three or four days after the beginning of the organized fight this year. Thereafter the cases decreased in 1905 as against a great increase in 1878. In all the South there have been in 1905 less than 9,000 cases and not over 1,000 deaths, while in 1878 in New Orleans alone, with half its present population, there were 4,000 deaths. In 1905 outside New Orleans it has been shown, in town after town, that the epidemic recedes uniformly when there is thorough application of the methods deduced from the mosquito doctrine. Whenever the community has been reluctant to adopt the measures demanded by modern knowledge, there the epidemic has been most severe. If the South will see the lesson and insist on its application, there surely will never be another epidemic of yellow fever in the United States. The medical profession of the south-

1. Report on The Origin and Spread of Typhoid Fever in U. S. Military Camps During the Spanish War of 1898.



ern states faces a great responsibility. In every locality it must teach the lesson of the epidemic and be insistent on the adoption of those precautionary measures that have been proved to be effective and to be absolutely indispensable.

#### NEWSPAPERS THAT DECEIVE.

The newspapers of the country, as a class, are sufficiently true to the responsibilities of their position in directing the thoughts of the people to make the flagrant exceptions which are frequently noticed to stand out in most unwholesome prominence. Two medical pretenders in Des Moines were allowed to purchase space in the Des Moines newspapers and nothing was published about them except in their approval. The editor of the *Iowa Medical Journal*<sup>1</sup> inquired of a reporter why the arrest of these men on the charge of fraud was not mentioned, and was told that it had been "overlooked." He went to the city editor of the largest daily paper in Des Moines with some facts concerning the case; he was cordially received and was assured that the facts would be published, and that the news columns were not influenced in any way by the advertising department. The next morning not one word appeared in the paper concerning the arrest and trial. On the contrary, there appeared a column article, presumably written by the offenders, and derogatory to the profession of Des Moines. Later, when the courts decided against the fraudulent practitioners, thus putting an end to the possibility of a money income for advertising, the daily press had plenty to say about the "victory achieved in interest of good government," etc. This is one of the glaring offenses against honesty which tend to make the careful reader doubt almost every statement in such a paper. But the newspaper which allows the character of its contents to be influenced by pecuniary considerations is not alone to blame. The public which continues to read such a paper must bear a part of the responsibility.

#### TREASON AGAINST THE GOVERNMENT.

The New Orleans *American* (sadly misused name) of Oct. 5, 1905, in an editorial, accused the United States Public Health and Marine-Hospital Service of failing to combat successfully the epidemic of yellow fever and of hoodling. At this late date it even sneeringly questioned the existence at any time this year of yellow fever in New Orleans. Among other things, it said: "The campaign of the Marine-Hospital Service against the so-called yellow fever is an absolute failure." This "means loss for the many, profits for the few." Then it demands the "expulsion of the hoodlums." It is one thing to discuss debatable theories and to expose dishonesty wherever found, but the events of the epidemic can not by any artifice be twisted into any excuse for this offense of the New Orleans paper. To the credit of the press it may be said that few papers have ever approached this depth, for this denotes hopeless depravity. The time is close at hand for the creation by statute of a new variety of treason. If it is treason in time of war for a man to betray his country's military plans, it cer-

tainly should be made treason for a man or a publication in time of deadly peril from disease to foment by false allegations public lack of confidence in the government's plan of rescue, and in the integrity and ability of the men who risk their lives to save the community from unnecessary deaths. Than this no treachery can be more base. Physicians, citizens and the reputable press should join in asking stringent penalties for this crime against the nation, against humanity.

#### ADDITIONAL ALCOHOLIC COMPOUNDS TO BE TAXED.

We commented recently on the Internal Revenue ruling by which compounds which are composed chiefly of distilled spirits are to be classified as alcoholic liquors unless it can be shown by the manufacturer that substances undoubtedly medicinal in their character are used in sufficient quantity to give a medicinal quality to the liquor other than that inherent in the alcohol. A subsequent ruling<sup>1</sup> includes malt extracts in the alcoholic compounds so to be taxed. Further, essences or extracts, such as of lemon, vanilla, etc.—which, being household articles for culinary use—would ordinarily not be included in the ruling, will come under the ruling whenever they are found by the local internal revenue officers to be generally used and sold as beverages, especially in prohibition districts. Thus it is seen that the interpretation of this ruling is broad and yet specific, while at all times fair. Whenever a composition is really used as an intoxicating liquor, it must meet the requirements of law laid down for the sale of liquor.

#### RIGHTS OF PURCHASERS.

Since every one is a purchaser, directly or indirectly, it is a problem of universal interest as to how one may be sure that the goods purchased at any time or place were prepared for the market so as to be free from disease. In an interesting article<sup>2</sup> on this subject, Mrs. Florence Kelley, secretary of the National Consumers' League, gives an insight into the problem. Goods supposed to have been made in a department store's "own factory" have been found to come from squalid, filthy sweat-shops. It was found to be impossible to depend on the statement of many stores concerning the origin of goods. A woman in the last stages of consumption was found making little boxes for wedding cake, moistening gummed edges with her tongue. A man with tuberculosis, and whose son had an external cancer, earned money by cracking walnuts. A \$60 overcoat, supposed to have been made to order by a merchant tailor in Helena, Mont., was really made in an eastern city in a tailor-shop where a case of smallpox existed. Mrs. Kelley remarks: "It would seem an obvious right of the purchaser that the food which he buys at the price asked should be pure and clean; that the garment purchased of an entirely reputable dealer should be free from poisonous dyes, vermin and the germs of disease; and that both food and garments should leave his conscience free from participation in the employment of young children or of sweaters' victims. Yet these seemingly obvious

1. *Iowa Medical Journal*, Oct. 15, 1905, p. 415.

1. See Medicolegal Department, this issue, p. 1358.

2. *Charities*, Sept. 30, 1905.



rights were perhaps never farther from attainment than to-day, in the opening years of the twentieth century. Adulteration of foods has never in the history of the human race been carried on on a scale so vast as at present. The sweating-system, with its inevitable accompaniment of filth and disease conveyed in the product, persists and increases in spite of sixty years of effort of the philanthropists and the needle-workers to check it." A few individual inspections of such cases as are referred to in the article will do more to convince one of the way in which the rights of purchasers are ignored than volumes of argument.

## Medical News

### COLORADO.

**Staff for Moffat Road.**—Dr. Lewis F. Lemen, assisted by Dr. Hugh L. Taylor, has begun the work of organizing the medical and surgical department of the Moffat system.

**Denver to Have Emergency Hospital.**—Denver is to build an emergency hospital in a central location, at a cost of \$40,000. The new institution will be under the supervision of the city board of health, the commissioner of health being directly in charge.

**New Editor.**—Dr. J. M. Blaine has resigned as secretary of the Colorado State Medical Society to become editor of *Colorado Medicine*, the official journal of the state society. Dr. Melville Black of Denver succeeds Dr. Blaine as secretary. Dr. Edward Jackson, formerly editor of *Colorado Medicine*, retires from the editorial position, but remains on the publication committee.

### CONNECTICUT.

**Money for Hospitals.**—By the will of Elbert A. Woodward \$5,000 is bequeathed to Norwalk Hospital for the endowment of a free bed to be known as the Woodward Fund bed.—The fête recently held for St. Vincent's Hospital, Bridgeport, netted \$1,047.52 to the institution.

**Infectious Diseases.**—During September 27 cases of measles were reported in 10 towns; 88 cases of scarlet fever in 32 towns; 5 cases of cerebrospinal fever in 3 towns; 92 cases of diphtheria in 26 towns; 25 cases of whooping cough in 10 towns; 316 cases of typhoid fever in 58 towns, and 36 cases of consumption in 11 towns.

**Personal.**—Dr. Charles B. Graves has been elected president and Dr. Abiel W. Nelson a member of the executive committee of the Mainwaring Memorial Hospital, New London.—At the annual meeting of the Litchfield County Hospital Dr. William S. Hulbert, Winsted, was elected a director.—Dr. Charles H. Glover, Norwalk, has been appointed a member of the medical staff of the Connecticut Hospital for the Insane, Middletown.

**September Deaths.**—During the month of September only 1,195 deaths were reported, 222 less than in the previous month, 26 more than in September of 1904, and 5 less than the average for September during the five preceding years. The mortality was equivalent to an annual rate of 14.5 per 1,000. Infectious diseases were responsible for 196 deaths, or 16.4 per cent. of the total mortality. The chief death causes were: Diarrhea, 150; diseases of the nervous system, 138; consumption, 111; heart disease, 109; accidents and violence, 90; pneumonia and typhoid fever, each 35.

### DISTRICT OF COLUMBIA.

**Board of Charities Estimate.**—The secretary of the Board of Charities has submitted his annual estimate for the next fiscal year to the commissioners of the district. The schedule is less by about \$200,000 than that sent in by the Board of Charities last year.

**Personal.**—Dr. Henry D. Fry is entertaining his guest, Prof. Carl von Noorden of Frankfurt-a-Main, at his residence. A card reception was held October 21 in his honor.—Dr. W. Robert Perkins, formerly resident physician at the Central Dispensary and Emergency Hospital, has returned to the city and taken up his practice.

**Health of the District.**—The report of the health officer for the week ended October 14 shows the total number of deaths

to have been 95, of which number 61 were white and 34 were colored, and 21 stillbirths, of which number 6 were white and 15 colored. The total number of births was 164; whites, 116; colored, 48. There were 27 cases of diphtheria, 10 of scarlet fever, 228 of typhoid fever and 1 of smallpox under treatment at the close of the week.

### ILLINOIS.

**Hospital Incorporated.**—The Graham Hospital Association and Training School for Nurses has been incorporated at Canton by C. F. Everly, M. Addie Dewey and Oscar H. Parks.

**Physician Wins Suit.**—In the damage suit of Paul F. Kline against Dr. Edgar H. Little, East St. Louis, in which \$5,000 was claimed for alleged malpractice in the setting of a broken arm, a verdict was returned October 17 in favor of the defendant.

**Diphtheria Closes School.**—One of the schools of Ottawa has been closed on account of the existence of 10 cases of diphtheria among its pupils.—The grade school at Desplaines has been closed on account of diphtheria; 3 cases have been reported, with 1 death.

**Personal.**—Dr. Arthur F. Comings, Rockford, has retired from the medical profession and will go into business in Sterling.—Dr. Joseph Scheurich, Philo, who was recently shot, is convalescent and has returned to his home.—Dr. Fremont C. Knight, Waukegan, has been appointed chief surgeon of the Chicago & Milwaukee Electric Railroad.

**Staff Examination.**—More than 300 physicians have signified their intention to the county civil service commission to take the examination for places on the Cook County Hospital staff. The examination opened October 23 and will close November 27. All examinations are being held at the County Hospital. The dates of examinations in the various subjects are as follows:

Oct. 23, Skin diseases; Oct. 26, X-Ray and diseases of the eye. October 30, Diseases of the ear, nose and throat; November 2, Obstetrics; November 6, Diseases of children. November 9, Contagious diseases; November 13, Pathology; Nov. 16, Nervous and mental diseases; November 16, Pathological chemistry; November 20, Medicine (general); November 24, Orthopedic surgery; November 27, Surgery (general).

### Chicago.

**Hospital Incorporated.**—The Ravenswood Hospital has been incorporated with a capital stock of \$50,000 to maintain a hospital and training school for nurses by Drs. George W. Green, George N. Bussey and Ernest A. Fetherston.

**Personal.**—Dr. P. J. H. Farrell has been elected surgeon-general of the Army of the Philippines.—Dr. John E. Owens has been re-elected a trustee of St. Luke's Hospital.—Dr. Carl L. Barnes has gone to California.—Dr. John B. Murphy was given the degree of Doctor of Science at the convocation of the University of Illinois, Champaign, October 19.

**Deaths of the Week.**—The total deaths from all causes of the week ended October 21 were 466, 11 less than for the previous week and 4 more than for the corresponding week of 1904. The annual death rate per 1,000 was 12.19. Acute intestinal diseases lead in the death causes with 64, followed by consumption with 55; violence, including suicide, with 46; Bright's disease with 45; pneumonia with 44; heart diseases with 32, and cancer with 22.

**Gynecological Society Election.**—At the annual meeting and dinner of the Chicago Gynecological Society October 20 the guests of honor were Drs. Hunter Robb, Cleveland; Frank Billings and Henry S. Tucker, Chicago, and Matthew D. Mann, Buffalo, N. Y. The following officers were elected: President, Dr. Frank T. Andrews; vice-presidents, Drs. Joseph B. De Lee and Charles E. Paddock; secretary, Dr. Henry F. Lewis; treasurer, Dr. Charles B. Reed; pathologist, Dr. Gustav Kolischer; editor, Dr. Rudolph W. Holmes, and councilor, Dr. Franklin H. Martin.

**Evils to be Avoided.**—In an address on pneumonia delivered October 19 by Dr. Heman Spalding, he gave the following summary of evils to be avoided and precautions to be taken to keep the vital resistance of the body up to the normal standard:

Drunkness; foremost among all the habits of mankind that aid in the propagation of the disease. Congested mucous membranes offer ideal soil for the germ.

Overeating; disturbs digestion, interferes with circulation. Failure to keep mouth and teeth clean; convenient lodging places for the ever present germ are afforded.

Overheated houses make persons too susceptible to outdoor cold; light clothing, including underwear, should be worn indoors.

Breathing through the mouth; bad for many reasons. Frequent baths will keep the skin active and free from effete material.



**The Senn Banquet.**—A banquet in honor of Dr. Nicholas Senn, professor of surgery, University of Chicago, and surgeon-general of Illinois, will be held at the Auditorium Hotel, November 11, at 6:30 p. m. No personal invitations will be issued, but every one is invited. Tickets for the banquet may be procured from Dr. D. J. Doherty, 100 State Street, Chicago. The price per plate is five dollars. Among the speakers will be Hon. George R. Peck, Dr. W. J. Mayo, Rochester, Minn.; Dr. Charles A. L. Reed, Cincinnati; Dr. Frank Billings, Chicago; Dr. Jacob Lang, Milwaukee, and Dr. John A. Witherpoon, Nashville, Tenn.

## IOWA.

**Sisters Accept Hospital.**—The Sisters of Charity of the Roman Catholic Church have accepted the gift of Mercy Hospital, Webster City, erected at a cost of \$35,000 by the late Jacob M. Funk.

**Faith Doctor in Jail.**—A fine of \$300 was imposed on Louis Valeske, New Hampton, who pleaded guilty to an indictment charging him with practicing medicine without a certificate. In default of payment he was committed to the county jail.

**Diphtheria Closes Schools.**—Grant school, Des Moines, was closed October 10 on account of the prevalence of diphtheria among its pupils.—On October 13 the public schools of Corydon, with the exception of the high school, were closed on account of diphtheria.—The school at Wyaconda has been closed on account of an epidemic of diphtheria.—Moreland reports 30 cases of diphtheria and 1 death.

**"Great Paul" Pleads Guilty, Is Fined and Leaves State.**—The patent medicine fakir known as "Great Paul," and who was arrested at Fort Madison, charged with practicing medicine without a certificate and who was later indicted by the grand jury, pleaded guilty in the district court, was fined \$300 and costs, which he paid and immediately left town. Dr. C. F. Wahrer, the health officer of Fort Madison, took a leading part in ridding the city of this impostor.

**Ill and Injured.**—Dr. Wilton W. McCarthy, Des Moines, escaped with a bruised right hand from an accident which threatened to be serious. He was running alongside a moving train when he was struck by a car and knocked down, falling almost under the train.—Dr. D. H. Killingsworth, Clarinda, is critically ill.—Dr. Jason Roberts, Osceola, is seriously ill.—Dr. Albert P. Johnson, Sigourney, has so far recovered from his injuries that he is able to attend to business.

**Personal.**—Dr. John Elliott has resigned as city physician at Mount Pleasant and Dr. Walter A. Sternberg has been elected his successor.—Dr. Henry B. Jennings, Council Bluffs, has returned from abroad.—Dr. and Mrs. William B. La Force, Ottumwa, have returned from Holland.—Dr. John N. Warren, Sioux City, has returned from Europe.—Dr. John F. Ritter, Maquoketa, has returned from a four months' vacation in Virginia.—Dr. and Mrs. Frank B. Whitmore, West Union, sailed for China, October 10.—Dr. Timothy J. Caldwell, Adel, has gone to Fort Bragg, Cal., for the winter.—Dr. William E. Owen and family have returned from a trip to the Pacific Coast.—Dr. Edward M. Arenschield, formerly of South Ottumwa, has located in Glendora, Cal.—Dr. Charles M. Mackin, Independence, has been appointed assistant superintendent of the Clarinda State Hospital.

## MARYLAND.

**Old Letters.**—The University of Maryland monthly, *Old Maryland*, is publishing interesting extracts from the letters of a Baltimore medical student in London during the years 1786 to 1789.—*Old Maryland* has been made the organ of the University of Maryland Alumni Association.

**Society Election.**—The University of Maryland Medical Society has elected the following officers for the year: President, Dr. Harry Adler; vice-president, Dr. Fairfax Wright; secretary, Dr. Walter H. Mayhew, and executive committee, Drs. José L. Hirsh, R. L. Mitchell and Charles W. McElfresh.

## Baltimore.

**Election of Officers.**—At the Johns Hopkins Hospital Medical Society Dr. William G. MacCallum was elected president, and Dr. Charles H. Bunting secretary.

**Visitors from the Far East.**—Dr. Ho Kan Yuen, fleet surgeon Imperial Chinese Navy, Hai Chow; Dr. Tsui Ying Young, surgeon-major Imperial Chinese Army, and Dr. W. P. Chung of the Government Hospital of Chinanfu, spent October 14 in Baltimore.

**Will Continue Service.**—The supervisors of city charities have decided to continue for 1906 the hospital and dispensary

service as maintained in 1905. There are numerous applications from the hospitals and dispensaries all over the city, but besides having worked satisfactorily, the concentration of patients in a few hospitals allows a better oversight and inspection of patients and institutions.

**Personal.**—Dr. James G. Iglehart has been re-elected president of the Sons of the American Revolution in Maryland.—The vacancy caused by the death of Prof. Charles Schmidt, at the University of Maryland, will be filled temporarily by Prof. Charles Caspari, Jr.—Dr. Hugh Warren Brent has settled for practice in Baltimore.—Dr. William T. Watson has recovered from an operation for appendicitis.—Dr. Archibald W. Graham has been appointed assistant resident physician of Bayview Hospital, vice Dr. William W. Riha, made assistant physician at Danvers Insane Hospital, Hawthorne, Mass.

## MASSACHUSETTS.

**Home Dedicated.**—The new convalescent home of the Children's Hospital, Boston, which is located in Wellesley, was dedicated by Rt.-Rev. William Lawrence, D.D., October 24, and opened for use.

**Adulterators Punished.**—Twelve milk dealers in Boston and one vinegar manufacturer were recently fined \$10 each for adulterating. The vinegar man only a few weeks ago lectured in his native town on "The Dangers of Adulterated Foods."

**Harvard Opening.**—Harvard Medical School starts off with 13 graduate, 68 fourth-year, 65 third-year, 59 second-year and 76 first-year, students. This is a decrease of 8 from last year, but an increase in the first-year class of 10. Each of the other classes is smaller than it was last year.

**Personal.**—Dr. Anthyme S. Menard, the most prominent French physician in Holyoke, was seriously injured October 19 by a horse which became frightened at his automobile and fell into it, crushing him against the steering wheel.—Dr. Atwood R. Wood, Worcester, Mass., has been appointed superintendent of the Michigan Asylum for the Insane, Kalamazoo.

**Hospital Concerts.**—The November concerts of the Hospital Music Fund announced by Dr. John Dixwell are: November 4, Boston Insane Hospital; November 5, Somerville Hospital; November 8, Soldiers' Home; November 12, United States Naval Hospital; November 19, United States Marine Hospital; November 26, Boston Home for Incurables, and November 30, Massachusetts General Hospital.

**Boston Medical Library Program.**—The Boston Medical Library meetings are to be resumed October 28. As last winter, they are to be held in conjunction with the Suffolk District Branch of the Massachusetts Medical Society, at the Medical Library, on the Fenway, at 8:15 p. m. Light refreshments will be served at the end of each meeting. Twelve meetings are planned. The following is a preliminary program:

October 28: Semi-annual meeting of the Suffolk District Branch of Massachusetts Medical Society. The Committee on Tuberculosis will make a report on progress through Dr. Henry Jackson. "The Treatment of Surgical Tuberculosis in Children," by Dr. Edward H. Bradford, "The Duty of the City Toward Tuberculosis," by Prof. William T. Councilman. "The Home Sanitarium Treatment of Tuberculosis," by Dr. Joseph H. Pratt.

November 15: Moving pictures showing gaits, spasms and convulsions. Dr. Walter B. Chase, Brookline. Demonstrations with the Reflectoscope.

December 6: Surgical meeting. Subject of meeting will be announced later.

December 20: The milk supply of large cities. The program for this meeting has been arranged by Dr. Charles Harrington, secretary of the Massachusetts State Board of Health, who has invited speakers from other cities.

January 3: "Recent Advances in Physiology Bearing on Clinical Medicine," Prof. William T. Porter, Prof. Walter B. Cannon, Prof. Howell of Johns Hopkins.

January 24: "Surgery of the Peripheral Nerves," Dr. John B. Murphy, Chicago.

February 14: "The Military Hygiene of the Japanese Army," Captain Charles Lynch, United States Army.

February 28: "Secret Nostrums," Dr. Frank Billings, Chicago.

March 14: Surgical meeting. Subject to be selected by Dr. Joseph A. Blake, New York.

March 28: "The Treatment of Heart Disease." a. "The Use of Depletion," Dr. Frederick C. Shattuck; b. "The Use and Abuse of Digitalis," Dr. Franz Pfaff; c. "Pneumatic Differentiation," Dr. Charles E. Quimby, New York; d. "The Nauheim Treatment," Dr. Francis B. Kinnicutt, New York.

April 11: "Pyloroplasty and Gastroenterostomy," by Dr. J. N. T. Finney, Baltimore.

April 28: Semi-Annual Meeting of the Suffolk District Branch of Massachusetts Medical Society. Paper by Dr. Guy G. Fernald, Waverly, of the Massachusetts School for Feeble-Minded.

## NEW JERSEY.

**Physician Left Fortune.**—Dr. Frank L. Horning, Camden, has fallen heir to about \$50,000 by the death of an uncle in Schuylkill County.



**Appropriation for School Inspection.**—The city council of Montclair has made an appropriation of \$1,000 for medical inspection of schools.

**Accidents.**—Dr. William H. Pratt, Camden, narrowly escaped serious injury when his carriage was struck by a train October 11.—Dr. Alexander McAlister, Camden, was thrown from his carriage October 14 and seriously injured.

**Hospital Elects Officers.**—At a meeting of the board of directors of the Essex Private Hospital, Newark, Dr. John Dennis was elected president; Dr. Herbert W. Long, secretary; Dr. Theodore Teimer, treasurer; Dr. William O. Bailey, chairman of the executive committee, and Dr. William Buermann, chairman of the finance committee.

**Hospital Staff Selected.**—The board of governors of the Atlantic City Hospital has elected the following medical staff to serve one year from November 1: Drs. W. Blair Stewart, Elisha C. Chew, Theodore Senseman, Emery Marville, Edgar Darnell, A. Burton Shimer, Walt P. Conaway, J. Addison Joy, William M. Pollard, William H. Bennett and Joseph C. Marshall. Dr. Charles K. Mills, Philadelphia, was appointed consulting physician and Dr. W. F. Ridgeway pathologist of the hospital.

**Personal.**—Dr. and Mrs. C. D. Martinetti, Orange, sailed for Europe October 21 on the *Fuerst Bismarck*.—Dr. Katherine Porter, Orange, has returned from abroad.—Dr. Sidney C. Keller, Paterson, has been appointed a member of the resident staff of St. Elizabeth's Hospital, Utica, N. Y.—Drs. William A. Clark and Nelson B. Oliphant, Trenton, have returned from abroad.—Dr. Arthur H. Dundon, Plainfield, has been appointed registrar of vital statistics.—Dr. Immanuel Pyle, Jersey City, has been appointed successor to Dr. Stephen V. W. Stout on the staff of the City Hospital.—Dr. Dennis R. McElhinney, Elizabeth, has been appointed city physician vice Dr. George W. McCallion, deceased.—Dr. A. Haines Lippincott, Camden, has returned from a trip to Yellowstone Park and the Pacific Coast.—Dr. and Mrs. George W. Shera, Jersey City, have returned from a tour of the Great Lakes.—Dr. Talbot R. Chambers and family, Jersey City, have returned from Europe.

#### NEW YORK.

**Hospital Opened.**—The new Corning Hospital was opened to the public in connection with a donation party October 7.

**Diphtheria at Oxford.**—On account of the spread of diphtheria the Oxford schools were ordered closed October 11 for at least two weeks.

**Medical Society Centennial.**—The Washington County Medical Society celebrated its centennial at Sandy Hill October 3, 25 members being present.

**Isolation Pavilion a Reality.**—The woman's board of St. James' Mercy Hospital, Cornellville, has raised a fund of \$2,600 for the erection of an isolation pavilion, or \$100 more than is required for the purpose.

**Clerk of Health Department Removed.**—Thomas Stuart, who has been chief clerk of the State Health Department for thirteen years, has been removed from office by the state health commissioner. It is claimed that this change was demanded for political reasons.

**District Attorney Praised.**—Drs. Henry R. Hopkins, Ernest Wende and Herman Hayd, Buffalo, give unstinted praise to Mr. Frank A. Abbott, first assistant district attorney, for his ability and the tenacity of his efforts to rid Erie County of the medical quacks and charlatans with which it has been infested for twenty years.

**Cornerstone Laid.**—The cornerstone of the new building for the Providence Retreat, Buffalo, was laid with appropriate ceremonies by Bishop Coulton, October 7. The institution is expected to be one of the finest in the United States for the care of the insane, will accommodate 186 patients and will cost about \$300,000.

**Hospital Loses Bequest.**—In the suit of Edward Rosenbaum against Andrew Turnbull, executor under the will of Mary Rosenbaum, to break the latter's will, the Supreme Court decided in favor of the plaintiff. By this decision the German Hospital, Buffalo, loses the estate valued at \$40,000, which was willed to it by Mrs. Rosenbaum.

**Convalescent Home Opened.**—St. Elizabeth Home for Convalescents at Spring Valley, Rockland County, was opened with impressive ceremonies by the Rt.-Rev. T. F. Cusack, auxiliary bishop of New York, September 14. The institution will accommodate 35 patients and will be open to persons of all denominations.

**Library Association Election.**—The Utica Medical Library Association held its annual meeting October 2, at which the following officers were elected: President, Dr. Thomas H. Farrel, Utica; vice-president, Dr. B. Pemberton Allen, Oriskany; secretary, Dr. Fred W. Smith, Utica; treasurer, Dr. James H. Glass, Utica, and librarian, Dr. Smith Baker, Utica.

**Colleges Opened.**—The Albany Medical College opened for its seventy-fourth session October 19, Dr. Albert Vander Veer delivering the introductory address. Dr. Holmes C. Jackson has been placed in charge of the physiologic laboratory and Dr. G. E. Bielby will assist in the department of histology. Dr. E. V. Fredericks has been made assistant in clinical microscopy, and Dr. C. Lannahan assistant in dermatology.—The sixtieth annual session of the medical department of the University of Buffalo opened September 25 with an address by Dr. George F. Cott.

**New York Brought to Terms.**—The strained relations which existed between the medical authorities of New York and New Jersey, which culminated in the recent action of the New Jersey authorities compelling New York physicians to submit to a New Jersey examination before practicing in that state and which was in retaliation for a similar restriction previously imposed by New York, have come to an end. At a conference of the representatives of the medical societies of the two states it was agreed that after Jan. 1, 1906, the authorities of each state should recognize medical certificates issued by the other state.

**Personal.**—Dr. Lucius B. Parmlee, Batavia, is spending the winter in Pasadena, Cal.—Dr. Mary O'Malley, Binghamton, has been appointed a member of the medical staff of the Government Hospital for the Insane, Washington, D. C.—Dr. Charles W. Chapin, Georgetown, has been appointed junior physician at the Manhattan State Hospital.—Drs. Harold G. Levy, Samuel H. Rosenthal, Arthur M. Johnson, Michael Casey and Edwin V. Rose have been appointed city physicians at Rochester.—Dr. William E. Silcocks, Green Island, who has been under treatment for appendicitis at Troy Hospital, has returned home.—Dr. Horace P. Pritchard, Cicero, has been made house surgeon at St. Joseph's Hospital, Syracuse; Dr. Maxwell Montgomery, house physician; Dr. Frank E. Eustin, assistant house surgeon, and Dr. Otto Weiscotten, ambulance surgeon.—Dr. Charles H. Langdon, assistant superintendent of the Hudson River Hospital, Poughkeepsie, was operated on for appendicitis October 3.

#### New York City.

**Insane Transferred.**—Fifty female insane patients were transferred from the Manhattan State Hospital to the Binghamton State Hospital October 11.

**Hospital Sold.**—The lot of ground on which is situated the old Harlem Hospital and the pier used by the city for its ferry to Randall's Island has been sold.

**College Opens.**—The sixty-fifth year of the New York University Medical Department opened October 4. The opening addresses were made by the dean, Egbert Le Fevre, and Chancellor McCracken.

**Another Ambulance Accident.**—An ambulance from St. John's Hospital, Brooklyn, was struck by a Marcy Avenue car at Bergen Street and Classon Avenue. This is the tenth ambulance accident in Brooklyn since Memorial Day.

**Gift to Sanatorium.**—Mr. Jacob H. Schiff, the banker, has given \$10,000 to the sanatorium for Hebrew children, Rockaway Park, conditional on the raising of the balance of \$25,000 necessary to complete the fund for the erection of a large wing to the sanatorium.

**Hospital Dedicated.**—The new Washington Heights Hospital, which was opened August 1, was formally dedicated October 15. The hospital is a two-story stone structure. There are at present 32 beds and 12 more will shortly be added. The institution is non-sectarian and will meet the needs of all classes in that district.

**Milk Dealers Fined.**—A fine of \$200, with an alternative of thirty days' imprisonment, was imposed on a wholesale milk dealer in the Court of Special Sessions. It was the fourth offense of which the dealer had been convicted. He was warned that the next time the punishment would be imprisonment in addition to the fine. A number of small dealers were also fined.

**Pollution of the Water Supply.**—The City Club, corroborating the statements made in the papers in regard to the pollution of the water supply at Mount Kisco, and suggesting as a remedy the condemnation of additional land in that place, has



sent a letter to Mayor McClellan urging that immediate action be taken to correct the present abuses, which render water very dangerous.

**Lowest Death Rate on Record.**—It was announced at the Health Department that the death rate for the week ended October 14 was equivalent to an annual rate of 15.53, as compared with 15.64 for the same week of last year. If figured on actual population instead of the 1900 census, this would be the lowest death rate on record at the Health Department.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended October 14, 302 cases of tuberculosis, with 141 deaths; 219 cases of diphtheria, with 19 deaths; 124 cases of typhoid fever, with 20 deaths; 81 cases of measles, with 5 deaths; 69 cases of scarlet fever, with 4 deaths; 4 cases of cerebrospinal meningitis, with 9 deaths, and 55 cases of varicella.

**Personal.**—Dr. James F. Donnelly has started for Russia to study cholera and plague.—Dr. H. L. Barnes, Brooklyn, has been appointed superintendent of the State Sanatorium for Tuberculosis, Providence, R. I.—Dr. and Mrs. Florian Krung have returned from Europe.—Dr. Charles T. Schondelmeier has been re-elected president of the Long Island Throat Hospital and Eye Infirmary, Brooklyn.—Dr. Julian Dean was elected a trustee of the institution.

#### NORTH CAROLINA.

**Hospital Opened.**—The private hospital of Dr. David T. Tayloe, located near his home in Washington, was opened with appropriate exercises week before last.

**Sentenced for Fraud.**—Dr. M. Avery, Salisbury, who was heavily fined in the Federal Court for frauds against the government and sentenced to three months in jail, was taken to Salisbury October 7 to serve his jail sentence.

**Physicians Prescribe Whisky.**—The recorder of Charlotte has inaugurated a campaign against physicians who give indiscriminate prescriptions for liquor. He says that four of the physicians of the city are issuing more prescriptions than the other forty physicians of the city combined.

**Medical Schools Opened.**—The University of North Carolina Medical Department, Raleigh, opened for its annual session September 14 with an address by Dr. Hubert A. Ryster, dean of the faculty. Dr. Ralph S. Stevens has been added to the faculty as lecturer on pathology.—North Carolina Medical College opened October 3 with an address by Dr. Isaac W. Faison, Charlotte, dean of the faculty.

**Ethics in a Nutshell.**—The Cumberland Valley Medical Society recently enjoyed a most delightful outing at the country home of Dr. Thomas D. Haigh, one of its veteran members. Picnic refreshments were served and the society entertained and instructed by an address from Dr. Haigh emphasizing the importance of high ideals in the professional life and suggesting that after all the talk about medical ethics the whole scheme is included in the thought and actions of a medical gentleman.

**Personal.**—Dr. J. Howell Way, secretary of the Medical Society of North Carolina, has returned to his work at Waynesville after a brief vacation spent in the hospitals of New York.—Dr. Edward C. Register, Charlotte, has returned to his home after an extended tour of Europe.—Dr. Richard H. Whitehead, for ten years professor of anatomy in the University of North Carolina at Chapel Hill, is leaving the state to assume the duties of the chair of anatomy in the University of Virginia, to which he was recently elected.—Dr. Robert L. Gibbon, Charlotte, has been elected medical director of the Conservative Mutual Life Insurance Company of that place.

#### OHIO.

**The Afflicted.**—Dr. John W. Murphy, Cincinnati, is seriously ill with what is believed to be an abscess of the frontal sinus.

**Donation Day.**—More than \$1,000 was contributed to the German Deaconess Home and Hospital, Cincinnati, at its annual donation day, October 12.

**New Dispensary Opened.**—The medical and pharmacal departments of Toledo University opened a free clinic and dispensary October 16 at the college building.

**Personal.**—Dr. Reber F. Quigley, Vermillion, has returned from the Pacific Coast.—Dr. D. C. Clark Hoffman, Dayton, chief surgeon at the Soldiers' Home, has resigned.

**Diphtheria Epidemic.**—Leetonia is experiencing a scourge of diphtheria which is increasing with such rapidity that the Board of Health has ordered the schools closed until further notice.

**Lancet-Clinic Incorporates.**—The Lancet-Clinic Company of Cincinnati was incorporated October 16 with a capital stock of \$100,000 by Drs. James C. Culbertson, William Ingram, William H. Falls, William D. Haines and Rufus B. Hall, all of Cincinnati.

**Physician Vindicated.**—Dr. Henry F. Kattenhorn, Cincinnati, who was sued by Ella Doty in 1902 for damages on the charge of having negligently treated a fracture of the arm, was given judgment October 13, as it was shown that the bone alleged to have been broken was not broken, and the one which was broken had been properly treated by the defendant.

#### PENNSYLVANIA.

**New Hospital.**—The old Mills homestead, Braddock, is being remodeled as a hospital at a cost of about \$7,000.

**Practice Without License.**—"Dr." Densen, Scranton, convicted of practicing medicine without license, was sentenced to pay a fine of \$200 and in default was committed to jail.

**Annex for Hospital.**—The board of directors for the Mercy Hospital, Pittsburg, decided on the erection of a three-story addition to the hospital, to cost \$50,000 and to contain operating rooms, a free dispensary and an amphitheater.

**State Hospital Staff Elected.**—Dr. Joseph Thomas, Quakertown, has been re-elected president of the board of trustees of the State Hospital for the Insane, Norristown. Dr. Julia Harden, Philadelphia, was elected assistant resident superintendent, and Drs. D. Richardson and Mary M. Wolfe were re-elected to the medical staff.

**Help Hospitals.**—The Sewickley Af-Fair netted \$4,000 to the Sewickley Hospital.—The late Robert L. Shetter, York, devised \$5,000 to be used for the endowment of a bed in the Methodist Episcopal Hospital, Philadelphia.—Mrs. Mary L. Baer, Lancaster, has given the Lancaster General Hospital \$10,000 for the endowment of a bed in memory of her husband, the late Reuben L. Baer.

**Guilty of Malpractice.**—In the case of Dr. W. A. Cochran, Easton, charged with criminal malpractice on Miss Lizzie Trader, Phillipsburg, the defendant was found guilty, and is reported to have fled to Canada.—Dr. Edwin S. Cooper, New Castle, charged with conspiring to perform a criminal operation on Miss Mabel Williams of Johnstown, was found guilty September 13. Dr. Cooper was convicted on the same charge two years ago and sentenced to two years' imprisonment, but was granted a new trial.

**Personal.**—Dr. William R. Palmer, Johnsonburg, was operated on for appendicitis at the Elk County General Hospital September 14.—Dr. John C. Greenewalt, Chambersburg, was thrown from his horse September 24 and dislocated his shoulder.—Dr. Thomas T. Zerbe, Schaefferstown, fell September 19 and fractured a rib.—Dr. A. Barr Snively, Waynesboro, was thrown from his buggy September 17 and fractured several ribs.—Dr. and Mrs. S. Louis Zeigler, Reading, have returned after a three months' tour of Europe.—Dr. Albert C. Snider, White Haven, has been appointed local surgeon for the Lehigh Valley Railway vice Dr. S. Wilson Trimmer, deceased.—Dr. Edward A. Weiss, Pittsburg, was held up and robbed October 2 for the third time in three months.—Dr. Cameron Shultz, Danville, has been commissioned first lieutenant and assistant surgeon, N. G. Pa., and assigned to the Twelfth Infantry.—Dr. Alfred J. Yost, mayor of Allentown, left October 5 for the Pacific Coast.—Dr. William P. Burdick has been appointed surgeon for the B. & P. Railroad at Mount Jewett, and Dr. William J. Fredericks oculist for the company at Bradford.—Dr. Elizabeth McLaughry, New Castle, has sailed for Europe.—Dr. Milton Goldsmith and wife, Pittsburg, have returned from Europe.—Dr. Samuel S. Apple, Easton, has suffered the loss of his wife, who died from valvular heart disease October 9, aged 65.

#### Philadelphia.

**College Opens.**—The Women's Medical College opened September 27 for its fifty-fifth year.

**Von Noorden Entertained.**—Prof. Dr. Carl von Noorden, Frankfurt, Germany, was entertained by the Medical Club of Philadelphia, October 25.

**Martin Resigns.**—Dr. Edward Martin, director of the Department of Public Health and Charities, has resigned. In his letter to the mayor he assigns as reason that the "times are too strenuous."

**Coroner's Physician Fined.**—Dr. William S. Wadsworth, a coroner's physician, who was a witness in a criminal case, was fined \$25 and costs for being late in returning to court after recess. The fine was promptly paid.



**Charge Unfounded.**—After two hearings Dr. Charles Conrad, who had been arraigned on the charge of conducting a disorderly house, was discharged, the prosecution having been shown to have no foundation in fact.

**Chinese Visitors.**—Drs. Ho Kan Yuen, fleet surgeon in the Imperial Chinese Navy; Tsui Ying Young, surgeon major in the Imperial Chinese Army, and W. P. Chung of the government hospital service, recently visited Philadelphia.

**Suffer for Breaking Laws.**—Dr. Thomas Wallace was convicted on September 20 of using the mails for advertising medicine for illegal purposes and was sentenced to pay \$100 fine and to serve nine months in the county prison.—Minnie Tilburn pleaded guilty September 28 to performing a criminal operation on Lillia Rentfer and was sentenced to two years in the county prison.

**Health Report.**—The deaths reported from all causes during the week ended October 21 numbered 308. This is an increase of 30 over the number reported for the previous week, and an increase of 18 over the number for the corresponding period of last year. The principal causes of death were: Typhoid fever, 7; diphtheria, 6; tuberculosis, 42; cancer, 23; apoplexy, 24; heart disease, 42; acute respiratory disease, 32; enteritis (under 2 years), 29; enteritis (over 2 years), 8; appendicitis, 5; Bright's disease, 35; suicide, 3, and accidents, 15. There were 212 cases of contagious disease with 16 deaths, as compared with 171 cases and 12 deaths for the previous week.

**Bequests to Charity.**—The will of the late John Alter, who died in August last in Vichy, France, devises \$50,000 to Jefferson Hospital for the erection of a John Joseph Alter memorial in that institution. The trustees are to decide what kind of a memorial would be most suitable. Bequests of \$5,000 are also made for the endowment of two free beds in the above named hospital, together with two beds endowed for \$10,000 in the University Hospital.—By the will of the late Susan C. Whelan the Maternity Hospital receives \$500.—By the will of the late David Teller the Jewish Hospital Association of Philadelphia receives \$200, and the Jewish Foster Home and Orphan Asylum a like sum.—By the will of the late Mrs. Frances E. Loeb the Jewish Hospital Association and the Jewish Maternity receive \$500 each.

**Portrait of Dr. Coxe Presented to the University.**—An oil portrait of Dr. John Rodman Coxe, one of Philadelphia's earliest and most famous physicians, was presented to the department of medicine of the University of Pennsylvania October 20. The presentation was made at the home of Dr. Roland G. Curtin by Dr. Richard A. Cleeman, in behalf of J. Rodman Coxe, a grandson. Dr. Coxe was born in Trenton, N. J., Sept. 16, 1773. In 1790 he began a four years' course of study under Dr. Benjamin Rush. He was port physician in 1798, for five years was connected with the Pennsylvania Hospital, and was also a physician at the Philadelphia Dispensary. In 1809 he was professor of chemistry in the University of Pennsylvania, and from 1818 to 1835 he was professor of materia medica and pharmacy in the same institution. He was a trustee of the university and one of the founders of the Philadelphia College of Pharmacy. The presentation was given added interest by the meeting of the Historical Club of the department of medicine of the University of Pennsylvania at the same time.

**Personal.**—Dr. Frank W. Talley was thrown out of an automobile in a collision at Allentown September 24 and seriously bruised.—Dr. William H. Semple was seized with hemorrhages while riding on a street car September 16 and is critically ill at the Medico-Chirurgical Hospital.—Dr. Heatley C. Dulles has returned from Europe.—Dr. Judson Deland has returned from a visit to India, where he has been making an especial study of tropical diseases.—Dr. M. Frank Kirkbride and family sailed for Naples October 15.—Dr. Nathan F. Mossell was re-elected medical director and chief of staff of the Frederick Douglass Memorial Hospital. At a meeting of the board of directors it was decided that the election, at a previous meeting, of Dr. P. C. Howard to succeed Dr. Mossell was illegal.—Dr. W. H. F. Addison of the University of Toronto has been appointed demonstrator of histology in the department of medicine of the University of Pennsylvania.—Dr. Francis J. Higgins has been appointed on the out-patient surgical staff of St. Joseph's Hospital.—Dr. Mortimer Herzberg, University of Pennsylvania, 1902, was one of two successful candidates for the positions of assistant bacteriologists of the bureau of health at a recent civil service examination.

#### SOUTH CAROLINA.

**College Opens.**—The Medical College of the State of South Carolina, Charleston, opened for its annual session October 2.

Dr. Francis L. Parker, the dean, delivered the opening address.

**An Ethical Rule.**—The Columbia Medical Society has passed a rule strongly condemning the publication of names of any of its members in professional items or news.

**Personal.**—Dr. Lewis A. Griffith, Columbia, has been elected chairman of the local board of health, vice Dr. E. C. McGregor, resigned. Dr. McGregor was elected vice-chairman of the board.—Dr. David B. Frontis, Ridge Spring, was recently thrown from his buggy in a runaway accident and painfully hurt.—Dr. W. W. Fennell, Rock Hill, has purchased the stock of the other physicians interested in the Rock Hill Hospital.

#### TENNESSEE.

**Graduation Exercises.**—The medical department of the University of the South, Sewanee, held its annual commencement exercises October 26, when a class of 27 was graduated.

**East Tennessee Medical Society.**—The fifteenth annual meeting of the East Tennessee Medical Society was held in Bristol September 29. Dr. Charles J. Broyles, Johnson City, was elected president; Dr. Claude P. Fox, Greenville; A. G. Kern, Knoxville, and William A. Dietrich, Chattanooga, vice-presidents, and William M. Copenhaver, Bristol, secretary. The society will meet in Johnson City next year.

**Personal.**—Dr. John R. Biust, Nashville, was recently operated on for appendicitis at Rochester, Minn.—Dr. James G. Haywood, Memphis, is critically ill.—Drs. John A. and H. C. Murphy, Bristol, have started for California.—Dr. Benjamin B. Cates, Knoxville, has been seriously ill with septicemia.—Dr. James H. McCall, United States Army, has been made a member of the faculty of the medical department of Vanderbilt University, Nashville.

**Colleges Opened.**—The medical department of Vanderbilt University opened October 2 with addresses by the Rev. G. W. Bull and Dr. G. Chris. Savage.—At the opening exercises of the medical department of the University of Nashville, October 2, Dr. Sidney S. Crockett presided and Dr. R. L. C. White delivered the address of welcome.—The medical department of the University of Tennessee, Nashville, opened for the year October 2 with addresses by the mayor of Nashville and Dr. S. A. Medors, dean of the dental department.

#### TEXAS.

**Operated on for Appendicitis.**—Dr. Benjamin M. Warsham, Austin, who was recently operated on for appendicitis in New York City, is making favorable progress toward recovery.—Dr. F. P. Seymour, Beeville, who was recently operated on for appendicitis, has returned to his home.

**School Inspection.**—The individual medical inspection of the pupils of the city schools of Dallas was inaugurated October 2 by Drs. Robert S. Yancey, Seurry L. Terrell, W. E. Howard, Theo. L. E. Arnold, Martin E. Taber, Frank J. Hall, Benjamin R. Bluit, Richard T. Hamilton and Edward H. Carey.

**Executive Committee Meeting.**—The executive committee of the State Medical Association met at Fort Worth October 3 to prepare for the reception and entertainment of Dr. J. N. McCormack, chairman of the Organization Committee of the American Medical Association, who reaches El Paso October 30, and who will make a tour of the state, visiting the various medical societies.

**Personal.**—Dr. John S. Carter, Denison, is ill with rheumatism.—Dr. James E. Dodson, Vernon, suffered a dislocation of the patella and serious lacerated and contused wounds in a runaway accident September 29.—Dr. Andrew W. Duke, Center, while driving a few miles from town was thrown from his buggy and rendered unconscious for a short time.—Dr. Charles W. Griffith, La Porte, has returned from the Pacific Coast.—Dr. John W. Vermillion, Silverton, has moved to Texhoma, Okla.

**Medical Schools Opened.**—The fifteenth annual session of the medical department of the State University of Texas, Galveston, began October 2. The opening address was delivered by Dr. William S. Carter, dean of the institution. Dr. M. L. Graves has succeeded to the chair of medicine, vice Dr. James W. McLaughlin, resigned.—The Southwestern University Medical College, Dallas, opened for the first term in its new building October 2.—Baylor University College of Medicine, Dallas, held its opening exercises October 2. The term has been extended from six months to seven months, and entrance requirements have also been increased.—The medical department of Fort Worth University opened for the year September 26. The opening address was delivered by Dr. Frank Gray, dean of the institution.



## VERMONT.

**Personal.**—Dr. Henry D. Holton, Brattleboro, has succeeded Dr. Don D. Grout, Waterbury, as a member of the state tuberculosis commission, and was elected chairman of the commission.

**Change in Journal Management.**—The *Vermont Medical Monthly* will hereafter be conducted by the following board: Dr. Bingham H. Stone, editor-in-chief; Dr. Henry C. Tinkham, Dr. Charles F. Dalton and Prof. H. L. White, all of Burlington.

**Must be Relicensed.**—Seventy-eight physicians from different sections of the state, who have been practicing without having their licenses recorded, have been summoned before the state medical board for examination. Included in this number are physicians who have been in practice thirty years, and three of those summoned are members of the faculty of the medical department of the University of Vermont. This action on the part of the board was made necessary by the provisions of a law passed by the legislature in 1904.

**State Society Meeting.**—The Vermont State Medical Society held its ninety-second annual meeting in Burlington October 12-13, the president, Dr. Patrick E. McSweeney, Burlington, in the chair. The presidential address was on a technical subject, "Tumors Complicating Pregnancy," and the address of the first vice-president was on the subject "The Physician as an Educator." The election of officers resulted as follows: President, Dr. Myron L. Chandler, Barre; vice-president, Dr. Elmore S. Allbee, Bellows Falls; secretary, Dr. George H. Gorham, Bellows Falls; treasurer, Dr. Bingham H. Stone, Burlington; auditor, Dr. John H. Blodgett, Saxton's River; executive committee, Drs. Myron L. Chandler, Bellows Falls; George C. Gorham, Bellows Falls, and Henry C. Tinkham, Burlington; committee on publication, Drs. George C. Gorham, Bellows Falls; George R. Anderson, Brattleboro, and Clarence Beecher, Burlington; committee on legislation, Drs. Arthur B. Bisbee, Montpelier, and Henry D. Holton, Brattleboro; delegate to American Medical Association, Dr. Carroll B. Ross, West Rutland. A resolution regarding uniformity in fees for physicians was discussed, but no action was taken on it. Resolutions were adopted eulogizing Senator Proctor for his gift of the establishment of a tuberculosis sanatorium, and requesting him to allow his name to be used in connection with the institution. The next meeting of the society will be held in Barre.

## VIRGINIA.

**Must Report Contagious Diseases.**—Failure on the part of many Richmond physicians to comply with the ordinance requiring them to report to the Board of Health the existence of all cases of contagious diseases has compelled the board to instruct the health committee to enforce the rule in this regard.

**Personal.**—Dr. Stuart McGuire appeared for the first time as president of the University College of Medicine at Richmond at the mass meeting of students October 5.—Drs. W. Levi Old and Israel Brown, Norfolk, returned from Europe October 12.—Dr. Marvin P. Rucker, Manchester, has returned from Europe.

**Union of Colleges.**—Plans for the consolidation of the Medical College of Virginia, Richmond, and the medical department of the University of Virginia, Charlottesville, were discussed by the board of visitors October 6.—Dr. George Ben Johnston of the Medical College of Virginia, Richmond, was elected professor of surgery in the medical department of the university, to succeed Dr. J. H. Buckmaster, resigned, and was also made chief of the staff.

## WASHINGTON.

**Washington State Medical Association Grateful.**—The following is an extract from the proceedings of the seventeenth annual session of this association, held in Tacoma, September 25-27:

Dr. Semple said: "We have been greatly indebted to the American Medical Association and to Dr. McCormack, who has given his time and talents to assist us in helping ourselves, and I therefore move that the thanks of the Washington State Medical Association be tendered to the American Medical Association for their assistance to us, and Dr. J. N. McCormack for his able and masterly address, giving us his experiences in organizing our profession, advising us of proper methods to increase our influence, better our position and solve the many questions that confront us."

The motion was duly seconded and carried.

## WEST VIRGINIA.

**Fire Damage.**—Fire at Germania September 25, supposed to be of incendiary origin, destroyed the house and office of Dr. W. G. Drinkwater.

**Fined for Prescribing Liquor.**—In the case of Dr. Walter L. Leach, Rivesville, charged with illegally issuing a prescription for whisky, the defendant was found guilty and was sentenced to pay a fine of \$50.

**Not Guilty.**—The charges against Dr. Albert H. Kunst, superintendent of the West Virginia Hospital for the Insane, Weston, were proven on investigation to be absolutely without foundation, but Dr. Kunst has handed his resignation to the board of directors, to become effective January 1.

## WISCONSIN.

**Addition to Hospital.**—The extensive addition to the Deaconess Mother House of the Milwaukee Hospital has been completed. The building will be used for offices, assembly rooms and dormitories.

**Little Contagious Disease.**—The Milwaukee Isolation Hospital is empty; since June there have been 215 cases of smallpox, with 1 death. The city is reported to be unusually free from communicable diseases.

**Jail for Spitters.**—An ordinance introduced in the Sheboygan city council October 17 provides a jail sentence for violations of the anti-spitting law, and owners of theaters and public halls are notified to provide sufficient cuspidors or suffer penalty.

**College Opens.**—The Milwaukee Medical College opened for its twelfth annual session October 3. The opening address was made Dr. William H. Earles, president of the institution. Dr. E. L. Bullard has been made professor of nervous and mental diseases.

**Personal.**—Dr. J. Fremont Corbett and wife, Weyauwega, have moved to Southern California.—Dr. Daniel W. Lynch, West Bend, and Dr. Grove Harkness, Waukesha, have returned from the Pacific Coast.—Dr. and Mrs. Arthur J. Patek have returned after a summer in the Adirondacks.

**Chiropractic Fined.**—In the case of the state of Wisconsin against G. W. Johnson, La Crosse, for practicing medicine without a state license, the court found that the defendant had not treated patients. The case against him was, therefore, dismissed and a warrant issued for his partner, E. J. Whipple, on whom devolved the duty of treating patients. Whipple was found guilty October 12 of practicing medicine without a license and was sentenced to pay a fine of \$50 and costs, making the total judgment about \$100. The defendant asserts that he will appeal the case.

## GENERAL.

**Experiments with the Milk of Malta Goats.**—It is reported that the Department of Agriculture is to experiment in typhoid fever with the milk of goats recently imported from Malta. The goats were subjected to a rigorous quarantine and have been carefully inspected to determine their freedom from Malta fever.

**Cholera in the Philippines.**—A cable report from the Philippines states that cholera is practically wiped out. From August 23 to October 14 there were 713 cases and 553 deaths. In Manila the cases and deaths are thus classified: Americans, 11 cases and 6 deaths; Filipinos, 180 cases, 162 deaths; foreigners, 19 cases, 15 deaths; Chinese, 4 cases and 4 deaths.

**Physician for Indian Service.**—The United States Civil Service Commission announces an examination Nov. 22, 1905, to secure eligibles from which to fill a vacancy in the position of physician (male), at \$1,000 per annum, San Juan Indian Agency, N. Mex.; another, at \$900 per annum, at Fort Bidwell, Cal., and similar vacancies as they may occur in the Indian service. As the commission has experienced considerable difficulty in securing eligibles for this position, but five having been secured as the result of the examination held on Sept. 13, 1905, qualified persons are urged to enter this examination. This examination is open to all male citizens of the United States between the ages of 25 and 55. Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of any civil service board of examiners, for application form 1312.

**Yellow Fever News.**—Except at Pensacola the epidemic is practically at an end.—At New Orleans there was a final general fumigation on October 15.—The steady decline in the number of new cases has continued.—On October 17 it was announced that the Emergency Hospital at New Orleans would receive no more cases.—On the same date eleven acting assistant surgeons who had received local appointments were released.—On October 22 there were only two new cases reported in New Orleans and no deaths.—All Mississippi quarantines were raised on October 23.—Texas has raised



its quarantine except as against infected points.—At Pensacola the epidemic is yet active, due wholly to the fact that a large element in the population will not co-operate in fumigation and other sanitary measures, especially the reporting of cases.—Castleberry, Ala., has had two cases of yellow fever, the infection coming from Pensacola.—Georgia has extended its quarantine to include several Alabama counties.—Knoxville, Tenn., has discontinued train inspection.—Arkansas has modified its quarantine only slightly.—Cincinnati has discontinued its recently established train inspection system which employed thirty physicians.

**Cholera in Manila.**—During the week ending September 2 there were 70 cases of cholera in Manila, with 56 deaths. During the following week, according to *Public Health Reports*, there were 78 cases, with 69 deaths. The first cases of cholera were of the most virulent form. Those who were attacked succumbed in a few hours, and all had the type ordinarily described as cholera sicca. The disease has not shown a tendency to localize itself in any one portion of the city, and, so far, there has been no second case to appear in any house in which the disease has been discovered. This would indicate that the disinfecting measures which are being practiced have been effective. Those portions of the city which are the most crowded, and in which the so-called "slum" population resides, so far have been but slightly invaded. In fact, the disease has appeared sporadically in every portion of the city, and the persons who have been attacked up to the present time have been generally of the better classes. So far, there have been 7 Americans (?) attacked, with 3 deaths; also 6 Europeans, and, in proportion to the population, there have been more cases among the Americans and Europeans than among natives. There is as yet no exact evidence as to where the disease started. It is known, however, that cases occurred in Taguig and Pateros, which are small villages near Lake Laguna in the interior of Luzon, at least one week before the disease was found in Manila. Numerous theories have been advanced as to its origin in these places, but no satisfactory conclusions have been reached. Among others is the fact that the body of a person who died of cholera was exhumed at Pateros shortly before the outbreak. Another is that possibly the conditions of some of the wells near Pateros are such that cholera germs may live in them indefinitely, and, at times, for some unknown reason, assume a virulent form. Many medical men of the islands are now inclined to believe that the disease is indigenous to the Philippines. One point has been observed which should receive consideration by laboratory workers, and that is that for some time before the outbreak persons died with all the clinical symptoms of cholera, and on postmortem examination the bodies presented the gross pathologic lesions of the disease, but no organisms were found at the bacteriologic examinations which were made. The quarantine of interisland vessels has been continued, and it is hoped that it will be effective at least in preventing the spread of the disease to other islands. Army medical officers outside of Manila are co-operating with the Public Health and Marine-Hospital Service in maintaining a quarantine inspection of vessels. Major-General Corbin has tendered the services of such army medical officers for this purpose as may be spared. In view of the experience gained in the last cholera epidemic it was not deemed advisable to institute a land quarantine or to place a cordon around the city of Manila or other infected districts, because the lay of the land is such that to make such a quarantine effective at least 100,000 men would be required. The fact that no such rigid measures have been adopted has been of the greatest assistance to the board of health in gaining the co-operation of the natives. So far this course has been fully justified, because the disease has not spread to the provinces with anything like the rapidity with which it did in the former epidemic. The only places outside of Manila at which cases have occurred are Pasig, Taguig, Pateros, and Jala Jala in Rizal Province, Malabon in Bulacan Province, and Guagua and San Fernando in Pampanga Province. So far, the total number of cases in the provinces has not been as great as that in Manila. The policy of the insular board of health has been to combat the epidemic by a campaign of education rather than by rigid measures. Circulars are being sent out by the bureau of education with instructions that the teachers in the schools in every town and village throughout the Philippine Islands shall teach the contents to their pupils. The board of health likewise sends them to all its officials located in all parts of the islands. In addition, the various religious orders are also sending out the circular with the request that its contents be diffused among the people.

## CANADA.

**Health of Montreal.**—In Montreal during the week ending October 14, 21 cases of diphtheria were reported, 8 of typhoid fever and 12 of tuberculosis. The total mortality during the week was 85, and there were 66 births.

**Typhoid Fever in Winnipeg.**—There is an alarming epidemic of typhoid fever in Winnipeg. There are said to be 334 cases in the two hospitals. The attention of the Manitoba Board of Health has been directed to the matter and Drs. Gordon Bell and R. M. Simpson are making an investigation into the causes of the epidemic.

**Medical Organization in Lower Canada.**—The physicians of Wolfe County, Canada, have organized and held their first meeting in September. Dr. A. Thibault of Wolton is honorary president, and P. Chicoine of Israeli, acting president. A general rate for fees was adopted, and a motion presented to the effect that the secretary correspond with the secretaries of other medical associations to agitate the following proposition, viz.: That the physicians of said association guarantee to cast their vote against every member of congress who works for the passage of a private bill licensing any irregular, unless the said bill has first been approved and recommended by the "Collège de médecins et chirurgiens de la province de Quebec." The *Bulletin Méd. de Quebec* for September contains the detailed account of the proceedings.

**Personal.**—Dr. Claude Freeman, formerly superintendent of the Hamilton (Ont.) City Hospital, has gone to China, where he will be assistant to Dr. McCartney, superintendent and surgeon of the General Hospital at Chung King, province of Sze-Chuan.—Dr. J. H. Bell, ex-mayor of Kingston, Ont., has been appointed health officer of that city in succession to the late Dr. Fee.—Dr. Charles Elliott of London, Ont., will go to China as a medical missionary at the end of October.—Dr. George D. Porter, Toronto, has gone abroad for a year's postgraduate work.—Dr. Halden Love, late of Carlton Place, Ont., but now of North Dakota, has lost the sight of both eyes through a gunshot injury, and as a consequence has given up the practice of medicine.—Dr. Nickle of Mather, Man., has succeeded to the practice of the late Dr. George Riddell of Crystal City, Man.—Dr. Mulvey of Minto, Man., has been taking a postgraduate course in Chicago and will locate in Crystal City, Man.

**Hospital News.**—The total number of patients treated in the General Hospital, Winnipeg, during the week ending October 14 was 379, of whom 262 were men, 76 women and 41 children. In the outdoor departments the number treated was 103.—At the beginning of September there were 60 patients in the Vancouver General Hospital; 60 were admitted during the month; 49 were discharged cured, 7 died, and there were left in the hospital September 30, 64 inmates.—The estate of the late Hart A. Massey, Toronto, has donated \$100,000 to the Toronto General Hospital. This gift now brings the available amount for the new hospital up to \$979,000. The total amount required for the project is \$1,200,000 to \$1,400,000.—Mr. Thomas McCormack of London, Ont., has made arrangements to erect a handsome seven-roomed cottage on the grounds of the Muskoka Cottage Sanitarium. The expenditure for this purpose will amount to \$6,000.—The Victorian Order of Nurses in Canada does work in 16 districts and has 17 hospitals, where over 6,000 patients have been treated.

## FOREIGN.

**Yellow Fever in French Guiana.**—It is reported that 2 cases of yellow fever have occurred at one of the convict stations on the Maroni River.

**Plague in China.**—The American consul general in Niu-chwang reported October 12 that cases of plague had occurred in that city with one death. The disease is supposed to have originated in Antung. Traffic in the interior is temporarily interrupted.

**Cholera in Europe.**—The *St. Petersburg. Wochft.* states that it has been officially announced that 27 cases of cholera were reported in Russia between September 1 and 10, with 17 deaths. The cases were scattered through three districts, Warsaw, Lodz and Lomsha.

**Monkeys for Neisser.**—A hundred monkeys of all kinds and sizes have been embarked at Singapore en route for Breslau, destined for Professor Neisser's experimental work in inoculation of syphilis. They have been ordered by the German government and include some just caught and others that have already been domesticated by the Malays as shown by the earrings they are wearing. Neisser is still in Java, but he will soon follow this consignment.



**Italian Prize Awarded to Vulpius.**—The international "King Humbert" prize of \$500 for the best work or the best discovery in the domain of orthopedic surgery during the last five years was awarded this year for the first time. The recipient was Prof. O. Vulpius of Heidelberg, Germany, for his work on the transplantation of tendons to relieve paralyses. The prize money has been presented by Vulpius to a home for cripples now being erected in Baden.

**Medals Presented by Tuberculosis Congress.**—The newly endowed "tuberculosis medals" were awarded at the closing session of the Tuberculosis Congress at Paris. The two gold medals were given to Robert Koch of Germany and to Paul Brouardel of Paris. Silver medals were given further to Billings of New York, Bang of Copenhagen, Broadbent of London and von Schroetter of Vienna. It was officially announced the next congress will be held in this country in 1908.

**Another Russian Medical Congress in Trouble.**—The Congress of Russian Psychiatrists met at Kiev in September, with Professor Ssikorski in the chair. About 130 members assembled, but at one of the meetings a large crowd of students and others gathered outside and demanded entrance. They at once proceeded to turn the meeting into a political demonstration, demanding the release of certain persons who had been recently arrested by the authorities. The president had to summon police aid and adjourn the congress.

**Cholera in China.**—Acting Assistant Surgeon Ransom reports from Shanghai that he has learned from a fairly reliable source that there were about 400 deaths in that city from cholera of natives in one guild (society), which has a membership of about 200,000, though at present the disease seems to be in abeyance. Dr. Ransom states that there were probably about 600 deaths from this disease during July, August and September, and that this has been an exceptionally healthy year, so far as cholera is concerned.

**Plague and Cholera in India and Burmah.**—In India during the week ended Aug. 26, 1905, there were 2,873 cases of plague, with 2,050 deaths, and during the week ended Sept. 2, 1905, 3,157 cases and 2,330 deaths. It is reported from Rangoon that the destruction of rats was continued with unabated vigor during August. During that month 13,128 rats were destroyed. Total number of rats killed since February, when the epidemic commenced, to the end of August, was 142,985. Acting Assistant Surgeon Eakins reports that during the week ended Sept. 2, 1905, there were 28 deaths from cholera and 11 deaths from plague, and during the week ended Sept. 9, 1905, 34 deaths from cholera and 15 deaths from plague in Calcutta.

**Hospital for the Blind in Porto Rico.**—An asylum for the blind was opened at Ponce, P. R., the beginning of October. It was dedicated by Governor Winthrop and the Stars and Stripes were raised over the building by Mrs. Winthrop while a native band played "The Star Spangled Banner." The building, with its modern furnishings, is worth \$40,000, and is on an excellent site on a hill overlooking Ponce and the Caribbean Sea. The furnishings are from the United States throughout. As the work expands the capacity will be enlarged. The legislative assembly of Porto Rico has provided for maintenance of 150 inmates and 30 employes for the present fiscal year. It is a noteworthy fact that every officer and employe of the new asylum is a Porto Rican. It will be at the start both a hospital and a home. The most urgent cases from the various municipalities will first be selected and by degrees as the cures are effected, the demand for a hospital of this class will diminish and more importance will be given to its character as a home for the incurable.

**Official German Report on Relations Between Human and Bovine Tuberculosis.**—The Imperial Board of Health of Germany has given out for publication the report of the committee which has been studying during the last two years, under governmental auspices, the relations between human and bovine tuberculosis. The committee distinguishes two types of tuberculosis in warm-blooded animals, the tubercle bacilli of fowl tuberculosis and the tubercle bacilli of mammal tuberculosis. The tubercle bacilli of mammal tuberculosis can be further classified as the human and the bovine. From one to two years of experiments and tests failed to show any indications of transformation of any one of these types into another type. The attempts to inoculate cattle with human tuberculosis all resulted negatively. Nine cases of tuberculosis of the bovine variety were discovered among 67 persons with tuberculous lesions, and in 2 both types of bacilli were found. The bovine cases were all in children under the age of 8, and in 6 of the cases infection had evidently been by way of the intestines. In 2 cases the lesions were in the neck. The bovine tubercle bacilli were found in or near the entering point of

the bacilli or in the glands near by. The bovine bacilli cultivated from the human lesions showed no differences in any respect from those cultivated directly from cattle. The report further states that tuberculosis in cattle was found to be caused by bovine tubercle bacilli from cattle or other domestic animals; man being also liable to be a source of infection in the rare instances when affected with tuberculosis of the bovine variety. Pigs are susceptible to both bovine and human tuberculosis infection, but the disease in swine is almost invariably of bovine origin. Feeding swine with swill from dairies is an important source of their infection with bovine tuberculosis. Tuberculosis in other domestic animals is generally traceable to infection from cattle. In poultry tuberculosis is due to infection with the tubercle bacillus specific for fowls, and this plays no part in the spread of tuberculosis among human beings. In man tuberculosis is generally due to infection with human tubercle bacilli. Infection occurs mainly by transmission from man to man, but there is also a possibility that it may be transmitted by pork from swine infected with human tubercle bacilli. The fact that bovine tubercle bacilli are sometimes found in human tuberculous lesions shows that the human body is capable of infection from the secretions, excreta or meat of tuberculous domestic animals. As a rule, the action of the bovine tubercle bacilli in man is limited to a pathologic process at the portal of entry and the adjacent glands, or in the latter alone, but cases are known in which the process has become general and fatal. The report concludes by pointing out the danger of infection from milk and meat from tuberculous animals unless the bacilli are killed by heating. The report is published in full in the *Deutsche med. Wochft.*, October 5. It is signed by H. Kossel and R. Weber. The former is now professor and director of the Institute of Hygiene at Giessen; both are experts in the service of the imperial Board of Health. Kossel delivered one of the main addresses in the section of surgical pathology at the recent International Tuberculosis Congress at Paris, his being the third address on the subject of "Comparative Study of Various Tuberculoses."

**The Communication of von Behring to the Tuberculosis Congress.**—At the closing session of the congress von Behring announced that in the course of the last two years he had established the existence of a curative principle entirely different from the antitoxic principle. It is the essential element, he stated, in the immunizing action of the vaccine with which he has been successfully combating bovine tuberculosis. Four years of experience have demonstrated the efficacy of the bovovaccine, and it is being applied now on a large scale in agricultural circles. "The curative principle," he continued, "depends on the impregnation of the living cells of the organism with a substance derived from the virus of tuberculosis, which I call TC. When the TC has become an integral part of the cells of the organism of the animals treated with it, and has become transformed by these cells, I designate it as TX. In the bacillus of tuberculosis the TX, or, rather, the TC pre-exist as an agent endowed with a large number of extraordinary properties. In the bacillus this agent has the function of a formative substance. It has also fermentative and catalytic properties. It can fasten itself by contact on other substances—a phenomenon called 'adsorption'—and has assimilating properties, in short, it represents the 'quasi vital principle' of the bacilli. In cattle, in the process of rendering them immune to tuberculosis, the TC is freed from accidental substances. It exerts a symbiotic action inside the cells of the organism, especially in the cellular elements which are derived from the germinal centers of the lymphatic tissue. The presence of the TC is the cause of the supersensitiveness to Koch's tuberculin, on one hand, and of the protecting reaction against tuberculosis, on the other hand. This conception of a cellular immunity is entirely different from the antitoxic humoral immunity." THE JOURNAL of Oct. 17, 1903, page 994, presented Behring's announcement in regard to vaccination of cattle against tuberculosis. (See also page 620 of volume xlii.) His experience has convinced him that the technic was inapplicable to man, it being unwise to inject live tubercle bacilli into human beings for therapeutic purposes. He continued, in his congress address: "The discovery of this curative principle is destined, I believe, to protect human beings threatened with phthisis against the injurious action of tuberculous infection. As I studied it more and more I found that the relations between vaccination and immunity became plain, and that it solved one after another of the puzzling problems in regard to the nature and mode of action of antidiphtheria serum. After the discovery of the curative principle my efforts were directed to produce it *in vitro* and thus spare the cells of the organism the arduous and sometimes dangerous task of



elaborating the TX under the influence of the TC. This I have accomplished, substituting passive immunization for the active immunization of my boovaccine. The TC has to be freed from the substances which interfere with its therapeutic action. There are three groups of such substances in the body of the bacillus. The first is a substance which has a fermentative and catalytic action and is soluble in water. The toxic elements in Koch's tuberculin are derived from this substance. It possesses all the physical, chemical and tinctorial properties of volutin, and I call it TV. A single gram of this substance in the dry form is more powerful than a liter of Koch's tuberculin. The second substance is soluble only in a neutral salt, such as a 10 per cent. saline solution. I call this substance TGL, as it is like globulin. The third group includes various non-toxic substances, soluble only in ether, alcohol, chloroform, etc. After the bacillus has been freed from these three groups of substances it still retains its shape and staining properties, but it can be modified into an amorphous substance which is absorbed by the lymphatic cells. The amorphous substance is elaborated and metamorphosed by these cells and they become oxyphile and eosinophile. Parallel with this transformation of the cells under the influence of the amorphous substance, the TC, the organism acquires the condition of immunity. One of the fundamental facts is that while the TC is not capable of reproduction, it yet has the power of inducing the formation of the tubercle. The tubercle thus created never undergoes caseation and never softens. It corresponds exactly to 'Laennec's tuberculous granulation.' In certain conditions the TC may also induce gray or gelatiniform infiltration." In conclusion, Behring recalled that four years elapsed after his communication in regard to antidiphtheria serum before the profession at large accepted it. Its acceptance was hastened by Roux's cordial backing, and he hopes that he may be fortunate enough to obtain such a friend for this new remedy, with as much conquering force and the same disinterestedness above all suspicion. He intends to publish a book next year with the title "Modern Phthisiogenetic and Phthisiotherapeutic Problems Illuminated by History." He remarked in regard to it: "The part of the work devoted to the therapeutic aspect of the question will not appear until the therapeutic efficacy and harmlessness of my new remedy shall have been demonstrated by clinicians better versed than I am in the knowledge of the individual varieties of pulmonary phthisis and its prognosis." . . . "I hope that all the scientists to whom I shall entrust my remedy, after my return to Marburg, for them to try it on animals, will obtain in their laboratories as good and even better results than my own."

#### LONDON LETTER.

##### How to Combat Consumption.

In a letter to the *Standard* Dr. Tolniewski advocates a modification of the method of combating consumption which is in vogue on the continent. The discussion on the subject, he thinks, should not be confined to the medical press. There are at present in Great Britain 200,000 poor consumptives and about 1,000 beds for them, which means that only 1 in every 70 can be treated per annum. The annual cost to the nation from tuberculosis amounts to \$150,000,000, and the cost of relieving the pauperism resulting therefrom amounts to another about \$5,000,000. Would it not be wiser, he asks, to spend this sum in curing the patient than in relieving the pauper? The most simple and effective way to do this would be to organize in all the urban centers special dispensaries for the prophylaxis of tuberculosis. The principal mission of these dispensaries would consist not only in giving free consultations and medicine, but in attracting and detaining poor consumptives or those suspected of consumption, giving them food, clothes, etc., when they are obliged to interrupt their work, disinfecting their homes, washing their linen, and sending to sanatoriums those requiring special treatment. The mistake has been made of erecting palatial sanatoriums at great expense while the much less expensive special dispensaries have been neglected. Often it will be necessary not only to treat a patient medically, but to provide him and his family with the necessities of life, and to rectify the hygienic conditions of his home. The means of assistance might be classified as follows: First Class.—Those receiving meat, coal, milk, bread, vegetables, eggs and part of rent. Second Class.—Those receiving milk, bread, meat, eggs, vegetables and 5 shillings a month toward rent. Third Class.—Those receiving milk and eggs. Under this plan the budget of a dispensary which assisted annually 500 consumptives, cured one-fourth of them and improved the health of more than half the others, without many of them ceasing their daily work, would be considerably less than that of a sanatorium with 50 beds.

## Pharmacology

### Secret Proprieties and Prescription Writing.

There is a vast and ever-increasing number of so-called "ethical preparations" with fanciful names, samples of which, with much seductive literature, are poured into every physician's office, and which he is assured by the silver-tongued detail man will be just the thing for this or that obstinate case, which the physician happens to have on hand. The sample is made use of, perhaps the patient feels better the next day, and the physician continues to use the preparation until another remedy takes the place of the first. It is so much easier to write for the proprietary by its euphonistic, and perhaps easily remembered name, than to write a prescription, that many physicians use nothing else in their practice; and then, too, there are many physicians, particularly among the recent graduates of some of our best medical schools, and this is the point we would particularly emphasize, who can not write prescriptions at all. The Minnesota State Board of Medical Examiners, doubtless other state boards have had the same experience, have observed during the last few years many candidates who passed excellent examinations in the other branches displayed hopeless ignorance in their answers to questions concerning materia medica, and particularly concerning prescription writing. There is evidently something radically wrong in the teaching of materia medica in our medical schools, and it is quite time for a radical change in these methods. There should be regular, systematic drilling in prescription writing, even if the time for this work must be found at the expense of some of the more spectacular instruction, in, for instance, major surgery, which the students now receive. The subject of prescription incompatibilities, which now receives but little attention, should be made much more prominent, and we would also suggest that a few practical lectures and demonstrations on the subject of proprietary remedies would be of great value. Let the students, for instance, be taught that "antikamnia" consists of acetanilid, 68 parts; caffeine, 5 parts; citric acid, 5 parts, and bicarbonate of soda, 20 parts, and that it costs but a few cents an ounce. They will not then be so likely to make their patients pay a dollar for what the druggist can dispense for 25 cents. Let the other fashionable proprieties be discussed in the same manner—the Council on Pharmacy and Chemistry of the American Medical Association is rapidly accumulating the material for such teaching—and we feel sure that those who graduate in medicine, having had these facts impressed on them, will not prescribe proprietary remedies, except in those cases where they have good reason to believe that the proprietary is the best thing to prescribe.—*St. Paul Medical Journal*.

### The Propaganda Against "Patent" "Proprietary" Medicines.

Of course, our readers realize the fact that a propaganda is being conducted against the "patent-medicine" evil of this country, and that those who are making fortunes out of this traffic in human health and life are thereby greatly agitated. The leaders in the protest against "patent medicines" are the *Ladies' Home Journal*, and *Collier's Weekly*. There are influential laymen quietly but effectively aiding the cause, but, we are sorry to say, physicians are not assisting as they should. This, however, is another story.

The "patent-medicine" men and the makers of proprietary remedies are united in an organization known as the Proprietary Association of America, and the fact that the majority of the manufacturers of these remedies are among its members is sufficient to know that it is a power as far as dollars and cents are concerned. This association is using every effort to stem the tide, and one way of doing it is to influence public opinion.

Recently Mr. J. A. Patten of the Chattanooga Medicine Company—manufacturers of Wine of Cardui, etc., and who was announced as representing the Proprietary Association, delivered an address before the Tennessee State Pharmaceutical Association, which was a defense of "patent medicines." This address has appeared, either in full or in abstract, in



newspapers all over the country, but especially in the South.

On reading this address one will be impressed with the fact that the "arguments" sound familiar; that they have been heard before. And sure enough they have been, for are they not the same that the secret "proprietary" manufacturers use and that appear so often in medical journals which defend the prescribing of proprietary medicines? Of course, they—the manufacturers and so-called medical journals—do not defend "nostrums," but secret proprietaries. Incidentally, and in parentheses, we have always been at a loss to know how to distinguish between a secret "proprietary" and a "patent medicine." Reading Patten's address we are still more at sea, for he calls the class of medicines he defends "proprietary."

We quote from the Mobile (Ala.) *Register* and take the liberty of interjecting a word here and there to point a moral as well as to adorn the tale. In other words, we apply Mr. Patten's remarks to the question as it relates to so-called proprietary preparations and to physicians:

"Mr. Patten said that he felt inclined to speak a few words about the so-called 'patent-medicine curse,' inasmuch as we have recently had unusually severe and persistent attacks on the manufacturers of proprietary [patent] medicines from influential publications and prominent medical organizations. He said one widely circulated paper [*Collier's Weekly*] had gone so far as to state that these manufacturers and the newspapers were in a 'criminal conspiracy' to defraud and poison the public."

"We first observe that it is not from the public [medical profession], the great mass of people [physicians] who use medicines, that these criticisms arise. Note the source from which they come, and the self-appointed guardians appear for a competent people [physicians] who have not asked for such protection."

How very, very familiar this sounds.

"It must also be admitted by fair-minded people [physicians] that every self-interest of the manufacturer prompts him to put out a remedy which is not only meritorious, but safe. However unscrupulous he may be at heart, common sense teaches him that only as he produces an article that will 'repeat'—which will meet the needs of the people who buy it [physicians who prescribe it]—can he reach success."

"Admitting that there are fakes in medicine as in every other line of trade, is it not true that the leading proprietary [he means 'patent'] medicines that have stood the test of time are of known therapeutic value? Are they not prepared in laboratories of the highest grade, under the care of skilled pharmacists, and made from approved formulas, which in many instances have been the especial pride and specific of some successful physician or chemist? [This does not sound so familiar.] Have they not been tried in the crucible of public opinion and been found satisfactory by the people [physicians]? For otherwise would not the people [physicians] discontinue using them? Are they not generally obtained at a mere fraction of the cost of the same class of medicines when obtained through a physician's advice and prescription? Are not the millions of people [thousands of physicians] who use them satisfied?"

"Then there is the formula bill. This makes it necessary for every proprietary [patent] medicine house to print the formula of the medicine on the label. With no real benefit to the public [medical profession], this would open the door to a flood of imitators and frauds, who would endeavor to profit by the advertising and reputation of the originator of the real formula. It would do the public [medical profession] not one atom of good and only result in the demoralization of trade conditions, besides making it possible for thieves to steal the stock in trade of an honest manufacturer." [The same old argument.]

"In all I have said in speaking of proprietary medicines, I do not refer to the 'fake' concoctions of cocaine or other admittedly harmful drugs or 'booze,' put up in the guise of *bona fide* remedies. They are no more proprietary medicines than counterfeit bills are real dollars."

This sounds natural, too. Any manufacturer of secret preparations, whether these be "patent" medicines or "proprietary," will acknowledge that there are some of these remedies which are not good and which should not be used."

We heartily recommend this address by the manufacturer of Wine of Cardui to the secret proprietary manufacturers of the United States and to the medical journals which defend them. The foregoing quotations—we have only space for a few samples—will show how easily this address might be modified so that it could be used as "literature" to convince physicians that the use of secret proprietary medicines is all right.

In this connection, it might be interesting to know what the Chattanooga Medicine Co. manufactures and their manner of advertising. So far as we can learn, their chief product is "Wine of Cardui," and the following advertisements from daily papers which are supposed to be reputable and which are received in the homes of respectable people will indicate what it is:

"But, as we have stated, it is the *weak* woman who suffers such fearful pains at childbirth. Perfectly sexed, strong, healthy women don't.

"The Indian mother, on the trail, stops for an hour or so by a river or creek, and then starts on with the new papoose on her back to catch up with the rest of the tribe, which has not even delayed its march to await her.

"It is possible for you to build up your female organs, functions and constitutions, to such a state of vital, hearty health, that the Crown of Womanhood will come to you, without its Cross or Thorns.

"To accomplish this by natural methods treat yourself with Wine of Cardui, the scientific, specific, health tonic for women.

"Cardui, a pure extract of medicinal herbs, exerts a natural, restorative action on the weak female functions, regulates all irregularities, relieves periodical pain, restores falling womb by strengthening the womb muscles, and revitalizes the entire female constitution.

"In 70 years it has relieved the sufferings of over a million women."

Here is another advertisement clipped from a current daily newspaper:

"The best wife is a good chum or companion, and in the right wife before age and beauty comes health, or in the power and beauty of superb womanhood man finds his best mate. A well-sexed woman wins success also in business, literary or social life—where the weak-sexed one fails. What is your chance for success or happiness in married or other spheres of life? Are you a victim to any of the many forms of disease peculiar to women, which prevents you from tasting to the full the enjoyment and happiness that is due you? If so, cure yourself. It can be done at home, by simple, safe and reliable means—by taking Wine of Cardui, the successful tonic for sick women. Cardui relieves periodical pain, *pulls up falling womb* [italics ours] and builds up health tonicity. Over a thousand women a month testify to its curative powers. Are they all mistaken?"

Here is an advertisement from the *Chicago Tribune*:

"The knell of health is tolled for many a poor woman when she enters the married state. Thousands write: 'Have not seen a well day since.' The manifold duties of married life are too hard for most weak women, but relief is easily obtained by just taking Wine of Cardui. Has cured a million women. No other medicine in the world has done so much good to sick women as Cardui. It relieves pain. Remember, this is the medicine you have heard so much about. It will restore your health as it has restored health to a million others. Ask for it. Get it. Take it.

"Every druggist sells Cardui in \$1.00 bottles."

### Pharmacology and Therapeutics of To-day.

The lay public has, for a long time, regarded the dictum of the medical man as authoritative, and even if an occasional cavil arises, it is individual and not general. Indirectly, the profession itself is responsible for the abuse of the general public by proprietary and patent medicine concerns. Any druggist will corroborate the statement that the bulk of his stock of proprietary medicines is kept for the physician's prescriptions, rather than for dispensing to the demands of ordinary counter trade. The neglected shelves of most doctors' offices are full of an assortment of these things, and if the public were not first reached through the medical profession, a regular staff of detail men would not be employed and salaried. When even the highest medical office in the gift of the profession is employed to exploit a proprietary medicine, even if a mild apology did follow, it argues the value the manufacturer places on such indorsement. And the evil grows. Every one of these compound proprietary preparations carries reports in abstract or out-and-out indorsements, signed by the physicians themselves, often men of recognized authority in their own communities. Of course, the encouragement to further traffic in the medical man's gullibility follows.

These are the conditions as they exist. It requires only a short step for the remedy, accepted by the physician, to be popularized.

The essential factor in all this is much more radical. The fault lies in the training of the medical man himself. It is not far from the mark to say that nine-tenths of the graduates in medicine know little or nothing of pharmacology. Prescription writing is acquired slowly after practice is begun, and the vast majority of young doctors copy prescriptions of older men, or follow those printed in the texts.

The struggle of the medical student, after his degree, discounts all interest he may have in acquiring any of the elements of a medical education not required in the curriculum. Most medical schools either openly omit all teaching of pharmacy and pharmacology, or else devote a casual lecture or two to expounding the elements. The United States Pharmacopeia is practically unknown to the average medical student and physician, and original prescription writing is as lost an art as Damascus blades.—Editorial in *New Orleans Medical Surgical Journal*, September, 1905.



### Work of the Council Indorsed.

At the recent meeting of the Michigan State Medical Society the following resolutions, presented by Dr. H. O. Walker, Detroit, were adopted:

*Whereas*, Last year the Michigan State Medical Society urged the American Medical Association to provide means for determining the exact composition of medicinal supplies of proprietary substances, in general use, and for publishing the same:

*Whereas*, Said American Medical Association has established a "Council of Chemistry and Pharmacy" for this purpose, composed of persons both competent and trustworthy;

*Whereas*, The results already published, foreshadow the great importance of the work, as indicated by the approval of friends, and howls of those fattening on the ways "that are dark" in pharmacy;

*Resolved*, That the thanks of the Michigan State Medical Society be extended to the American Medical Association for putting into practical operation its request, at so early a date, and in so admirable a manner.

*Resolved*, That we urge the Council to push its studies of medicines of unknown composition, as rapidly as possible, and to publish the same, that the individual doctor may better know his tools, that medical journals may have a correct standard in regulating their advertising pages, that honest, open pharmacy may be encouraged, and that outsiders may be attracted to organizations which thus are trying to help them in their work.

At its recent meeting in Atlantic City the American Pharmaceutical Association adopted the following resolutions:

*Resolved*, That the American Pharmaceutical Association, in general session assembled, commends all proper efforts on the part of the American Medical Association to differentiate between the various so-called proprietary remedies with a view of correcting the abuses at present existing in connection with the advertising pages of medical journals.

*Resolved*, That a copy of these resolutions be forwarded to the secretary of the American Medical Association.

## Marriages

DE MOTT RYAN, M.D., to Miss Iva Ballou, both of Virgil, N. Y., October 4.

DANIEL E. CULLERS, M.D., to Mrs. Ida Long, both of Stella, Mo., October 4.

E. VAN HOOD, M.D., to Mrs. Louisa B. Porter, both of Ocala, Fla., September 30.

R. B. STAFFORD, M.D., to Miss Angie Ewing, both of Walnut, Kan., September 27.

HARRY A. JACOBS, M.D., to Miss Naomi Marer, both of Indianapolis, October 11.

OTIS T. WINGATE, M.D., to Miss Mayione E. Astley, both of Philadelphia, October 18.

HENRY H. KAPP, M.D., to Miss Rosa Hege, both of Winston-Salem, N. C., October 11.

FRANK L. GILBERT, M.D., Grafton, Vt., to Miss Elva Mack of Windham, Vt., October 4.

IRVING J. FISHER, M.D., to Miss Gertrude Hall, both of Somerville, Mass., October 6.

WILLIAM H. SLATTERY, M.D., to Miss Florence Marr, both of Lincoln, Neb., October 10.

PERLE CLIFTON IRWIN, M.D., Gibson, Iowa, to Miss Mabel Almira Blake, October 18.

GRANVILLE L. FOX, M.D., to Miss Mamie McDade, both of Gallman, Miss., October 1.

FRANCIS P. PATTERSON, M.D., to Miss Edith Adamson, both of Philadelphia, October 21.

WILLIAM COGSWELL, M.D., Boston, to Miss Miriam G. Clay of Lexington, Ky., October 10.

OLIVER FISHER, M.D., Sloan, Iowa, to Miss Nina Norwood of Denver, Colo., September 9.

EARNEST R. LUCKETT, M.D., to Miss Nellie E. McDonald, both of Marengo, Ind., October 15.

ROSE FAIRBANK, M.D., to LESTER H. BEALS, M.D., both of Ahmednagar, India, September.

JOSEPH K. SWINDT, M.D., Pomona, Cal., to Miss Estelle Martin, at Denver, Colo., October 7.

THOMAS FORD HUEY, M.D., to Miss Mattie Marion Greene, both of Blocton, Ala., October 4.

FRANK WILBUR FOXWORTHY, M.D., to Miss Leila Thomas, both of Indianapolis, October 11.

EARL SURREY PACKWOOD, M.D., to Miss Ethel Lanore Jones, both of Buffalo, N. Y., October 4.

THOMAS P. BODKIN, M.D., to Mrs. Julia Tanforan Pacheco, both of San Francisco, October 8.

WALTER R. EVANS, M.D., Jackson, Ohio, to Miss Anna Lewis of Columbus, Ohio, September 27.

OLEN ROY COOPER, M.D., Banfield, Mich., to Miss Verna Davis of Battle Creek, Mich., October 3.

HAROLD HARGREAVE ROBERTS, M.D., Maywood, Ill., to Miss Leila Lines of Chicago, October 14.

EDWARD P. CROSBY, M.D., Lomira, Wis., to Miss Edwina Burg of St. Anna, Wis., October 24.

JOHN J. CATLIN, M.D., Buffalo, Minn., to Miss Edith Anna Larkin of Alden, Minn., October 17.

M. JEAN WILSON, M.D., Warsaw, N. Y., to Miss Charlotte Capwell of Dale, N. Y., October 12.

HERBERT B. WILLIAMS, M.D., Gladys, Va., to Miss Sue Kabler of Campbell County, Va., October 3.

WILLIAM D. TUCKER, M.D., to Mrs. Isadore Ballou Flanders, both of Newburyport, Mass., June 14.

IRVINE F. P. TURNER, M.D., to Miss Olive Josephine Agnew, both of Titusville, N. J., October 25.

JAMES R. PHARR, M.D., Dunloop, W. Va., to Miss M. Mattee Mulford of Richmond, Va., October 16.

WILFORD W. HAWKE, M.D., to Miss Aimee Josephine Penny-packer, both of Philadelphia, October 7.

ISAAC MOORE, M.D., Alton, Ill., to Miss Elizabeth Foree of Melville, Ill., at Quincy, Ill., October 5.

J. WILLIAM SCHULTZ, M.D., Tremont, Pa., to Miss Eva Viola Zimmerman of Sunbury, Pa., October 4.

JAMES M. FETTERMAN, M.D., Hawthorn, Pa., to Miss Laura B. Ablett of Allegheny, Pa., October 4.

BEECHER FRANKLIN STOUT, M.D., Kansas City, Mo., to Miss Liora Beach of Olathe, Kan., October 18.

HENRY ROSE CARTER, M.D., to Miss Mary Washington Pendleton, both of Ashland, Va., October 18.

EARL ALBERT MOWRY, M.D., Mexico, N. Y., to Margaret S. Brennan of Pompey, N. Y., September 27.

WILLIAM ORLIN COLBURN, M.D., Stuart, Neb., to Miss Ethel Reighter of Kansas City, Mo., October 18.

HORACE RAINSFORD DREW, M.D., to Miss Ethel Bluebell Conover, both of Jacksonville, Fla., October 4.

HARLEY STROHL, M.D., Waggoner, Ill., to Miss Grace Gill of Girard, at Springfield, Ill., September 28.

FRED MINTY, M.D., Woonsocket, S. D., to Miss Mary Caroline Crawford of Sioux City, Iowa, October 10.

HENRIK TILLISCH, M.D., Canby, Minn., to Miss Maud Leamore Stokes of Watertown, S. D., October 4.

GEORGE HUGHES, M.D., Mexico, to Miss Mary Caroline Babb of Philadelphia, at Chester, Pa., October 11.

CORTEZ FERDINAND ENLOE, M.D., Jefferson City, Mo., to Miss Margaret Hammett of St. Louis, October 12.

HARRY GILMER WALCOTT, M.D., Dallas, Texas, to Miss Wayne Howeth of Gainesville, Texas, October 18.

JAMES WILLIAM BEASLEY, M.D., Daleville, Ala., to Miss Lula Virginia Dismukes of Union Springs, Ala., October 18.

PAUL KERNAN, M.D., Big Stone Gap, Va., to Miss Julia Graham Robinson of Graham's Forge, Va., October 12.

HARRY BURTON ROBERTS, M.D., Highland Park, Ill., to Miss Caroline Gertrude Brown of La Grange, Ind., October 17.

FREDERICK S. BURNS, M.D., Boston, to Miss Josephine Lyman Boynton of Newport, R. I., at Middletown, R. I., October 3.

GEORGE KITTREDGE BUTTERFIELD, M.D., Taunton, Mass., to Miss Margaret Florence Fulton of Everett, Mass., October 3.

## Deaths

Robert Henry Harrison, M.D. Cincinnati Medical College, 1846, a member of the American Medical Association, member and vice-president in 1875 and president in 1876 of the Texas State Medical Association; member of the American Association for the Advancement of Science, the South Texas Medical Association and the Colorado County Medical Association; consulting surgeon to, and late medical director of the Atlantic division of the Southern Pacific system; consulting surgeon to the G. H. & S. Ry., a distinguished line officer, inspector general and brigadier general in the Confederate service during the Civil War; an expert of national renown on yellow fever, and one of the best known and most beloved



physicians of Texas, died at his home in Columbus, Texas, October 17, from paralysis, after a short illness, aged 78. Drs. William W. Cunningham, Beaumont; Robert W. Knox, Houston; Frank O. Norris, Eagle Lake; Matthew M. Smith, Austin; Walter Shropshire, Yoakum, and Samuel B. Mac Leary, Weimar, served as active pallbearers, and Drs. David F. Stuart, Houston; John N. Bowers, Columbus; Jaquelin S. Bruce, Eagle Lake; J. Hall Bell, San Antonio, as honorary pallbearers at his funeral.

**Louis A. Malone, M.D.** Northwestern University Medical School, Chicago, 1885, of Indianapolis, a member of the American Medical Association and the Marion County Medical Society; who conducted a sanatorium for several years at Jacksonville, Ill., died at the Indianapolis City Hospital October 14 from cerebral hemorrhage, after an illness of two weeks, aged 47.

**Asa Coleman, M.D.** Jefferson Medical College, Philadelphia, 1854; for four years physician to the Indian Department in the territory of Minnesota, surgeon of the Forty-sixth Indiana Volunteer Infantry in the Civil War, a member of the Loyal Legion, was found dead in his office in Logansport, Ind., October 11, probably from heart disease, aged 72.

**Joseph Huyett, M.D.** Jefferson Medical College, Philadelphia, Pa., 1843, Illinois Army Board, 1862, one of the oldest practitioners in Illinois; surgeon of the Ninety-third Volunteer Infantry during the Civil War; councilman, assessor, collector and supervisor of Milan, Ill., died at his home in that city from senile debility, October 6, aged 85.

**Wellington George Beyerle, M.D.** Jefferson Medical College, Philadelphia, 1853, surgeon of the One Hundred and Forty-first Pennsylvania Volunteer Infantry in the Civil War, for many years treasurer of the Bernville (Pa.) school board, died suddenly at his home in that place, from cerebral hemorrhage, October 15, aged 74.

**Abisha Shumway, M.D.** Albany (N. Y.) Medical College, 1846, one of the organizers of the Keokuk (Iowa) Medical College, and a member of its faculty; surgeon of the Thirty-fourth Illinois Volunteer Infantry in the Civil War, died at his home in Mount Vernon, Ohio, from edema of the glottis, October 9, aged 86.

**John O. McReynolds, M.D.** Jefferson Medical College, Philadelphia, 1849, for many years a member of the Kentucky State Board of Health and health officer of Todd County; one of the oldest practitioners of western Kentucky, died at his home in Elkton October 6, after an illness of three weeks, from senile debility, aged 78.

**George Walter McCallion, M.D.** College of Physicians and Surgeons, Baltimore, 1896, city physician of Elizabeth, N. J., and a member of the Union County Medical Society, died in Alexian Brothers' Hospital in that city from acute uremia, September 29, after an illness of only a few hours, aged 33.

**Charles L. Hart, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1865, hospital steward of the Sixteenth Connecticut Volunteer Infantry and afterward assistant surgeon, U. S. V., in the Civil War, died at his home in Longton, Kan., October 13, aged 62.

**Albert M. Knapp, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1865, of Arlington, Providence, R. I., a member of the Rhode Island Medical Society, died at the Rhode Island Hospital, Providence, from uremia, after a short illness, October 10, aged 63.

**John H. Dickenshied, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1847, said to have been the oldest practitioner in Lehigh County, Pa., died at his home in Plover October 17, from hemorrhage of the stomach, after a short illness, aged 80.

**Alexander G. Lane, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1858, surgeon in the Confederate service and chief surgeon of Winder Hospital, Richmond, Va., during the Civil War, died at his home in Oakland, Cal., October 9, aged 70.

**Norman K. MacKenzie, M.D.** Medical College of Ohio, Cincinnati, 1844, a lifelong resident of Wellsville, Ohio, once postmaster of the city and at one time a member of the state legislature, died at the home of his son in Wellsville, October 13, aged 87.

**Arthur Simonton Lynn, M.D.** Hospital College of Medicine, Louisville, 1901, of Rock Hill, S. C., died at Rock Hill Hospital October 1 from tuberculosis of the intestines, for which he had had an operation in Baltimore, after an illness of two months, aged 29.

**Lowell Holbrook, M.D.** New York University, New York City, 1849, surgeon of the Eighteenth Connecticut Volunteer Infantry during the Civil War; in 1879 a member of the legislature, died at his home in Thompson, Conn., October 16, aged 87.

**John B. Martin, Jr., M.D.** Barnes Medical College, St. Louis, 1902, of Lohman, Mo., died at the City Hospital, St. Louis, October 8, from skull fracture from a blow received during the Veiled Prophet's parade, after an illness of five days, aged 26.

**Frank M. Coates, M.D.** University of Wooster Medical Department, Cleveland, 1871, professor of pharmacy in Baldwin University for two years, township health officer, died at his home in Berea, Ohio, October 7, after a long illness, aged 57.

**Frederick Cole, M.D.** Rush Medical College, Chicago, 1865, formerly of El Paso, Ill., surgeon of the One Hundred and Fifty-first Illinois Volunteer Infantry in the Civil War, died recently at his home in Garden City, Kan., aged 76.

**Ulysses G. Hipp, M.D.** Chicago, 1901, died at his home in Chicago, October 24, from the effects of an overdose of chloral, taken, it is supposed, with suicidal intent, aged 33. He had been despondent owing to continued ill-health.

**August H. Holmgren, M.D.** Royal University of Sweden, 1888, a member of the Mississippi Valley Medical Association, died at his apartments in Canton, S. D., October 17, from diabetes after an illness of more than a year.

**William L. Godbold, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1867, surgeon in the Confederate service throughout the Civil War, died at his home in Knoxville, Miss., October 11, aged 73.

**Vernon G. Culpepper, M.D.** University of Virginia Medical Department, Charlottesville, 1876, died at his home in Portsmouth, Va., October 15, from cerebral hemorrhage, after an illness of a few hours, aged 52.

**Asa Spalding Allen, M.D.** Harvard University Medical School, Boston, 1830, of Cleveland, died at the home of his son in that city September 6, from senile debility, after an illness of one week, aged 94.

**William Jay Gilbert, M.D.** New York University, New York City, 1861, a practitioner of Wayne and Robeson counties, N. C., died at his home in Raeford September 9, from heart disease, aged 62.

**Richard M. Kerley, M.D.** Jefferson Medical College, Philadelphia, 1869, superintendent of the Female Hospital, St. Louis, from 1891 to 1895, died suddenly in his office in St. Louis October 19.

**Franklin B. Kling, M.D.** Baltimore Medical College, 1876, county physician of Dauphin County, Pa., a resident of Steelton, died suddenly at Williamstown, Pa., October 4 from heart disease.

**James Earl Cox, M.D.** Rush Medical College, Chicago, 1896, of Belleplaine, Iowa, died at Canon City, Colo., September 30, from tuberculosis, after an illness of nearly two years, aged 30.

**Robert L. Harris, M.D.** Tulane University of Louisiana, Medical Department, New Orleans, 1891, of Fulshear, Texas, died in New York City, October 11, after a long illness, aged 66.

**Robert Winning Glassford, M.D.** College of Physicians and Surgeons in the City of New York, 1878, of New York City, died in Roosevelt Hospital, New York City, October 18, aged 52.

**James Glasgow Haywood, M.D.** Memphis (Tenn.) Hospital Medical College, 1883, died at his home in Memphis, Tenn., October 4, from malarial fever, after a long illness, aged 43.

**Giles Mebane McAden, M.D.** Baltimore Medical College, of Charlotte, N. C., died in a hospital in New York City October 15 from pneumonia, after an illness of four days, aged 38.

**Thomas M. Hinshaw, M.D.** The Medical College of Indiana, Indianapolis, 1876, died at his home in Indianapolis, October 8, from cancer, after an illness of several months, aged 55.

**Anna Cole Howland, M.D.** New York, 1868, of Poughkeepsie, N. Y., died at Vassar Hospital in that city September 29, a few days after an operation for mastoiditis, aged 73.

**Walter R. Benjamin, M.D.** Bellevue Hospital Medical College, New York City, 1887, died at his home in Great Berrington, Mass., October 16, after a lingering illness, aged 42.

**Henry William Koehler, M.D.** University of Marburg, Germany, died at his home in Louisville, Ky., October 3, from pneumonia, after an illness of five days, aged 80.



Nelson H. Cornwell, M.D. Cincinnati, 1880, of North Amherst, Ohio, died in St. Alexis Hospital, Cleveland, September 21, after an operation for cholelithiasis, aged 58.

Jesse W. Connell, M.D. Bellevue Hospital Medical College, New York City, 1872, died at his home in New Liberty, Ky., October 14, from heart disease, aged 52.

Orletus Palmer Eaton, M.D. Detroit Medical College, 1872, of Detroit, died suddenly from heart disease at his farm at Bloomingdale, Mich., October 4, aged 60.

Lewis O. Ludlum, M.D. Geneva (N. Y.) Medical College, 1867, of West Branch, Mich., died at the home of his son in Ann Arbor, Mich., October 9, aged 70.

Edgar E. Martin, M.D. Memphis (Tenn.) Hospital Medical College, 1902, of Belcher, La., died at Roane, Texas, after a prolonged illness, October 6.

S. T. James, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1898, died at his home in Park Springs, Texas, from typhoid fever, October 14.

Matthew G. W. Jordan, M.D. Medical College of the State of South Carolina, Charleston, 1854, died recently at his home in Ruston, La., aged 80.

George H. Alexander, M.D. Detroit College of Medicine, 1894, was shot and killed by his son near his home in Hot Springs, Ark., October 9, aged 60.

Isaac H. Fry, M.D. Chicago Medical College, 1876, of Chicago, died suddenly in Arcata, Cal., from intestinal paralysis, October 4, aged 57.

Henry H. Boulter, M.D. Illinois, 1884, died at his home in Pensacola from yellow fever, October 3, after an illness of two days, aged 52.

Charles A. Gwynn, M.D. New York, 1888, committed suicide by stabbing himself in the heart, at his home in Auburn, N. Y., October 19.

Benjamin F. Greene, M.D. Cleveland, 1862, of Lynn, Mass., died at the home of his daughter in Peabody, Mass., September 18, aged 83.

J. William Clark, M.D. Medical College of Ohio, Cincinnati, 1870, died at his home in Gertrude, near Augusta, Ky., recently, aged 65.

E. Wendell Foster, M.D. The John A. Creighton Medical College, Omaha, Neb., 1902, died recently at his home in Cedar Creek, Neb.

Joseph W. Karten, M.D. Illinois, 1883, of Gervais, Ore., died at the Salem Hospital September 27, from septicemia due to a carbuncle.

Homer Bryan, M.D. Ohio, 1892, died from tuberculosis at his home in Beaver Falls, Pa., October 15, after a long illness, aged 48.

Ben H. Brodnax, M.D., died at his home in Brodnax, La., October 17, from typhoid fever, after an illness of six weeks, aged 73.

Franz Bacher, M.D. Heidelberg, Germany, 1848, died at his home in Quincy, Ill., October 15, from senile debility, aged 77.

Oscar E. B. Ewell, M.D. College of Physicians and Surgeons, Baltimore, died at his home in Marion, Md., October 6, aged 49.

Preston Bishop, M.D. Medical Department, University of Cincinnati, 1863, died at his home in Sligo, Ohio, October 15.

Edmund J. Howard, M.D. Rush Medical College, Chicago, 1888, of Corydon, Iowa, died at Saline, Ore., September 22.

Joseph W. Anderson, M.D. Jefferson Medical College, Philadelphia, 1862, died recently at his home in Ardmore, Pa.

Elizabeth Irwin, M.D. New York City, 1894, of New York City, died October 13, three weeks after an operation.

William H. Mansell, M.D. Atlanta (Ga.) Medical College, 1875, died at his home in Walthrall, Ga., October 1.

Bazil George, M.D. Medical College of Alabama, Mobile, 1872, died at his home in Enterprise, Miss., October 3.

Joseph W. Dostal, M.D. Rush Medical College, Chicago, 1892, died at his home in Chicago, October 4, aged 36.

Albert Arendt, M.D. Illinois, 1896, died at his home in Bloomington, Ill., October 22.

J. M. Gealy, M.D. Cincinnati, 1860, died recently at his home in Joseph, Ore., aged 72.

## State Boards of Registration

### COMING EXAMINATIONS.

Nebraska State Board of Health, State House, Lincoln, November 8-9. Secretary, George H. Brash, Beatrice.

Board of Registration in Medicine of Massachusetts, State House, Boston, November 14-15. Secretary, E. B. Harvey, Boston.

Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.

State Board of Health of Louisiana, New Orleans, November 14-15. Secretary, F. A. Larue, New Orleans.

State Board of Health of West Virginia, Clarksburg; November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.

**Illinois May Report.**—In the report of the examination held at Chicago, May 3-5, 1905, published in THE JOURNAL, August 19, the general average attained by representatives of Rush Medical College was given as 88.3; this was an error, it should have been 87.4. The averages given for the other schools were as follows: Northwestern University, 87.6; American College of Medicine and Surgery, 81.4; Bennett Medical College, 82.2; College of Medicine and Surgery, 81.8; College of Physicians and Surgeons, Chicago, 84.2; Hahnemann Medical College, Chicago, 82.3; Illinois Medical College, 82.1; Jenner Medical College, 81.2; National Medical University, 79.

**Oklahoma September Report.**—Dr. J. W. Baker, secretary of the Territorial Board of Medical Examiners, reports the written examination held at Guthrie, Sept. 27, 1905. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 66.6 in each branch. The total number of candidates examined was 22, of whom 17 passed and 5 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per Cent.
American College of Med. and Surg. ....	(1905)		88.4
University of Buffalo .....	(1902)		78.1
Med. Col. of Alabama .....	(1883)		74.1
University of Michigan, Homeo. Med. Coll. ....	(1905)		77.8
Kansas City Med. Coll. ....	(1905)		74.1
Northwestern University Med. Coll. ....	(1905)		77.1
College of P. and S., Dallas, Texas .....	(1905)		69.4
Eclectic Med. Inst., Cincinnati .....	(1890)		72.6
University of Vermont .....	(1899)		84.5
College of P. and S., Chicago .....	(1886) 67; (1905)		72.1
University Med. Coll., Kansas City, Mo. ....	(1905)	74.4,	78.2
University of Tennessee .....	(1903)		69.1
College of P. and S., Des Moines .....	(1896)		78.4
Hahnemann Med. Coll., Chicago .....	(1905)		76.1
Memphis Hospital Med. Coll. ....	(1904)		68.4

The following questions were asked:

#### OBSTETRICS AND GYNECOLOGY.

1. Define menstruation, vicarious menstruation, vitellus, allantois, amnion.
2. Give principal differences between the male and female pelvis.
3. Name the bones of the pelvis and define false and true pelvis.
4. Give the physical changes that occur during pregnancy.
5. Describe the human embryo at the second, fifth, seventh and ninth months, giving size and weight.
6. Define morning sickness, cause, appearance, duration and treatment.
7. Name the presentations liable to be met in labor; dispose of one abnormal one.
8. Define abortion, miscarriage, premature delivery, ectopic gestation, *caput succedaneum*.
9. Give your management of a case of confinement from the time your services are engaged until the case is discharged.

#### CHEMISTRY AND URINALYSIS.

1. Define element, atom, molecule, a salt.
2. In how many forms do we find matter in nature?
3. Define organic chemistry, inorganic chemistry.
4. What is the essential element of all acids?
5. Classify acids and name three of each class.
6. Explain the process of combustion.
7. Name the presentations liable to be met in labor; dispose of compounds used in medicine.
8. Give chemical antidote for bichlorid of mercury, carbolic acid.
9. Give common name of the following chemicals, NaCl, HNO<sub>3</sub>, MgSO<sub>4</sub>, KI, HgC<sub>2</sub>, AgNO<sub>3</sub>, H<sub>2</sub>O, 2KClO<sub>3</sub>, CO<sub>2</sub>, HCl.
10. Give in detail a reliable test for albumin in urine; for sugar in urine.

#### MATERIA MEDICA AND THERAPEUTICS.

1. Name three drugs belonging to each of the following classes: narcotics, stimulants, emmenagogues.
2. Mention the remedies you use hypodermatically and give indications for their use.
3. Give dosage of remedies you would use in typhoid fever and pneumonia.
4. Give dosage and indications for four remedies you use in rheumatism, jaundice, malarial fever.
5. Give habitat, preparations, dosage and uses of twelve leading remedies you carry in your medicine case.

#### MEDICAL JURISPRUDENCE AND TOXICOLOGY.

1. What is malpractice?
2. What period of intrauterine life does the fetus become viable?



## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending October 21.

Keefer, Frank R., surgeon, Crosby, William D., surgeon, relieved from duty in Philippines Division in time to sail from Manila, Feb. 15, 1906, for the United States.

Roberts, William, asst.-surgeon, ordered from Fort Hamilton, N. Y., to Fort Jay, N. Y., for temporary duty.

Gibson, Robert J., surgeon, relieved from duty at Fort Logan, Colo., to duty at Fort Adams, R. I.

Shaw, Henry A., surgeon, relieved from duty at Fort Adams, R. I., to duty at Fort Slocum, N. Y.

Morris, Edward R., surgeon, order for duty at Fort Slocum, N. Y., revoked, to Fort Logan, Colo., for duty.

Krebs, Lloyd Le R., asst.-surgeon, relieved from duty in the Philippines Division and at Presidio of Monterey, Cal., and ordered to duty at the Army General Hospital, Fort Bayard, N. M.

Glennan, James D., surgeon, leave of absence extended for ten days.

Rand, Irving W., asst.-surgeon, leave of absence extended one month.

Dalc, Frederick A., asst.-surgeon, leaves Lemont, Pa., October 15, at expiration of leave of absence, for his station, Fort Walla Walla, Wash.

Grubbs, Robert B., asst.-surgeon, leave of absence granted for one month, fourteen days.

Schreiner, Edward R., Dutcher, Basil H., asst.-surgeons, ordered to duty in the Philippines Division, and will sail from San Francisco, Cal., December 5.

Marrow, Charles E., asst.-surgeon, left attending surgeon's office, Chicago, Ill., October 17, for his proper station, Fort Sheridan, Ill.

Kennedy, James M., asst.-surg., left Washington, D. C., October 19, for proper station, Army General Hospital, Presidio of San Francisco, relinquishing remainder of leave of absence.

Hathaway, Levy M., asst.-surgeon, arrived at station, Fort Thomas, Ky., October 17, and left same day on leave of absence for two months.

Wilson, James S., asst.-surgeon, returned to duty at Fort Oglethorpe, Ga., from leave of absence.

Blanchard, Robert M., asst.-surgeon, left Fort Thomas, Ky., October 18, on leave of absence for ten days.

Juenemann, George F., left Fort Ringgold, Texas, on leave of absence for fifteen days.

Duval, Douglas F., asst.-surgeon, granted leave of absence for twenty days about October 25.

Holmes, Thomas G., contract surgeon, relieved from duty as examiner of recruits at Detroit.

Wall, Francis M., contract surgeon, granted leave of absence for fourteen days.

Waddell, Ralph W., dental surgeon, ordered from Fort Leavenworth, Kan., to Fort Crook, Neb., for one month.

Adair, George W., contract surgeon, leave of absence granted for fifteen days.

Tenney, Elmer S., contract surgeon, left Fort Strong, Mass., on leave of absence for ten days.

Sparrenberger, Frederick H., contract surgeon, returned to Fort Mott, N. J., from leave of absence.

Carpenter, Aiden, dental surgeon, left Fort Lisicum, Alaska, for Vancouver Barracks, Wash.

Shellenberger, James E., contract surgeon, arrived at Fort Sam Houston, Tex., from leave of absence.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending October 21.

Shaw, H., asst.-surgeon, detached from the naval recruiting rendezvous, Boston, and ordered to the Naval Hospital, Chelsea, Mass.

Dunbar, A. W., surgeon, ordered to the Naval Hospital, Mare Island, Cal.

Brister, J. M., P. A. surgeon, ordered to the Philadelphia, and to additional duty at the Navy Yard, Puget Sound, Wash.

Parker, E. G., P. A. surgeon, detached from the naval station, Tutuila, Samoa, and additional duty on the *Adams*, and ordered to the Pensacola, and to additional duty at the naval training station, San Francisco.

Fauntleroy, A. M., P. A. surgeon, detached from the *Philadelphia*, and from additional duty at the Navy Yard, Puget Sound, Wash., and ordered to the naval station, Tutuila, Samoa, and to additional duty on the *Adams*, sailing from San Francisco, November 2.

Elmore, B., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Washington, D. C.

Drake, N. H., medical inspector, detached from the navy yard, Norfolk, Va., and ordered home to wait orders.

Dickson, S. E., medical inspector, ordered to the navy yard, Norfolk, Va.

Bell, W. H., P. A. surgeon, detached from the *Dixie*, when placed out of commission, and ordered home to wait orders.

Porter, F. E., asst.-surgeon, detached from the *Dixie*, when placed out of commission, and ordered to the naval hospital, New York, N. Y.

Winn, C. K., acting asst.-surgeon, detached from the *Cesar*, when placed out of commission, and ordered home to wait orders.

Guthrie, J. A., surgeon, ordered to the navy yard, League Island, Pa.

Brownell, C. DeW., surgeon, detached from the *Iowa* and ordered home to wait orders.

Morris, L., surgeon, detached from the *Florida* and ordered to the *Iowa*.

Elliott, M. S., surgeon, detached from the naval hospital, Norfolk, Va., and ordered to the *Florida*.

Gates, M. F., surgeon detached from the navy yard, League Island, Pa., and ordered to the *Charleston*.

3. When is abortion legally justifiable?
4. How would you determine the presence of blood stains on clothing?
5. What mental condition renders a testator capable of making a will?
6. How would you treat a patient suffering from poisoning by coal gas?
7. What are symptoms and treatment for poisoning by the castor bean and what is considered a lethal dose?
8. What are symptoms of poisoning by wood alcohol and treatment for same?
9. What are symptoms and treatment for poisoning by muscarin or mushrooms?
10. Give symptoms and treatment for poisoning by turpentine taken internally.

#### PRACTICE OF MEDICINE.

1. Give treatment, medical, hygienic, and prophylactic of scarlet fever.
2. Give treatment and management of smallpox.
3. Give treatment of pertussis.
4. Give treatment, medicinal, hygienic, and prophylactic of typhoid fever, with treatment of most frequent complications that might arise.
5. Give treatment of a case of pneumonia.
6. Give treatment of a case of acute jaundice.
7. Give treatment, medical, hygienic and dietetic of acute gastritis.
8. Give treatment of a case of acute meningitis.
9. Give symptoms and treatment of case of follicular tonsillitis.
10. Give causes, symptoms and treatment of urticaria.

#### PHYSICAL DIAGNOSIS.

1. What is physical diagnosis and what are the methods employed?
2. Give cause, symptoms, pathology, diagnosis and prognosis of congestion of the lungs.
3. Give cause, pathology, symptoms, diagnosis and prognosis of acute pericarditis.
4. Give cause and symptoms of vertigo.
5. Give cause, symptoms, diagnosis and prognosis of renal calculi.
6. Give cause, pathology, symptoms, complications, diagnosis and prognosis of a case of acute Bright's disease.
7. Differential diagnosis between croupous and catarrhal pneumonia.
8. Differential diagnosis between erysipelas and scarlet fever in the early stages.
9. Give cause, pathology, symptoms, diagnosis and prognosis of acute dysentery.
10. Differential diagnosis between varicella and variola (a) period of incubation; (b) period of eruption; (c) character of eruption; (d) site of eruption.

#### PHYSIOLOGY.

1. Give the number of chemic elements in the human body.
2. Give the amount of saliva secreted in 24 hours in the adult, also give functions of saliva.
3. Give the amount of water and solids in the body of a person weighing 145 pounds.
4. Give the amount of blood (in pounds) in the body, and state the functions of the red corpuscles.
5. Give the amount of oxygen absorbed, carbonic acid exhaled and urine excreted in 24 hours.
6. Give, as far as known, the functions of the intestinal juices.
7. What are and where will you find the sebaceous and sudoriparous glands?
8. What are the functions of the iris and retina?
9. Name the organs of digestion, in the order in which they belong.
10. Give the source of muscular energy.

#### ANATOMY.

1. Give the number and name of the bones in the trunk and of each upper extremity.
2. Name the articulations and muscles attached to the inferior turbinated bone.
3. What kind of a joint is the sternoclavicular articulation? Give the number of synovial membranes and ligaments around this joint.
4. What are muscles, how are they formed and what are their principal uses?
5. Give origin, insertion, uses and nerve supply of the flexor longus pollicis, and the abductor pollicis.
6. Give the longest anastomosis in the body, also give the collateral circulation after ligation of the common carotid artery.
7. Give the number and names of the fissures of the cerebrum.
8. Name the branches and organs supplied by the inferior mesenteric plexus of nerves.
- 9 and 10. Locate and describe the uterus, vas deferens, Eustachian and Fallopian tubes, circle of Willis, Scarpa's triangle ureters and popliteal space, inguinal hernia and the entire colon.

#### SURGERY.

1. Give etiology, symptoms and treatment of inflammation, septic, traumatic, and surgical fever.
2. Define suppuration, abscess, ulcers, gangrene, septicemia, pyemia and anesthesia.
3. What do you mean by asepsis and antisepsis? Give a general outline to be followed by the surgeon, his assistants and attendants in preparing the room, instruments, etc., for some major operation.
4. Give symptoms and treatment of gonorrhoea, orchitis, acute prostatitis, cystitis and stricture.
5. Give differential diagnosis between strangulated inguinal hernia, hydrocele, hematocele and varicocele.
6. How would you diagnose a case of hip dislocation upward on the dorsum of the ilium from a case of hip-joint disease?
7. Give the signs of fracture and state what you would call an infallible sign, also give the process of repair in fractures.
8. When does it become necessary to tap the bladder, and if necessary, where, and how would you tap?
- 9 and 10. Give differential diagnosis and a cure for hemorrhoids and prolapsus ani, housemaid's knee, subcutaneous synovitis, carbuncle and furuncle.



Winn C. K., acting asst.-surgeon, orders of October 14, modified; ordered to the naval recruiting rendezvous, Omaha, October 23.

Omau, C. M., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from Dec. 18, 1904.

Hoyt, R. E., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from May 8, 1905.

Woods, E. L., asst.-surgeon, appointed asst.-surgeon, with rank of lieutenant (junior grade), from October 14, 1905.

Foster, T. G., asst.-surgeon, detached from the naval hospital, Norfolk, Va., and ordered to the Naval Medical School, Washington, D. C.

Elnore, B., asst.-surgeon, detached from the naval hospital, Washington, D. C., and ordered to the navy yard, Washington, D. C.

Hull, H. F., asst.-surgeon, detached from the Naval Academy and ordered to the naval hospital, New York, N. Y.

Baker, M. W., asst.-surgeon, ordered to the naval hospital, Washington, D. C., October 24.

Woods, E. L., asst.-surgeon, ordered to the Naval Medical School, Washington, D. C.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 18:

Sawtelle, H. W., surgeon, directed to proceed to Norfolk, Newport News, and Portsmouth, Va., on special epidemic duty.

Rosenau, M. J., P. A. surgeon, directed to rejoine station in Washington.

Lumsden, L. L., P. A. surgeon, granted leave of absence for ten days, from October 20.

Glover, M. W., assistant surgeon, granted leave of absence for three days from October 15.

Hunt, Reid, chief Division of Pharmacology, hygienic laboratory, leave of absence for six days from October 9, revoked.

Hallett, E. B., acting asst.-surgeon, granted leave of absence for five days, from October 11.

Foild, Edward E., acting asst.-surgeon, granted leave of absence for one day, October 14.

Sinks, E. D., acting asst.-surgeon, granted leave of absence for five days, from October 6.

Sibree, H. C., acting asst.-surgeon, granted leave of absence for five days, from October 15.

Brown, F. L., pharmacist, granted leave of absence for sixteen days, from October 14.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service during the period from October 9 to 20:

#### SMALLPOX—UNITED STATES.

California: San Francisco, Sept. 23-Oct. 7, 9 cases.  
Florida: Jacksonville, Oct. 7-14, 1 case.  
Illinois: Danville, Aug. 8-Oct. 9, 1 case; Galesburg, Oct. 7-14, 3 cases.

Louisiana: New Orleans, Sept. 30-Oct. 14, 3 cases, 1 death.  
Maine: Cooper, Oct. 6, present; East Machias and vicinity, present; Jacksonville, Sept. 27-Oct. 6, 5 cases; Wesley, Oct. 6, present.

Massachusetts: New Bedford, Oct. 7-14, 1 case.  
Ohio: Cincinnati, Oct. 6-13, 1 case.  
Pennsylvania: Altoona, Oct. 7-14, 2 cases, imported; York, 2 cases.  
Washington: Tacoma, Sept. 23-Oct. 7, 2 cases.

#### SMALLPOX—FOREIGN.

Brazil: Pernambuco, Aug. 15-31, 283 cases, 283 deaths; Rio de Janeiro, Aug. 27-Sept. 30, 30 cases, 6 deaths.  
Ecuador: Guayaquil, Sept. 20-27, 4 deaths.  
France: Paris, Sept. 14-30, 22 cases, 4 deaths.  
India: Calcutta, Sept. 2-9, 1 death; Madras, Aug. 16-Sept. 15, 1,553 deaths.

Italy: General, Sept. 14-28, 8 cases; Messina, Sept. 16-23, 1 death.

Russia: Moscow, Sept. 2-23, 13 cases, 3 deaths; Odessa, Sept. 16-23, 6 cases; St. Petersburg, Sept. 2-23, 11 cases, 2 deaths.

Turkey: Constantinople, Sept. 10-17, 1 death.

#### YELLOW FEVER—UNITED STATES.

Florida: Pensacola, Aug. 29-Oct. 8, 253 cases, 38 deaths.  
Illinois: Chicago, Oct. 1-7, 1 death, imported.

Louisiana: Ascension Parish, to Oct. 7, 78 cases, 4 deaths; Assumption Parish, to Oct. 10, 40 cases, 1 death; Avoyelles Parish, to Oct. 7, 12 cases, 2 deaths; East Carroll Parish, to Oct. 10, 318 cases, 38 deaths; Iberville Parish, 33 cases, 8 deaths; Jefferson Parish, 4473 cases, 50 deaths; Lafourche Parish, to Oct. 6, 385 cases, 48 deaths; Madison Parish, to Oct. 9, 312 cases, 18 deaths; Natchitoches, to Oct. 9, 81 cases, 7 deaths; Orleans Parish, New Orleans, July 21-Oct. 11, 3,235 cases, 415 deaths; Rapides Parish, to Oct. 9, 24 cases, 1 death; St. Bernard Parish, 80 cases, 3 deaths; St. John the Baptist Parish, to Oct. 5, 177 cases, 18 deaths; St. Mary Parish, to Oct. 9, 801 cases, 31 deaths; St. Tammany Parish, to Oct. 10, 9 cases, 1 death; Terrebonne Parish, 311 cases, 13 deaths.

Mississippi: Gulfport, Aug. 15-Oct. 7, 107 cases, 2 deaths; Gulf Quarantine, July 22-Oct. 7, 68 cases, 1 death; Hamburg, Sept. 15-Oct. 7, 44 cases, 6 deaths; Handsboro, Sept. 17-Oct. 6, 5 cases; Mississippi City, Aug. 22-Oct. 6, 68 cases; Natchez, to Oct. 8, 93 cases, 5 deaths; Port Gibson, Sept. 27-Oct. 7, 44 cases, 1 death; Rosetta, to Oct. 8, 28 cases, 7 deaths; Soria, Sept. 14-Oct. 5, 2 cases; Vicksburg, Aug. 30-Oct. 8, 110 cases, 13 deaths.

#### YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Aug. 27-Sept. 20, 9 cases, 3 deaths.  
Cuba: Sagua, Oct. 6, 1 case, on schooner.  
Ecuador: Guayaquil, Sept. 20-27, 1 death.  
French Guiana: Maroni River, to Sept. 15, 2 cases, reported.  
Honduras: Cholera, Sept. 15-22, 1 case; Puerto Cortez, Sept.

19-26, 1 case; Rio Blanco, Sept. 15-22, 2 cases, 1 death; San Pedro, 2 cases.

Mexico: Coatzacoalcas, Sept. 23-Oct. 7, 5 cases; Soconusco, Oct. 7, 2 cases; Tezonapa, Sept. 17-30, 8 cases, 5 deaths; Tierra Blanca, Sept. 17-23, 1 case, 1 death; Vera Cruz, Sept. 17-30, 4 cases, 1 death.

Panama: Bocas del Toro, Oct. 1, 1 case; Panama, Sept. 20-27, 2 cases, 1 death.

#### CHOLERA—INSULAR.

Philippine Islands: Manila, Aug. 23-Sept. 14, 172 cases, 150 deaths.

#### CHOLERA—FOREIGN.

China: Shanghai, to Sept. 13, 400 deaths.

India: Bombay, Sept. 12-19, 6 deaths; Calcutta, Aug. 26-Sept. 9, 62 cases; Madras, Aug. 26-Sept. 15, 969 deaths.

#### PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 10, 1 case; Waipahu, Oct. 9, 2 cases, 2 deaths.

#### PLAGUE—FOREIGN.

Australia: Queensland, Townsville, Aug. 4, 1 case, 1 death.  
Brazil: Rio de Janeiro, Aug. 26-Sept. 20, 41 cases, 14 deaths.  
Egypt: Alexandria, Aug. 26-Sept. 2, 9 cases, 8 deaths; Assuan, 1 case; Damietta, 1 case.

India: General, Aug. 18-Sept. 2, 6,030 cases, 4,380 deaths; Bombay, Sept. 5-19, 75 cases; Calcutta, Aug. 26-Sept. 9, 26 cases; Karachi, Sept. 3-17, 48 cases, 48 deaths.

Peru: Callao, Aug. 21-Sept. 10, 2 cases, 2 deaths; Lima, Aug. 11-Sept. 10, 13 cases, 5 deaths; Mauseiche, Aug. 11-20, 2 cases, 1 death; Mollendo, Aug. 21, Sept. 10, 2 cases, 1 death; Pampa Blanca, 1 case, 1 death; Payta, Aug. 11-Sept. 10, 28 cases, 13 deaths; Trujillo, Aug. 21-Sept. 10, 1 case, 1 death.

Zanzibar: Sept. 2, 6 cases.

## Medical Organization

### Georgia.

HALL COUNTY MEDICAL SOCIETY.—This society was organized at Gainesville September 15 on the standard plan by Dr. W. B. Hardman, Commerce, state councilor for the ninth district, with an initial membership of sixteen. The following officers were elected: President, Dr. J. W. Bailey, Gainesville; vice-president, Dr. J. W. Oslin, Gainesville; secretary and treasurer, Dr. P. E. B. Robertson, Gainesville, and censors, Drs. James H. Downey, New Holland; John B. Rudolph, Gainesville, and William A. Palmour, Gainesville.

MUSCOGEE COUNTY MEDICAL SOCIETY.—Dr. W. L. Fitts, Carrollton, Ga., councilor for the fourth district, met the physicians of Muscogee County at Columbus August 26 and assisted in the organization of a medical society on the standard plan. Dr. Floyd W. McRae, Atlanta, and Dr. R. E. Lee Barnum, Richland, councilor for the third district, were also present. The following officers were elected: Dr. Charles L. Williams, Columbus, president; Dr. James H. McDuffie, Columbus, vice-president; Dr. Charles A. Dexter, Columbus, secretary; Dr. Thomas E. Mitchell, Columbus, treasurer; Drs. S. E. Young, Midland; John M. Crook, Columbus, and John I. Darby, Columbus, censors, and Dr. William L. Bullard, Columbus, delegate to the state association.

STEPHENS COUNTY MEDICAL SOCIETY.—This society was organized on the standard plan at Toccoa September 18 with the aid of Dr. W. B. Hardman, Commerce, councilor for the ninth district, with nine charter members. The following officers were elected: Dr. Jeff Davis, Toccoa, president; Dr. W. L. McBath, vice-president; Dr. James H. Crawford, secretary and treasurer, and Drs. J. Claude Verner, John H. Edge, Toccoa, and W. H. Parker, censors.

### Florida.

LAKE COUNTY MEDICAL SOCIETY.—This society was organized September 5 and the following officers elected: President, Dr. William P. McKee, Eustis; vice-president, Dr. T. Newton Lewis, Mt. Dora; secretary, Dr. Karl Mantey, Eustis; treasurer, Dr. Guy Hutchings, Eustis.

### Illinois.

CHICAGO MEDICAL SOCIETY, NORTH SHORE BRANCH.—This society has sent out an announcement of its program for the coming year. The circular is reproduced below, as a suggestion to county secretaries. This society is one of the district branches of the Chicago Medical Society.

*Members of the North Shore Branch:*

You are requested to assist the executive committee in preparing the program for the meetings this coming year by sending to the secretary on or before October 1, 1905, the subject of any papers you may wish to write or discuss, or have discussed. This subject to be of your own choosing or taken from some phase of the subjects as outlined below. As soon as these suggestions are received from the members the committee will arrange the program. This program does not prohibit the presentation of other papers and



discussions which members may request during the year. Kindly insert title of paper, your name and address opposite subjects indicated below, or in blank space at bottom.

R. E. GREEN, Secretary.

#### OUTLINE OF PROGRAM.

Oct. 3, 1905.—Informal discussion: "Business Side of Physician's Life."

Nov. 8, 1905.—"Early Diagnosis of Smallpox."

Dec. 5, 1905.—"Tuberculosis."

Jan. 2, 1906.—"The Relation of Mental Disorders to General Medicine."

Feb. 6, 1906.—"Insects as Disease Carriers."

March 6, 1906.—"Infant Feeding."

April 3, 1906.—"Annual Reception and Banquet."

May 1, 1906.—"Skin Diseases as Seen by the General Practitioner."

June 5, 1906.—"Intestinal Obstruction."

I will present a paper on the following subject at the..... meeting: ..... I desire the following subject discussed: .....

#### Minnesota.

**AITKIN COUNTY MEDICAL SOCIETY.**—Physicians of Aitkin County met at the office of Dr. J. Fowler Avery, Aitkin, September 19, to attempt to revive the organization. The following temporary officers were elected to serve until October 5, when the organization is to be completed and constitution and by-laws adopted: Dr. Carlton Graves, president, and Dr. A. G. Belsheim, secretary, both of Aitkin.

**FIFTH COUNCILOR DISTRICT MEDICAL SOCIETY.**—A joint meeting of the societies in this district, comprising the societies of Renville, Chippewa, Lac qui Parle, Lyon-Lincoln, Yellow Medicine-Sibley and Brown-Redwood Counties, was held at Redwood Falls September 12. Dr. Henry M. Workman of Tracy, councilor for the district, presided. Dr. J. N. McCormack of Bowling Green, Ky., and Dr. Charles H. Mayo of Rochester, president of the Minnesota State Medical Association, were present and addressed the meeting.

**SIXTH AND EIGHTH DISTRICT MEDICAL SOCIETY.**—A meeting of the physicians of Southern Minnesota from the counties making up the sixth and eighth councilor districts, was held at Mankato September 13, when Dr. J. N. McCormack, national organizer of the American Medical Association, delivered an address on "The Advantages of Organization." The physicians of Mankato entertained those who attended the meeting at a lunch. Dr. Adolph O. Bjelland, Mankato, councilor of the eighth district, presided.

**NINTH DISTRICT MEDICAL SOCIETY.**—The societies making up the ninth councilor district met at Fergus Falls September 9 and perfected a district organization, Dr. Eugene A. Hensel, Alexandria, being chosen secretary. Dr. J. N. McCormack, national organizer of the American Medical Association delivered an address in which he discussed the value of organization as the means of professional advancement, holding that conventions and the discussion of scientific topics assist materially in keeping physicians informed in regard to the latest discoveries in medical and surgical science. He also urged the advantages of organization in protecting the profession from quacks and irregular practitioners.

#### Montana.

**SILVER BOW COUNTY MEDICAL ASSOCIATION.**—Dr. J. N. McCormack, national organizer of the American Medical Association, gave an address before a large gathering of physicians of Butte, under the auspices of the Silver Bow Medical Association September 24, in which he set forth the advantages of organization.

**YELLOWSTONE VALLEY MEDICAL ASSOCIATION.**—The physicians of Eastern Montana met in Billings September 20 and organized this society on the standard plan. Dr. Donald Campbell, Butte, president of the State Medical Association, presided. The following officers were elected: President, Dr. Henry E. Armstrong, Billings; vice-president, Dr. Joseph H. Rinehart, Billings; secretary, Dr. Charles F. Watkins, Billings; treasurer, Dr. Carl Schulin, Billings, and trustees, Dr. Henry E. Armstrong, Billings; Thomas D. Tuttle, Helena; W. L. Seamon, John L. Weitman, Great Falls, and James Chapple, Billings.

#### South Carolina.

**ORANGEBURG COUNTY MEDICAL SOCIETY.**—A meeting of the physicians of the county was held in Orangeburg September 4, at which Dr. Theodore G. Croft, Aitken, councilor for the second district, was present. The society was organized on the standard plan and a constitution and by-laws adopted. The following officers were elected: President, Dr. W. L. Pou, St. Matthews; vice-presidents, Drs. Manley, J. D. Dantzler, Ellore, and Marion S. Grissett, Branchville; secretary and treasurer, Dr. Linn C. Schut, Orangeburg, and censors, Drs. A. R. Able, St. Matthews; Arthur W. Browning, Ellore, and Michael G. Salley, Orangeburg.

## Society Proceedings

#### COMING MEETINGS.

American Academy of Medicine, Chicago, November 9-10.  
Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.  
American Dermatological Association, New York, Dec. 28-30.  
Western Surgical and Gynecological Association, Kansas Mo., Dec. 27-28.

#### SECOND INTERNATIONAL SANITARY CONVENTION.

*Held at Washington, D. C., Oct. 9-14, 1905.*

The President, Dr. Walter Wyman, in the Chair.

The Second International Sanitary Convention was called to order by the president, Dr. Walter Wyman, Surgeon-General, U. S. Public Health and Marine-Hospital Service, at 10 a. m., October 9. Addresses were made by Secretary of State Root, the Assistant Secretary of the Treasury Taylor, Hon. W. C. Fox, director of the International Bureau of the American Republics, Minister Quesada of Cuba, and the president, Dr. Walter Wyman.

#### Delegates.

The following delegates were present:

Senor Dr. Don Eduardo Moore, of Chile.  
Senor Dr. Don Juan J. Ulloa, of Costa Rica.  
Senor Dr. Don Juan Guiteras, of Cuba.  
Senor Dr. Don Enrique B. Barnet, of Cuba.  
Senor Dr. Don Serafin S. Wither, of Ecuador.  
Senor Don Miguel H. Alcivar, of Ecuador.  
Senor Dr. Don Joaquin Yela, of Guatemala.  
Senor Dr. Don Eduardo Licéaga, of Mexico.  
Senor Dr. Don J. L. Medina, of Nicaragua.  
Senor Dr. Don Daniel Eduardo Laverria, of Peru.  
Senor Don Pedro R. Bermudez, of Uruguay.  
Senor Don Emilio C. Joubert, of the Dominican Republic.  
Senor Don Nicolas Veloz-Golticoa, of Venezuela.  
Surgeon-General Walter Wyman.  
Dr. H. D. Geddings, U. S. Pub. H. and M. Hosp. Serv.  
Dr. J. F. Kennedy, Iowa.  
Dr. John S. Fulton, Maryland.  
Dr. Walter D. McCaw, U. S. A.  
Dr. J. F. Gatewood, U. S. N.  
Dr. H. L. E. Johnson, Washington, D. C.

The following physicians were granted the privilege of the floor: Medical Director John C. Wise, U. S. N.; Drs. L. O. Howard, Preston H. Bailhache and Reid Hunt, of the Public Health and Marine-Hospital Service; the president of the Navy Medical School; the president of the Army Medical School; the surgeon-general of the United States Navy; the surgeon-general of the United States Army; Surgeon-General George M. Sternberg, retired; Dr. Wardell Stiles; the health officer of the District of Columbia; Dr. H. C. Wood, Philadelphia; Surgeon-General S. Suzuki, of the imperial Japanese Navy, and Dr. James Carroll, U. S. Army.

#### Elections and Reports.

After the appointment of an executive committee and the re-election of Surgeon-General Walter Wyman as president and the election of Dr. J. J. Ulloa as permanent secretary, the delegates to the convention were taken to the National Filtration plant, which is in the course of construction in the District of Columbia.

The following day, October 10, the delegates were taken on a government ship to Mount Vernon and Indian Head, the United States proving station. In the evening they were entertained at the Corcoran Gallery of Arts.

The executive committee presented the name of Dr. Eduardo Licéaga, who was elected president of the third convention, which is to meet in Mexico City in 1907, with Dr. Ulloa as secretary. Then followed an interesting address read by Dr. Licéaga in Spanish, accompanied by the English translation in pamphlet form which was distributed among the delegates. Addresses were made by Drs. Moore, Wither, Guiteras and Ulloa. President Wyman called for the reports of the delegates representing the several countries, which were read and referred to the executive committee for report.

#### Reception by President Roosevelt.

October 12, President Wyman announced that the delegates would be received by the President of the United States at the White House, saying:



"Gentlemen: We are about to proceed to the White House to pay our respects to President Roosevelt. Before starting I wish to assure you that you will have a cordial reception and that you will, without doubt, be greeted with words of encouragement as regards the objective aims of this convention. I wish to state that no other president of the United States has publicly expressed so often and so eloquently an appreciation of the character and labors of the physician in regard to his sacred relation to his patients, to his civic duties, and to his labors as a sanitarian.

"In his address before the Association of Military Surgeons of the United States, his address at the unveiling of the monument in Washington erected to the memory of Dr. Benjamin Rush, at the laying of the corner stone of the Naval Medical School, and very recently before the Association of Physicians of Long Island, his words were words of encouragement and of wisdom. He has declared that in military life the surgeon, besides being a surgeon, bears all the hardships of a soldier and the responsibilities of an administrator; he has declared that the physician who stands high in his profession in any city counts as one of the most valuable assets in that city's civic work, that 'no doctor can be a good doctor or a good citizen unless he does his duty by the state, and that doctors must personally pay attention to their civic duties because "everybody's business is nobody's business." It must not be left to everybody, but individually the medical man should take an interest in state matters.'

"He has thus shown his appreciation of the sentiments that are so dear to us as physicians and sanitarians, namely, that our labors are highly essential to the welfare of the state as well as to the individual. In exemplification of this he has expressed the greatest interest and confidence in the work of the sanitarians of the Isthmian Canal Zone, and has taken an initiative, the good results of which are incalculable in the sanitary work which was begun and is still being conducted in New Orleans against the yellow fever pestilence.

"In expressing this appreciation of our president I am only echoing the voluntary expressions which I have heard on many sides, and particularly at the recent session of the great American Medical Association in Portland, Oregon, where comments of the above nature were frequent, prompted solely by appreciation in the minds of the medical profession of the sentiments and support of our president in matters relating to individual and public health."

The President received the delegates, greeting them most cordially, and showed great interest in the purpose of the convention. He made the following address, requesting Dr. Ulloa to interpret his remarks into Spanish for him:

#### President Roosevelt's Address.

*Dr. Wyman and Gentlemen and Ladies of the Convention:* I should like to greet you and say with what peculiar pleasure I welcome you, because both of the profession you represent and of the fact that you come from our sister republics of America.

I believe that we on this hemisphere are going to show to all the world—are going to teach all the world by an object lesson—that separate states, separate nations, can dwell together in absolute harmony and can unite in a common effort, as you are uniting here, for the betterment of the conditions affecting them all.

The outside world is only beginning to understand the astonishing progress made, not only socially and industrially, but in science, literature and art, by the Central and South American republics. In medical matters, in industrial, scientific, social, artistic matters, each of our countries has something to learn from the others; and I welcome you as colleagues and as teachers.

Of course, I could not overstate the all-importance of the medical profession in modern life and, as it is now becoming, in modern international life. In the old days a plague that happened in one country was regarded as only concerning that country until it spread over into some other helpless to defend itself against it. Now we recognize that the stamping out of disease, the warfare against unhygienic conditions, must be done by the organized effort of the medical profession of all the countries joined together.

#### Pharmacopeia in Spanish.

At the afternoon session of October 12 Dr. Guiteras presented the following resolutions concerning the U. S. Pharmacopeia. They were unanimously adopted:

WHEREAS, The decennial edition of the United States Pharmacopeia has just been published and issued by the board of trustees of the United States Pharmacopeial Convention.\*

WHEREAS, This revised Pharmacopeia embraces many new forms of value for use both in therapeutics and in prevention of epidemic disease, and represents the best thought and labor of experts on these matters; therefore, be it

*Resolved,* That a translation of this United States Pharmacopeia into the Spanish language would prove of great benefit to the medical profession and pharmacists in each of the republics represented in this convention, and further,

*Resolved,* That the said Pharmacopeia be referred to the several governments to report on at the next meeting in Mexico, with a view to the adoption of an international pharmacopeia for the American republics.

#### Etiologic Naming of Disease.

Dr. H. C. Wood addressed the convention, taking for his subject "The United States Pharmacopeia." Dr. L. O. Howard made an address on the "Geographic Distribution of the Yellow Fever Mosquito." Dr. H. L. E. Johnson read the following paper, entitled "Will Etiologic Naming of Diseases Influence Public Opinion?"

*Mr. President, Members of the Conference and Guests:* The principal object of sanitary and medical science and study at the

\*Verbiage slightly corrected, because of error in name, not discovered till resolutions had been passed.

present time is the prevention and limitation of disease. Pathologic, biologic and chemical laboratory investigations have made valuable advances in determining the cause and origin, transmission, scientific recognition, modification and arrest of many of the morbid processes affecting mankind and the lower animals.

Much good has been accomplished, more good will follow as a result of future labors, but before a universal acceptance and a successful practical application of the facts demonstrated in the laboratory is possible it is apparent that the lay public must be instructed and convinced.

The lay public is generally skeptical about new medical facts and discoveries, and until they appreciate the value and importance of sanitary, curative and preventive measures they will ridicule our teachings and obstruct our methods.

Legislators keep pace with the lay public and press; consequently sufficient appropriations for maintaining proper health conditions are seldom made either by a state or nation.

Generally speaking, belief on the part of the public in our theories of cause and prevention of disease is essential in our crusades for health, and to this end health matters should be made part of even a common school education and should be supplemented by systematic public lectures in terms appreciable by all. The baths gave Rome her health and vigor.

The relation of fly infection as a factor in enteric fever and tuberculosis is established, also the rôle played by the mosquito in malaria and yellow fever, but the lay public and press, notwithstanding the unanimity of medical opinion on these points, has not entirely indorsed our views or given us necessary support in our efforts to overcome these preventable diseases.

Cause and effect in each class should be clearly demonstrated to the public, and those diseases which depend for their dissemination on an intermediary host, as, for example, malaria and yellow fever, should be given a name associated with or indicating their etiology, viz.: Malarial fever should be called anopheles fever, infection or poisoning; yellow fever, stegomyia fever, infection or poisoning. Thus named, their origin would be indicated and the necessity for the extermination of the insects which cause the respective diseases forcibly suggested. The medical profession and the public are mutually dependent for the promotion of sanitation and elimination of disease, and co-operation in these matters depends largely on a liberal education of the public along the established health lines.

The following delegates were elected as vice-presidents of the congress: Dr. Eduardo Moore, of Chile; Dr. Juan J. Ulloa, of Costa Rica; Dr. Juan Guiteras, of Cuba; Dr. Miguel Alcivar, of Ecuador; Dr. Joaquin Yela, of Guatemala; Dr. Eduardo Licéaga, of Mexico; Dr. L. Medina, of Nicaragua; Senor Emilio Joubert, of Santo Domingo; Dr. H. L. E. Johnson, of the United States; Dr. Eduardo Laverria, of Peru; Senor Bermudez, of Uruguay; Senor Veloz-Goiticoa, of Venezuela.

The convention also elected Drs. Wyman, Moore, Licéaga, Ulloa, Guiteras, Rhett, Goode, of Mobile, Ala., and A. H. Doty, of New York, members of the International Sanitary Bureau for a period of three years. This bureau will be clothed with semi-executive and judicial powers by the several governments and will decide on all questions relative to international sanitary arrangements.

October 13 and 14 were entirely devoted to the consideration and adoption of the sanitary agreements (which will appear next week).

(To be continued.)

#### NEW YORK STATE MEDICAL ASSOCIATION.

*Annual Meeting, held at New York City, Oct. 16-19, 1905.*

(Continued from page 1257.)

#### Amalgamation Approved.

Further details of the action taken by the New York State Medical Association at its annual meeting, on October 17, to which we referred editorially last week (page 1253), are as follows:

Resolutions were presented authorizing a committee to carry out the consolidation, and Dr. W. R. TOWNSEND moved that the resolutions be adopted. They are as follows:

*Resolved,* That the New York State Medical Association hereby approves and adopts the agreement of consolidation prepared by the joint committee of conference appointed by the New York State Medical Association and the Medical Society of the State of New York, dated Jan. 23, 1904, and heretofore adopted at the regular and a special meeting of the Medical Society of the State of New York in the year 1905, a copy of which is hereto annexed. And be it further

*Resolved,* That a committee, consisting of E. Elliot Harris, Julius C. Bierwirth, Alexander Lambert, Parker Syms and Wisner R. Townsend, is hereby appointed, or, in case of the disability of any of them, then of such other persons as the president may appoint in his or their place and stead, to carry out the purposes of said agreement and with full and absolute power to take any and all legal steps necessary in the premises, in the place of the said the New York State Medical Association, as may be necessary, to complete the consolidation of the New York State Medical Association and the Medical Society of the State of New York.

Dr. E. ELIOT HARRIS seconded the motion and said that he



believed the agreement between the Medical Society of the State of New York and the New York State Medical Association was fair, just and equitable. The plan of reorganization of the consolidated state body is the plan of organization of the New York State Medical Association. The essential features of that plan are, first, that every member of the county medical society shall be *ipso facto* a member of the state society, and every member of the state society shall be a member of the county society; second, the constituent county societies shall elect annually the members of the house of delegates, which shall transact all the business of the consolidated society; third, there shall be a constitutional provision for a referendum on all questions referred by, or taken from, the house of delegates, and the vote of a majority of the whole association shall be binding on the house of delegates, the general meeting, and every member of the society. The permanent members of the Medical Society of the State of New York and the privilege they enjoyed of continuing as such members after they arrived at the age of 60 without the payment of dues have been excluded from the agreement and they are now compelled to go back and seek membership in their societies in order to be members of the consolidated body.

All the rights, powers and privileges of the New York State Medical Association are to be enjoyed by the consolidated society, and all the obligations and liabilities of the New York State Medical Association shall be assumed by the consolidated Medical Society of the State of New York. The agreement protects the rights of members of the New York State Medical Association by making the length of time of membership in the association count as equal time of membership in the society in determining the eligibility for office. The dues will be assessed pro rata from the date to which they are paid in the association, and all members of the association will be specially notified of the date set for the reorganization of the county societies so as to make their by-laws agree with the constitution and by-laws officially known as Exhibit B of the agreement. The journal and directory are not part of the agreement, as they do not belong there, but should be considered in the house of delegates of the consolidated body. They do not appear in the by-laws of the New York State Medical Association, although we have had a special committee on by-laws for several years past.

The ethical question is cared for by the referendum, which is ordered by the court in Section 7 of the agreement. It is to be fairly and squarely decided by a majority mail vote of the full membership of the consolidated body, which is good American doctrine.

It now remains for this association to be true to itself and to carry out the broad principles embodied in the agreement by recording its vote in favor of the resolutions now before you in the interest of the medical profession of this state and, through this state, of the United States.

DR. EDWARDS, of Syracuse, moved to strike out the referendum part of the agreement, but later withdrew his motion.

DR. KAUFMAN, of Onondaga County, said that last year he opposed the amalgamation in the courts, but he came to the meeting this year with all the proxies from his county in favor of the agreement to consolidate the two state bodies.

DR. JOSEPH D. BRYANT stated that, as president of the Medical Society of the State of New York, he sent out 6,100 copies of the Principles of Medical Ethics to the members of the society, who would now be ready to vote intelligently on the question of their adoption as provided in the agreement.

DR. JAMES G. ORTEN, of Binghamton, a former president of the association, said he would be glad to be enrolled as a member of the consolidated society.

The roll of membership was called and in proper legal form the vote was recorded on the question of the adoption of the resolutions, which included the agreement and the new constitution and by-laws. There were 1,814 members whose dues were paid and who, therefore, had a right to vote. Each one had been legally notified of the proposed meeting and the action to be considered; 1,517 voted aye, or in favor of the resolutions either personally or by proxy; 295 did not vote; 2 voted against the adoption of the resolutions.

Thus every known legal requirement was observed in notify-

ing members of the annual meeting and in recording their vote on amalgamation.

(To be continued.)

## MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

*Annual Meeting, held in Scranton, Sept. 26-28, 1905.*

(Continued from page 1272.)

### Teaching the Deaf Child to Hear.

DR. G. HUDSON-MAKUEN, Philadelphia, referred to cases reported in the beginning of the last century by Itard and Toinbee of marked improvement in the hearing of deaf persons as a result of so-called aural gymnastics. Urbantschitsch found the use of musical instruments to be of value in diagnosis, and in one of Dr. Makuen's cases the piano furnished the only sound to which any response was given. The exercises were commenced with sounds similar to those of which the patient showed some appreciation, when the sounds of the human voice were gradually taken up. Dr. Makuen enumerated the following conclusions of his observation and treatment: 1. The hearing of the deaf child may be greatly improved by the systematic use of aural gymnastics; 2, the speaking voice used in close proximation to the ear is the most effective form of aural gymnastics for children; 3, the training of speech should be carried on simultaneously with the hearing exercises; 4, the degree of success attained will depend largely on the patience and skill of the teacher.

### Address in Hygiene and State Medicine.

DR. G. W. WAGONER, Johnstown, said that sanitary work, to be effective, must have back of it an authority, either assumed or delegated. The people must believe that it is necessary and have faith in the competency of those who undertake the work. The great value of sanitary knowledge is well illustrated in the work of the State Board of Health following the Johnstown flood. He reviewed the law "creating a Department of Health, and defining its powers and duties," recently passed by the Pennsylvania legislature. If the law is executed in an impartial, kindly and wise manner, it will deserve the cordial support of all, but if its opportunities for tyranny are taken advantage of the public will compel its repeal. It is the physician's duty to stand between the rigors of the law and the public as an advisor, a mediator and as an instructor of the people that they may accept the results of its enforcement.

### Protective Inoculations Against Typhoid Fever.

DR. D. H. BERGEY, Philadelphia, said that the value of protective inoculations could only be determined by carefully following out the health of inoculated as compared with the health of uninoculated persons living under the same conditions. It was observed that the reduction in the incidence of typhoid fever among those inoculated by the Wright method varied greatly in different troops, also in regard to the number of injections made. In some instances the incidence was reduced one-half, while in others there was a reduction varying from a sixfold to a twenty-eight-fold reduction. The case mortality among the inoculated as compared with the uninoculated was reduced more than 50 per cent. While the method was considered of value by Dr. Bergey, he maintained that there should be no less energy used in eradicating all known sources of infection by the well-established means known to sanitarians.

### Pain of Obscure Origin Simulating Neuritis, Neuralgia or Organic Lesions.

DR. JOHN H. MUSSER described illustrative cases and said that in the elucidation of such cases a thorough study should be made of the nerve itself, of the spinal cord, of the sensory and motor phenomena and of the reflexes of all kinds. In connection with a consideration of possible lesions along the course of the nerve trunk the anatomic conditions must be recognized; bony, vascular and muscular lesions must be considered before a definite diagnosis is made. The general phenomena attendant on the case should be studied and too much



reliance should not be placed on sedative drugs. Dr. Musser is so thoroughly convinced of the frequent surgical source of pain that, generally speaking, he would rather resort to the knife, even though he sometimes did it wrongly, than to the hypodermic needle.

#### Case of Malignant Lymphoma with Autopsy.

DR. J. A. LICHTY, Pittsburg, reported the case of a patient aged 67 who had been sick two years. There was primary enlargement of the spleen, absence of leucocytosis, gradual decrease of leucocytes, anemia, comparatively large number of erythrocytes; presence of pigmentation and of subcutaneous hemorrhage; absence of enlargement of lymph glands; no history of malaria, leukemia, syphilis or cirrhosis of the liver. In the course of the disease there occurred enlargement of the liver and ascites. A diagnosis of splenic anemia was made. At autopsy there was found a great infiltration of lymphoid cells in the liver and the spleen, and the lymph glands about the coeliac axis were enlarged. He concluded that the diagnosis of splenic anemia should be made with great reservation, and that it is more than likely that at present it is made too often.

#### Chronic Rheumatism.

DR. CHARLES W. PAINTER, Boston, stated that his classification of chronic rheumatism is based on the etiology, the clinical course and phenomena and the pathology of the disease. He divides chronic rheumatism into three groups. In the first group, which seems to be associated with some infective organism, the joint manifestations are acute in character, more or less rapid in their development, and are accompanied by constitutional symptoms characteristic of an infection. The second group, the atrophic, is not inflammatory either on onset or progress, and seems to be associated with some metabolism of the body. This disease is more common in women and in young adult life and is associated often with nervous shocks. In this group lesions are found in the cartilage and bone as well as in the soft parts, thus differing from lesions in the infectious type. In the third group, the hypertrophic, he placed Heberden's nodes, morbus coxae senilis, and similar lesions occurring in the spine, the knee, the elbow, etc., the lesions being characterized by a hypertrophy of cartilage about the joint lines and subsequently a true bone formation which is permanent and gives rise to mechanical disturbance more than to any constitutional disability. Dr. Painter commended his classification as a useful working hypothesis, one which would do away with the necessity for indiscriminately prescribing the salicylates for the interior and the oil of wintergreen for the exterior, and the statement that the condition was chronic rheumatism for which nothing could be done.

DR. JAMES J. WALSH, New York City, emphasized the necessity for individualization, and to recognize the fact that under the group of chronic rheumatism there were a number of diseases which could be benefited by medicine only when separated. Referring to occupation neuroses he asserted that there was not a single occupation in which a person performed a habitual motion which would not cause pain around the joints thus associated. A change in the barometer, he said, would cause pain in a tooth, if it happened to be bad, a pain in the arm, if it were overworked, and such pain is not greatly different from that which is called rheumatism.

DR. DEFOREST WILLARD thought it the bane of the medical profession that pains were called rheumatism without making any diagnosis relative to the cause of the symptoms. He has seen cases which had been allowed to go to bone destruction and were still treated for rheumatism.

#### Diagnostic Value of Blood Cultures.

DR. DAVID L. EDSALL, Philadelphia, said that in cases of bacterial infection in which the bacteria get freely into the blood the cultures have been of much value. A case of mastoid disease was cited in which it was not thought by the ear specialist that there was sufficient evidence of mastoid disease, but a positive culture of colon-like bacillus was found. In a series of gynecologic and obstetric cases, in which the local source of infection could not be found, blood cultures revealed an abscess in the wall of the uterus.

#### Some Color Comparisons in Medicine.

DR. HENRY E. WETHERILL, Philadelphia, called attention to an improved hemoglobin scale called the ante-mortem blood color scale. The advantage claimed for it was that it gave the true percentage of hemoglobin. Another scale determined the weight of the perspiration; another the color of the feces. Other scales were for the determination of the color of postmortem blood and of the urine. Another scale was an improvement on Bell's scale for testing the amount of hydrochloric acid in the gastric filtrate.

#### Address in Neurology.

DR. E. E. MAYER, Pittsburg, discussed the limitations of psychology and biology to explain clinical psychiatry. A plea was made for physicians to recognize mental diseases as a part of general medicine and to study them. He considered neurasthenia as always being a psychasthenia and hypochondriasis as being only a symptom of psychasthenia.

#### Insanity in the Aged.

DR. CHARLES W. BURR, Philadelphia, spoke of the difficulty of determining the mental condition of the aged, because there is no dividing line between normal and pathologic senility. The best rule to follow is to discover whether the man knows what he wishes to do, whether he is competent to recognize the duty he owes toward his relatives, and is not swayed by momentary passion or delusions. He also spoke of the frequency of acute insanity in old age (mania and melancholia), and stated that the outlook as to cure was almost as good as in younger people. While it is true that physical and mental old age run along together, yet the saying that "a man is as old as his arteries," Dr. Burr believes is not true in every case. He said that there are a certain number of people who become prematurely senile while the physical organism remains in fairly good condition. In the consideration of post-paralytic insanity, he thought that it is perfectly possible for an old man, after an ordinary hemiplegia, to remain in fit mental condition to take care of himself, but if there was also sensory aphasia or an extreme diffuse arterial disease there would surely be more or less dementia. Occasionally apoplexies in old people are ushered in with a period of excitement.

#### Brain Abscess with Sudden Exophthalmos and Blindness.

The condition in Dr. Heckel's case developed suddenly in a married woman, 22 years of age, whose previous history had been negative, except that suspecting herself to be pregnant, she had been persuaded to take some patent preparation with the object of producing an abortion. The condition which attracted most attention was the sudden exophthalmos and blindness, which was complete within a few hours. Curettage showed no signs of pregnancy. A typical septic temperature zigzagged between 105 and 99. In addition to the exophthalmos, hemorrhages appeared in both anterior chambers. Death occurred eight days after the appearance of the exophthalmos. The patient did not complain of headache until the day previous to death. Streptococci were found, but no abscess formation in any part of the body. In the left frontal lobe there was a cavity about the size of a hen's egg apparently filled with purulent fluid, but which was demonstrated to be a clot. There was no limiting membrane, but the cavity was studded with small millet seed granulations so that even after the thorough autopsy a positive diagnosis was doubtful.

#### Clinical Examination of the Feces.

DR. J. DUTTON STEELE, Philadelphia, employed the method of Adolph Schmidt in these examinations, with a few modifications. He said that this so-called functional examination of the stools, has its limitations when used as a method of diagnosis, but is of great value in following the digestibility of various food-stuffs in determining the proper diet in any given case. The method is simple and easy to carry out, and bids fair to be an accurate means of watching the power of the gastrointestinal tract to digest certain food; hence would be of great use therapeutically and, in a general way, of considerable value in diagnosis.



### Diaphragmatic Hernia with Complete Extrusion of Stomach and Spleen.

DR. J. BRUCE MCCREARY, Shippensburg, detailed the history of the case, that of a man of 22, who fell in collapse after having run a footrace. His usual health was not recovered until the end of two years, when he still, however, experienced a feeling of pressure in the spleen, and chronic diarrhea was present in varying degrees for six years. Eight years after the first injury he was thrown from a carriage and had a return of the same symptoms. Three months later he had an enormous internal hemorrhage. For three years the hemorrhages continued, at intervals. A diagnosis of diaphragmatic hernia with partial extrusion of stomach, dislocation of heart and pneumogastric fistulae was made and verified by autopsy. During the illness of the patient relief from the extreme pain was given for a year by stomach lavage. By keeping the stomach clean the generation of gases had been prevented.

### Treatment of Mediastinal Carcinoma by the X-Ray.

DR. G. E. PFAHLER, Philadelphia reported six cases following carcinoma of the breast, the first occurring in a woman, aged 36, sixteen months after removal of the primary growth. X-ray treatment was instituted and the patient is now able to do her ordinary work. The second case was a secondary growth appearing three years after the removal of the primary lesion. This was treated on several occasions for a period varying from six weeks to three months, and the patient has now apparently recovered. The third, fourth and fifth cases were women, aged, respectively, 62, 52 and 62 years, in whom the treatment was followed by good palliative results.

### DISCUSSION.

DR. JAY F. SCHAMBERG, Philadelphia, said that in malignant disease surgical interference should be employed in operable cases, and the x-rays used as a postoperative measure and in inoperable cases as a palliative agent.

DR. JOHN C. PRICE, Scranton, emphasized the importance of careful individual regulation of the strength and quality of the rays, and deprecated the fact that they were too often employed by the general practitioner without sufficient regard to these facts.

DR. ERNEST LAPLACE, Philadelphia, believed that during the early stages of malignant diseases, if the cells were of a low grade, the x-ray possibly would destroy them.

DR. CHARLES P. NOBLE, Philadelphia, stated that he believed that the field for this work was in postoperative and palliative measures, rather than in operable cases in the first instance.

### Conservative Treatment of the Enlarged Prostate.

DR. H. M. CHRISTIAN, Philadelphia, stated that the patient when first seen by the surgeon would present one of the two conditions: (1) Good general health, moderate enlargement of the gland, with increased urethral length, partial retention, residual urine, varying from three to six ounces, urine sterile or slightly cloudy, indicating slight infection of the bladder. Catheter used without difficulty once or twice daily. (2) General health fair, marked enlargement and increased urethral length, complete retention, absolute catheter life, chronic cystitis and the introduction of the catheter difficult and painful. He did not view prostatectomy, either suprapubic or perineal, as a minor operation, and while recommending it for the second class, felt that its use should be limited to those cases in which there was acute or chronic cystitis, painful or difficult insertion of the catheter or the occupation of the patient prevented the use of this instrument. He stated that careful attention should be given to the selection and sterilization of the catheter and the instruction of the patient in its use, and considered the soft rubber and single or double elbow silk-woven instruments to be the only safe ones for home use.

### DISCUSSION.

DR. H. R. GAYLORD, Buffalo, felt that the reason the mortality is so high in prostatectomy operations was due to the fact that the cases came too late. He believed that there is great danger from the continued use of the catheter, no matter

how careful the patient might be, and urged operative interference, unless the cases were in too poor condition at the time they came to the surgeon to warrant this course.

DR. RICHARD H. GIBBONS, New York recommended operative interference, discussing various operations, including the Reginald Harrison and the Parker Sims method, and remarked that by the latter the largest prostate could be removed in a short time. He urged that the operation be done under cocaine anesthesia as soon as a collar is discovered about the urethra.

DR. WILLIAM L. RODMAN, Philadelphia, recommended that operative interference be the rule, rather than the exception, especially if the man is not more than 55 or 60. The operation of Hunter Maguire he considers the most appropriate one. The danger of infection or malignant disease is too great to warrant the continued use of the catheter.

### Recent Results in Cancer Research which Bear on the Parasitic Theory.

DR. H. R. GAYLORD, Buffalo, reviewed the literature regarding the transplantation of tumors. He referred to one operation reported by Ehrlich, in which the tumor started by inoculation from a carcinomatous growth that at the thirteenth generation developed into a sarcoma. Spontaneous recovery took place in about 50 per cent. of the cases inoculated. He also referred to experiments made by injecting the serum from immune mice, or by mixing the blood of immune mice with the germ as prepared for inoculating others, which would prevent its taking any effect. He gave a detailed account of the experiments conducted under his direction with a view to proving the germ theory.

### DISCUSSION.

DR. JONATHAN WAINWRIGHT, Scranton, referred to the possibility of curing cancer by means of the injection of serum from some immune person, and felt that the experiments would be very valuable, if such a serum could be obtained.

DR. WILLIAM L. RODMAN, Philadelphia, congratulated the author on the work he had done, but felt that it was incumbent on the advocates of the germ theory of the origin of cancer to bring more evidence to bear on the point. As a contradiction of the germ theory he referred to the fact that there was no reported case of a physician becoming infected while doing an operation.

DR. ERNEST LAPLACE, Philadelphia, stated that he believed there were two things necessary to the development of cancer, a proper seed and a fertile soil; and that a receptive soil would develop the condition, while an unreceptive one would not.

### Fractures of the Head of the Radius.

DR. T. TURNER THOMAS, Philadelphia, stated that a search of the literature on this subject revealed only 48 reported cases, six of which were diagnosed during life; and that he had been able to secure from four skiagraphers in Philadelphia records of about 55 cases. He mentioned as important diagnostic factors interference with rotation and supination, localized pain and tenderness, together with a history of falling on the hand, and recommended as a treatment immobilization for three or four weeks, after which passive movements should be begun gently.

### What Constitutes Operability in Cancer of the Uterus.

DR. ELLA B. EVERITT, Philadelphia, stated that the best results would be accomplished in three ways: 1. By bringing about conditions favorable to earlier diagnosis. 2. By improvement in operative technic. 3. Clear and widespread knowledge of when to apply radical measures and when to be content with palliative relief. Among the factors requiring consideration under the latter heading are (a) the proportion of the uterus involved, (b) the extension behind the uterus, and (c) the operative measures available. The question of prime importance should always be what is best for this individual patient. Operative interference is justifiable only when a radical cure or at least a prolongation of life under more favorable circumstances can be expected.

(To be continued.)



## MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

*Thirty-first Annual Meeting, held at Indianapolis, Oct.  
10-12, 1905.*

*(Continued from page 1270.)*

## Retroperitoneal Teratoma.

DR. C. M. NICHOLSON, St. Louis, described a teratoma of the abdominal cavity, remarkable not only because of its rare occurrence, rapid growth, and total absence of symptoms until three weeks before death, but because with its substance had been found a chorion epithelioma. The following is the author's report of the case:

Aug. 5, 1905, he was consulted by C. W., a healthy-looking, well-developed young man, 21 years of age, who complained of one symptom—fainting—which had occurred twice during the preceding week. He had attended to his business until August 4, when he quit work, fearing an accident during his trips as superintendent down into the mine. On inspection the abdomen appeared normal; pressure over the region of the gall bladder enabled the examining finger to outline a pear-shaped body. In the median line beneath the rectus abdominis, extending from a point four inches above the pubes to the lower margin of the right lobe of the liver was an immovable mass of definite form. The line of dulness was continuous between the pear-shaped body and the mass in the median line. Although the growth measured four inches in width, no intestinal disturbance had resulted. Three weeks later the patient vomited and complained of great pain after eating. The vomiting became more frequent and the pain more severe with each succeeding day. He saw the patient September 3 and the following morning made an exploratory incision, revealing a growth extending from the right kidney to the last dorsal vertebra, thence downward to within two inches of the pubes. It was firmly attached to the median line posteriorly and to the kidney externally. The posterior peritoneum was cut through and the mass found to be enclosed in a fibrous capsule, which was sewed to the anterior layer of the peritoneum and a portion of the growth removed. The patient sat up at the end of the first week, but continued to complain of great pain. He died two weeks after the operation.

Postmortem examination was made by his assistant, Dr. S. S. Stahl, whose report in part is as follows: "On opening the cavity of the abdomen and cutting through the posterior peritoneum and transversalis fascia, a fibrous capsule enclosing a semi-solid mass and adherent only in the median line and to the right kidney, was found. Not without much difficulty could the tumor be removed, so intimately was it attached to the structure, anterior to the vertebral column. The abdominal aorta from the first dorsal vertebra to the fourth lumbar was closely attached to the growth. The gall bladder was distended, evidently due to pressure on the common duct. Neither the lumbar glands nor the kidneys were enlarged, although the right kidney was adherent to the tumor. The liver, though very slightly enlarged, showed evidence of involvement. The heart and pericardium were normal. The lungs contained 200 or 300 nodules."

The tumor weighed a little less than two pounds. It was right-angled and lobulated, the lobules being smooth and extending in different directions. On cutting, the tumor was soft, the anterior inferior extremity being partially cystic. Some of the cysts were as large as a hazelnut. The remainder of the growth appeared solid. The outer surface of the tumor was covered with a distinct fibrous capsule. Paraffin section of the Zenker fixed tissue showed a very complicated mass. Portions of organs were found corresponding in embryonic origin to all the germinal layers. Skin, cutaneous organs, central nervous system, peripheral nerves, represented the epiblast. Mucous glands, tubes, cysts with epithelial lining, were indicative of the hypoblast. Bone, cartilage, fibrous tissue, constituted the mesoblastic structure.

The author considered at length the different theories that have been advanced in the past to account for the origin of teratomata.

## DISCUSSION.

DR. JOSEPH RILUS EASTMAN, Indianapolis, said that he has

had a remarkable experience in relation to tumors of this character. He has had two cases of precoccygeal teratomata, but no cases of inclusio fetalis, as he considered the case of Dr. Nicholson. In the first there was presented the clinical picture of a complete external fistula in ano. Long hairs protruded from both orifices, but when the roof of the canal was split up it developed that there was a cavernous space which was lined with epithelial membrane and this proved to be in either case a precoccygeal teratoma or dermoid. He related a case in which his father, the late Dr. Joseph Eastman, had removed almost a complete skeleton from the abdominal musculature in a man of middle age.

DR. NICHOLSON said that chorion epithelioma in a retroperitoneal teratoma is extremely rare, and he has been unable to find a similar instance in the literature. Examination of the microscopic slides demonstrates clearly the presence of tissues from the three germinal layers.

Some of the Fallacies in the Clinical Diagnosis of  
Gonorrhea.

DR. G. FRANK LYDSTON, Chicago, discussed some of the more dangerous of the fallacies in the diagnosis of this disease, with especial reference to prognosis as regards the infectiousness of a given individual to other and healthy persons with whom sexual contact may occur. He considered, first, the possibility of excluding infectiousness in the case of a woman under suspicion, or who is known to have had gonorrhea. That the most dangerous type of infection of the female is that in which the external manifestations of the disease are absent or wanting, is coming to be well understood by both gynecologic and genitourinary specialists. The explanation of the relatively great danger of infection of others by such subjects is not so thoroughly understood as it should be. Gonorrheal urethritis in the female, when it has assumed the chronic form, may present no secretion whatever on external examination. There may be little or no vaginal, cervical or uterine discharge, and even such as there is might on examination fail to disclose the micro-organisms of gonorrhea. A swab or probe passed into the urethra may return perfectly clean. Notwithstanding this apparent lack of infection in the urethra, the mucous glands may be involved, and under the influence of sexual excitement and the mechanical effect of coitus, the physiologic hypersecretion may convey to the meatus gonococci in abundance. The result is sufficiently obvious.

The author presented clinical facts which would seem to make it impossible for a physician to say in a given case that a woman is free from infection. He thought this one of the strongest arguments against regulation and medical inspection of prostitutes. He entertains serious objections to the medical profession constituting itself an assurance society for the protection and promulgation of the social evil, but aside from this scruple there remains the fact that no reliable system of inspection or examination can be devised. He is firmly convinced that in many cases of infection of healthy women by a latent gonorrhea of the husband, mixed infection is responsible, and the resulting pathologic condition in the female is non-specific. Its being non-specific, however, does not preclude the possibility of its becoming very serious. We have no tests at the present time which will enable us to give a positive opinion of the infectiousness of a given case of suspected latent gonorrhea. As already suggested, the clinical history in many cases is more important than the laboratory study of the case, and a careful combination of both methods of study is always essential. The physician should be as chary of assuming responsibility in advising a gonorrheic in the matter of matrimony as he should be in advising syphilitics under similar circumstances.

## Irritation of the Bladder.

DR. A. RAVOGLI, Cincinnati, stated that in many abnormal conditions of the genitourinary organs and also of the urine itself, this affection comes on as a symptom in the form of frequent micturition. This symptom can be produced by a number of intravesical and extravesical affections. Urination is so increased that it seems the bladder can not tolerate the



presence of urine. In some cases it occurs in the daytime only, in others at night, and in severe cases often in the day as well as in the night. The intervals between urination may be two hours, but in some cases the patient urinates every quarter of an hour, or even every five minutes. The patient loses sleep, wastes away, and is scarcely able to attend to his occupation.

In reference to the causes, the urine may be the cause of irritation on account of its quantity or its quality. It may be too concentrated, contain urates, phosphates, sugar, etc., which maintain or keep up irritation of the bladder. The bladder itself may be the cause on account of an hyperemic condition. This hyperemia may be the result of vesical or of extravescical troubles, phimosis, urethritis, prostatitis, neoplasms, pericystitis, vulvitis, nephrolithiasis, etc. In other cases it is a pure neurosis, the consequence of epilepsy, hysteria, eclampsia, etc. Since the urethroscope and the cystoscope have been in use, cases of irritation of the bladder without pathologic condition have greatly diminished, and in most of them there has been found either granulation or hyperemia of the mucous membrane. There are two kinds of irritation of the bladder, one of which is a local neurosis, and the other which results from pathologic alterations of the bladder or of the urethra. The detection of the causes will assist materially in selecting appropriate treatment.

#### Prostatectomy.

DR. W. D. HAINES, Cincinnati, said that two patients, aged respectively 42 and 59 years, with small indurated prostate with obstruction, occurring in his practice, did well after perineal section and the removal of the prostate gland, in that the catheter was abandoned and a troublesome cystitis relieved. One of the cases suffered incontinence for a period of three months after operation, and the cure was complete, as residual urine was found in both cases, and this despite easy bladder access by the sound or catheter. He condemns the use of metallic instruments in prostates for diagnostic purposes, or for the relief of urinary retention, as the danger of perforation and infection far outweighs the meager information or temporary relief thus obtained.

One can hope for complete cure in 30 per cent. of the cases submitted to prostatectomy, namely, release from catheter bondage, relief from bladder complications and restoration of urinary function. In his experience with perineal prostatectomy seven cases have been functionally cured, nine show residual urine, some of whom have had attacks of cystitis and dribbling, and five of these are suffering from incontinence six months to one year and a half after operation. Two cases required secondary operation, one for stone, and one for perineal fistula, making a total of sixteen cases with ages ranging from 42 to 79 years without mortality. While these results are far from ideal, the unfavorable physical condition present in the majority of them will in a measure militate against criticism as to the final outcome of this series.

#### Operative Treatment of Tuberculous Joints.

DR. HORACE J. WHITACRE, Cincinnati, advocates four kinds of operations for tuberculous joint disease. First, osteotomy for the removal of an epiphyseal focus; second, erosion or arthrectomy of those cases, particularly in the young, where the focus is circumscribed and a fair amount of synovial membrane remains; third, excision; fourth, amputation. Six cases of rather extensive tuberculosis of the knee were treated by arthrectomy or erosion. In four of these cases a complete cure of the disease with a useful stiff joint and good position was obtained. In three, a slight amount of motion, giving some assistance to the patient in locomotion, was regained. In two, amputation was subsequently resorted to. These subsequent amputations occurred in patients who passed from his observation very soon after operation. They undoubtedly represented recurrence in a spot where the dissection was not sufficiently thorough. Excision for a tuberculous joint has been reserved in his practice for those cases in which the bone ends are damaged.

#### President's Address.

DR. BRANSFORD LEWIS, St. Louis, considered two subjects:

1, Some unrecognized responsibilities of press and state in conserving health; and 2, the prophylaxis of the so-called venereal diseases. He called attention to quack medical advertising in newspapers and magazines, and said that news managers provide against discrimination frequently by making unworthy advertisements resemble as closely as possible the regular news material of the paper, or by setting it up as telegraphic matter. He thinks the press is *particeps criminis* in presenting such fraudulent material. There is a widely disseminated and growing belief that matters pertaining to sexual physiology and pathology should be taught in a simple way to the budding youth of both sexes in the course of their regular education, in order to place them in a position to resist the temptations that beset young life, by the clearer understanding that such instruction will afford. He would make use of educational channels of all sorts to spread the information desired in a scientific, dignified, truthful and wholesome manner, and such instruction will be received in the spirit in which it is imparted. It is primarily to the education of the people to which we must look for providing either the required legislation or the belated impulse or self-respect and decency on the part of the newspapers in eliminating quack advertisements.

Another subject which he considers well worthy of attention is the determination of practical methods of protecting the people from the far-reaching and disastrous effects of those diseases generally termed venereal, but which are not uncommonly entirely innocent in their development. He referred to gonorrhea, syphilis and chancroid. These diseases prevail to an extent undreamed of by the people and those in control of the public health of the country. He believes nothing is to be accomplished by prolonging a discussion as to the propriety of legal control and the regulation of prostitution. Instead of trying to do what is impossible, to corral and disinfect all prostitutes, he would teach the public the dangers of prostitution, the dangers of the diseases to which it leads, the prevalence of such diseases in daily life, how they are acquired innocently, how they are to be avoided, and the necessity of seeking relief from them as soon as possible when they are acquired. A campaign of education must be the chief reliance, and the medical profession, followed by the ministry, instructors in institutions of learning in general, philanthropists and leaders in public work, will have to be counted on as the purveyors of such education.

#### Present Status of Surgery of the Stomach.

DR. W. D. HAGGARD, Nashville, Tenn., said that a discussion relative to operation for stomach lesions now is similar to that in regard to appendicitis twelve or fifteen years ago. Then only the desperate cases were submitted to operation. It is so now with many stomach cases. This, however, must yield to the logic of results, and in a short time the profession generally will advise early operation as they now well nigh universally do in appendicitis. Improved technic, low mortality and satisfactory end results will inevitably do away with the empirical treatment of occult intractable stomach troubles. The typical indication for operative interference is obstruction of the pylorus from an open or cicatrized ulcer causing dilation of the stomach, with stasis of food. The short circuiting operation of gastroenteric anastomosis finds its ideal operation here, and has given the most beneficent results. It is the *fons et origo* of the present group of drainage operations, as well as other gastric procedures, and is altogether the most perfected and satisfactorily employed operative device. The other complications of ulcer requiring operation were pointed out, as (1) perforation, (2) hematemeses of chronic ulcer. Operation is advised in repeated acute hemorrhage or in constantly recurring small hemorrhages. Other indications are found in the following groups of cases: (3) Obscure and persistent stomach troubles, with a long history of dyspepsia culminating in hemorrhage after it has been controlled by medical means and the patient put in the proper condition for operation. (4) Cases of chronic intractable dyspepsia, even without dilatation, which fail to yield to proper medical treatment and are not due to a general visceral ptosis.



Aside from malignancy, chronic ulcer and its complications furnish most of the indications and the majority of cases. It is not impossible that the bulk of cases of inveterate dyspepsia is really due to ulcer. That it is found postmortem very many more times than it is recognized clinically.

(To be continued.)

## ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

*Fourteenth Annual Meeting, held in Detroit, Sept. 26-28, 1905.*

(Continued from page 1195.)

### Delegates.

Among the foreign delegates accredited to the association were: Surgeon-General S. Suzuki, imperial Japanese navy; Drs. M. W. P. Chung, chief surgeon Chinese Government Hospital; Tsin Ying Young, surgeon-major imperial Chinese army, and Ho Kan Yuen, chief surgeon imperial Chinese navy; Col. H. Mareschal, surgeon in the French service; Lt.-Col. J. T. Fotheringham and Maj. E. B. Echlin, of the Canadian medical service; Col. William John Read Rainsford, Royal Army Medical Corps; Fleet Surgeon F. Lloyd Thomas, Royal Navy, and Lt.-Col. Alejandro Ross, of the Mexican Army. Brigadier-General C. H. Todd, Owensboro, Ky., president of the Association of Medical Officers of the Army and Navy of the Confederacy, was also present as delegate from that association.

### Honorable Mention.

In the competition for the Seaman prize the papers of Maj. Frederick Smith, R.A.M.C., Major Charles E. Woodruff, surgeon, U. S. Army, and Assistant Surgeon William Colby Rucker, United States Public Health and Marine-Hospital Service, received honorable mention, in the order named.

### Senn's Welcome.

COL. N. SENN, Surgeon-General of Illinois, founder of the association, held an impromptu reception at the first meeting of the association on his return from a summer spent in Greenland and the arctics with Commander Peary's expedition.

### Captured at Mukden.

COL. VALERY HAVARD, assistant surgeon-general, U. S. Army, military attaché with the Russian army in Manchuria, who was captured when the Russians evacuated that place, was present and interestingly detailed his experiences.

### The Stokes-Seaman Controversy.

One of the most exciting features of the convention was the attack made by Surgeon Charles F. Stokes, U. S. Navy, on Major Louis L. Seaman, U. S. V., in which he bitterly arraigned Major Seaman for misstatements and misleading figures in his paper read last year before the association at St. Louis. He charged that Major Seaman's assertion that the proportion of loss by gunshot wound to the loss by disease in the Spanish-American war in a campaign lasting but six weeks was as 1 to 14 was incorrect. He stated that the report of the Secretary of War for 1898 shows that 270 died of wounds and 400 of disease in that campaign, a proportion of 1 to 1½. Dr. Seaman placed the losses from disease at 3,862. He also made the proportion of battle casualties to disease in the Civil War as 1 to 5, while the proportion, as shown by the official history, was 1 to 2. Dr. Stokes also attacked Major Seaman's statement that beri-beri was almost unknown among the Japanese and produced figures showing that of 5,609 cases of illness among Japanese troops in Manchuria 5,070 were of beri-beri, that the loss to the effective forces of the Japanese before Port Arthur from beri-beri alone was 25,000, and that in the second Japanese army of three divisions with 19,000 men in each there was a sick list of 24,642 in seven months, figures not varying greatly with those of other armies under similar conditions. He also attacked Dr. Seaman's knowledge of bacteriology, military hygiene and principles of asepsis and antiseptics.

Dr. Seaman was not present when this arraignment was made, but prefaced the reading of his paper by a caustic reply to the charges. He claimed that Surgeon Stokes had emasculated the extracts from his writings and addresses which had

been quoted, gave the source of every statement and of all the statistics for which he was criticised, and made a strong argument, not against the personnel of the medical department of the army, but against the lack of business system under which the medical department was conducted, which, he said, was responsible for many of the abuses and for the bad record as regards illness made in the Spanish-American war.

### The Real Triumph of Japan.

MAJOR LOUIS LIVINGSTON SEAMAN, U. S. V. E., in an interesting paper, entitled "The Real Triumph of Japan, or the Conquest of the Silent Foe," stated that, without minimizing the splendor of Japan's victories on land or sea, he must unhesitatingly assert that the greatest conquests of Japan were the humanities of war in the stopping of needless sacrifices of life by disease, and that this had been done by the medical men of the army.

"It must never be forgotten," said Major Seaman, "that in every great campaign an army faces two enemies: First, the armed forces of the approaching foe, with its various machines for human destruction, that is met at intervals in open battle, and, second, the hidden foe always found lurking in every camp—the far greater and silent foe—disease."

Quoting from Longmore's tables, which are accepted as the most reliable statistics of war, he showed that for two hundred years there has rarely been a war where at least four men have not died from disease to one from bullets. In the war between Turkey and Russia in 1878, 80,000 men died from disease and 20,000 from wounds. In the Crimean war the allied forces lost 50,000 men from disease and 2,000 from wounds. In the Civil War the ratio was about 4 to 1, and in the Boer war the losses of the English from disease were appalling. In the Russian-Japanese war 52,946 men in the Japanese army were killed or died from wounds, while but 11,992 died from disease, or nearly 5 to 1.

Japan accomplished this unparalleled record by organizing, in anticipation of war, her medical department on broad, generous lines and by giving to its representatives the rank and power which their great responsibilities merited. Japan even graded her medical men as high as officers of the line and accorded them equal authority, excepting, of course, in the emergency of battle. At home she organized the most splendid system of hospitals that has ever been devised for the treatment of sick and wounded, and put into execution a more effective system of sanitation than has ever been practiced in war. He contrasted with the complete preparatory work of the Japanese medical department the action of the hero of Manila in censoring the cablegram of the chief surgeon, who had requested fifty additional medical officers and two hundred more nurses when the hospital wards were overcrowded, because such a dispatch would prove the incorrectness of his claim that he had the situation well in hand. He also cited the recalling of the order at Tampa in the Cuban campaign directing the unloading of a ship filled with medical and hospital supplies for Santiago and the substitution therefor of a load of mules. He then detailed the incident of another general officer during the Spanish-American war who, when waited on by medical officers with a protest against the use of certain water supplied to the troops, said, "When I want your advice I will send for you. Until I do, you can attend to your own business." Lastly he narrated the incident of the Secretary of War who, when inspecting Camp Wyckoff, Montauk Point, with the President, said, on looking at a glass of water, furnished the troops in this infected camp, which had been pronounced by medical officers to contain germs of disease, "Why, it looks all right to me."

The only relief that can come to these conditions of health in the U. S. Army is when the medical officers are given more authority and when the actions of young and inexperienced officers are allowed to interfere less with the workings of the medical corps. When they listen more to the advice of men like Surgeon-General Sternberg, then many of the faults of the present system will be changed.

"Until the line and staff officers of the U. S. Army," said Major Seaman, "are taught the necessity of sanitation and the medical officer is given rank and authority to enforce it, the medical department of the army must remain a humiliating



failure. Its continuance under present conditions is no less than an evidence of national imbecility."

MAJOR WILLIAM C. BORDEN, U. S. Army, stated that it is a melancholy admission, but that he feared, were war to come on the United States at this time, the medical department of the army would make little better showing than in the Spanish-American war. The medical force to-day is large enough for an army of 42,000, while sufficient officers are provided in the other branches of the service for an army of 100,000. "The war department," said Major Borden, "detailed five officers to accompany the Russian and Japanese armies to observe the latest method for killing, but not one to observe how lives are saved by preventing disease until the President's attention was called to it by an interview with Major Seaman, whereon he directed a surgeon with the rank of colonel to be detailed as attaché in Manchuria, which was done."

MAJOR CHARLES T. NEWKIRK, Bay City, Mich., made an ardent defense of General Alger, and stated that in his experience in the Spanish-American war he had had no trouble in getting what he wanted from the medical supply depot and claimed that the United States had the finest army in the world and the best physicians.

MAJOR CARLTON E. STARRETT, Elgin, Ill., urged that reform was needed in the medical service and cited the experience in Camp Thomas, Chickamauga, when, before the camp was a month old, the medical department had condemned it as unsanitary; but the recommendations of the medical officers counted for naught. In Porto Rico he stated that a regiment was put into an unhealthy camp, and that the medical department condemned the camp, but that until half the regiment was ill the camp was not moved.

COL. WILLIAM J. R. RAINSFORD, R. A. M. C., spoke of the benefits to the medical department to be derived from criticism and publicity. He stated that if you educate the people you will get what you want, and not until then; that not until the public knows what is needed will the appeal be answered. He cited the criticisms of W. Ashmead Bartlett on the British medical department in the South African campaign, for which the medical department hated him. He published reports which the medical department did not like, but it was through these reports that the public became interested, and this resulted in the reform which was necessary, and which has now been attained, whereby the abuses in the medical department have been abolished and the condition of the officers of the Royal Medical Army Corps greatly improved. "So," said Colonel Rainsford, "to the man who stirred up ill feeling we owe the reforms which we got."

#### American Nurses in Japan.

DR. ANITA NEWCOMB MCGEE made an interesting report of her work and observation while in charge of a party of American nurses at Hiroshima Hospital, the largest military hospital in Japan. She confirmed the reports previously made that the wounded prisoners received exactly the same treatment as the wounded Nipponese, and that in its organization and practical workings the Red Cross service of Japan was far ahead of that of any other nation with which she was familiar.

*(To be continued.)*

### AMERICAN ROENTGEN RAY SOCIETY.

*Sixth Annual Meeting, held in Baltimore, Sept. 28-30, 1905.*

Under the Presidency of DR. CHARLES LESTER LEONARD, Philadelphia.

#### Study of Stomach and Intestines.

DR. HENRY HULST, Grand Rapids, Mich., spoke of the value of the Roentgen ray in the diagnosis of dilatation and dislocation of the stomach and intestines. To obtain a radiograph of these organs, an ounce of bismuth is given in a pint of milk or potato soup. Two exposures are made: one in the erect and one in the recumbent position. The first is made shortly after the ingestion of the bismuth and the second is made six hours later, thus showing the size, shape and functional capacity of the stomach. If a good picture of the colon is not obtained in this way, three ounces of bismuth should be injected per rectum.

#### Interpretation of Lung Negatives.

DR. GEORGE E. PFAHLER, Philadelphia, said that in order to study the lungs accurately the negative must be made while these organs are at rest. A careful physical examination should precede the Roentgen examination to permit of a correct interpretation of shadows. In tuberculosis, the Roentgen ray is an aid in diagnosis and also records the progress the disease is making.

Dr. Hulst considers the Roentgen ray as a means of diagnosis of pulmonary tuberculosis of equal value as the sputum examination.

#### Diagnosis of Aneurisms.

DR. F. H. BAETJER, Baltimore, believes the Roentgen examination of aneurisms far superior to any other method of examination. The diagnosis can be made earlier and more correctly, thus permitting earlier and more effective treatment. A physical examination should precede the Roentgen examination so as to detect any deformities that may exist and that would make the diagnosis of aneurism more difficult. He said that a pulsating shadow that does not disappear between pulsations is always suspicious.

#### President's Address.

DR. CHARLES L. LEONARD reviewed the past, present and future of the Roentgen ray, its identity, chemistry and physiologic action and application to medicine.

#### Regulation of Dosage of Roentgen Ray.

DR. E. G. WILLIAMS, Richmond, said that the more superficial the effect desired, the closer the tube should be placed to the surface. He found that about ninety minutes' exposure, with a tube distance of ten inches, spark gap of four inches equivalent to the resistance in the secondary circuit, and the millimeter showing three-fourths of a mp., is required to produce an erythema of the surface. The safety limits are about 30 per cent. less than the number of minutes required to produce a decided erythema. The law of inverse squares helps in regulating the exposure and distance of the tube from the surface. Williams' rule is not to expose in ten days more than the number of minutes required to produce a dermatitis, giving the treatments in series of four to six exposures. To measure and record the dose of the x-ray, there should be noted the duration of the exposure, the distance of the surface from the platinum disc, the equivalent spark gap and the reading of the millimeter.

#### Roentgen Treatment of Keloids.

DR. O. S. BARNUM, Los Angeles, Cal., uses an abundance of rays emanating from a tube of high resistance and excited by a large coil. It is better to have the tube too high than to have it too low. The tube distance should be fifteen to twenty inches, depending on the thickness of the tumor. The thicker the tumor, the higher the tube, the greater the distance and the longer the exposure. He usually exposes for from fifteen to twenty-five minutes on alternate days for ten days, and then stops treatment for ten days, repeating this procedure until the tumor has disappeared. He has had excellent results in the treatment of keloids by this method.

Drs. Boggs, Pancoast and others favored preliminary excision of the tumor, whenever this is possible, following this with Roentgen treatment. The tumors disappear more rapidly and are not so liable to recur.

#### Present Status of Radiotherapy.

DR. G. G. BURDICK, Chicago, cited cases to show the efficiency of the Roentgen ray in the treatment of skin lesions, many of which are cured entirely, while others are only improved. He has treated eighty cases of epithelioma involving the skin only without a recurrence. In cases of epitheliomas situated at muco-cutaneous junctions he advised removal of the glands in the vicinity after a period of quiescence has been brought about by Roentgen treatment. This method was followed in twenty-three cases with no recurrence of the disease after two years. The knife should be used only in such cases where the tumor is favorably situated for a radical removal. Eighteen cases of carcinoma were cured. In fourteen cases the tumor and enlarged glands disappeared



completely; in four cases they ceased growing. His results in the treatment of sarcoma have been as successful. He believes that every case of primary sarcoma can be much benefited by prolonged mild radiation from an old tube well plated with aluminum.

#### Treatment of Carcinoma.

DR. GEORGE C. JOHNSTON, Pittsburg, said that in carcinoma of the breast the application of a ray of sufficient intensity for a sufficient length of time is capable of causing a disappearance of the tumor. The course of radiation should not exceed ten treatments of twenty minutes' duration each, with a tube distance of eighteen inches. A tube of fairly low vacuum should be used, carrying a current not to exceed two and a half mp. On about the fifteenth day after operation, postoperative radiation should be begun, raying through the dressings every other day for ten minutes at a time.

DR. GEORGE H. STOVER, Denver uses a ray of mellow quality that will penetrate the tissues, exposing the surrounding tissues for a reasonable distance from the tumor. All vulnerable parts should be protected from the ray. He makes applications three times a week for ten minutes at a time, the tube distance being eight to ten inches. He advises the use of the Roentgen ray in all primary non-operative and recurrent non-operative carcinomas. While there is an equal chance, operation should be done first, followed by Roentgen treatment.

#### Treatment of Sarcoma.

DR. WILLIAM B. COLEY, New York, said that the value of postoperative treatment of sarcoma has not yet been determined. The facts up to the present time fail to show that the Roentgen ray is curative of malignant growths, except those that are superficial. In some cases the tumor decreases in size, and in a few instances it has disappeared entirely. In all the cases he has treated there has been either local or general recurrence, although in some few cases life has been prolonged. The universal tendency to recurrence and the danger of dissemination of the tumor is sufficient reason, in his opinion, for not advocating the Roentgen ray in the treatment of these tumors, except in inoperable or recurrent cases.

#### Calculus Diagnosis.

DR. RUSSELL H. BOGGS, Pittsburg, described his method and technic for diagnosing renal and ureteral calculi. The radiograph should be made while the patient holds his breath, using a large amount of current for a short time. In over 200 cases examined there were only two unsatisfactory results.

Drs. Pancoast, Smith and others pointed out that the calcified lymph glands, phleboliths and calcareous deposits in the broad ligaments and pelvic fasciæ may make a shadow simulating a ureteral calculus. Dr. Kassabian advised inflating the urinary bladder with air to assist in making a diagnosis of stone in the lower ureter.

Dr. Pfahler exhibited a new Roentgen ray filter consisting of a piece of sole leather which is moistened so as to resemble normal skin as much as possible. A piece of silver may also be used.

Dr. Strong, Boston, exhibited a unipolar *x*-ray tube to be used for the treatment of the center of tumors and growths on the walls of cavities.

#### Officers Elected.

The following officers were elected for the ensuing year: President, Henry Hulst, Grand Rapids, Mich.; vice-presidents, Russell H. Boggs, Pittsburg; C. E. Skinner, New Haven, Conn.; E. G. Williams, Richmond, Va.; E. W. Caldwell, New York; secretary, George C. Johnston, Pittsburg; treasurer, L. E. Custer, Dayton, Ohio; members of executive committee, P. M. Hickey, Detroit, and J. F. Smith, Chicago.

Chicago was selected as the next place of meeting.

The following papers were also read: Skeletal Development, P. M. Hickey, Detroit; Treatment of Leukemia, J. F. Smith, Chicago; Roentgen Treatment of Hodgkin's Disease, Leukemia and Polycythemia, H. K. Pancoast, Philadelphia; Treatment of Lupus and Rodent Ulcers, G. P. Girdwood, Montreal; Treatment of Non-malignant and Non-tubercular Skin Lesions, W. S. Newcomet, Philadelphia; Roentgen Ray in Military Surgery, C. F. Stokes, U. S. N.; Pathologic and Physiologic Effects of the Roentgen Rays, J. Rudis-Jicinsky, Cedar Rapids, Iowa.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Cardiac Affections.

Lambert, in the *New York State Journal of Medicine*, states that we must regulate the patient's exertions and the patient's environment rather than nag the heart with drugs. If the compensation is broken, then rest in bed should be ordered; if dilatation has taken place, some drug of the digitalis group must be used to lengthen the diastolic pause by diminishing the number of systoles, and thus increasing the time for cardiac nourishment. Small doses of the powdered leaves of digitalis with the extract of gentian are the least liable to disturb the stomach. A grain of digitalis leaves in twelve hours is often sufficient and is better than larger doses. One can divide this grain in varying amounts at varying intervals in the twelve hours. Strychnin sulphate or tincture of nux vomica is often of great value. When there are atheromatous changes in the blood vessels small doses of potassium iodid are of benefit. In order to avoid upsetting the digestion the author recommends giving the drug in a mixture containing aromatics and some artificial digestive substances. A dose of 5 gr. (.3) three times a day is usually sufficient. It is necessary to maintain a good digestion and thus aid in preventing arterial changes.

In the cardionephritic cases the author states that if the heart has reasonable compensation it should be left alone and the kidneys treated; if the heart is out of compensation it should be treated and the kidneys left alone for the time being, if they are doing a reasonable amount of work. The excessively high arterial pressure is often relieved by the administration of glonoin or sodium nitrite. The reduction of the arterial pressure will often relieve both the cardiac strain and the nephritic incompetence.

Brunton, in the *London Practitioner*, discusses breathlessness, especially in relation to cardiac disease. He states that digitalis is first in importance in its action on the heart and that there is no better way of giving it than the old-fashioned pill.

R. Pulv. digitalis	06
Pulv. scillæ	
Mass hydrarg., āā.....gr. i	
M. Ft. pil. No. i.	

This is the most common formula, but occasionally an additional grain of blue pill is added to it, and sometimes the extract of hyocyamus 2 grains (.12) in each pill. Why the blue pill should help the action of the digitalis one can not tell, but there can be no doubt whatever that it does so. Of the other preparations, the infusion and the tincture are the most commonly used. The preparations vary in strength and must be given with caution in order to learn the action. In patients in whom digitalis does not succeed strophanthus proves efficient and vice versa. Those cases can only be determined by trial. One of the most valuable remedies for strengthening the heart is strychnin. Its action appears to be that of stimulating the cardiac ganglia, and in cases in which one is doubtful about giving digitalis or strophanthus, either because of their power of slowing the heart or of unduly raising the tension, recourse may be had to strychnin. At the same time this drug proves a most useful adjuvant both to digitalis and strophanthus, and may be given either by mouth or subcutaneously. When the heart is failing digitalin and strychnin may be employed subcutaneously together, and 1/2 or even 1 mg. (gr. 1/60) of the former with 1/30 or even 1/20 of a grain of the latter. Citrate of caffein in doses of from 2 to 5 gr. or diuretin in doses of from 2 to 10 gr. every six hours, are sometimes useful adjuncts to digitalis or strophanthus. Sometimes these drugs cause irritation of the stomach or bowels, and give rise to vomiting or diarrhea, which may require their discontinuance, and as a rule the author thinks



they do more good if used only for a week or even less, and an interval of some days allowed before they are given again.

One of the most important means of relieving dyspnea is certainly free purgation, and one of the best means of securing it is by the use of compound jalap powder in doses of from 20 to 60 gr. (1.3 to 2). This combined with digitalis and blue pill, already mentioned, increases the elimination of water both by the bowel and by the kidney, and lessens the congestion of the liver, which is the natural consequence of venous stagnation. It also relieves the tendency to an edematous condition of the lung and eases respiration.

#### Furunculosis.

Guthrie, in the *Pennsylvania Medical Journal*, recommends the following treatment for this condition. He divides the treatment into preventive, abortive and curative:

##### PREVENTIVE.

Measures should be adopted to restore normal vitality, e. g., rest, recreation, fresh air and good food. Proper care should be given to the skin by bathing, and attention to slight injuries, so as to prevent ingress of pyogenic cocci. Sulphid of calcium has been advised as a measure to prevent boils, but the author has not obtained any good results from its use. He recommends the use of quinin in 3 gr. doses (.20) three times a day, given for a week, and claims excellent results.

##### ABORTIVE.

The author discusses the use of a saturated solution of permanganate of potassium applied to the furuncle and the insinuation into the hair follicle of a minute drop of clear carbolic acid, also the application of carbolic acid after an incision, and his conclusion is that the abortive treatment does more harm than good. All the methods employed involve the breaking down of the wall of protection against the infection. Care should be taken in the early treatment not to drive the infective agents deeper into the tissues nor to overdilute the pus cavity so that the septic process is made to spread.

##### CURATIVE.

He condemns the old-fashioned flaxseed and bread and milk poultices, believing they do more harm by softening and preparing the soil for the reception of infection. The so-called antiseptic poultice, such as gauze saturated with boric acid solution, or with Thiersch's solution, he considers an admirable dressing. As soon as the crater-like opening at the summit of the cone will admit a probe or small grooved director, and there is evidence of pus beneath, a small straight bistoury may be inserted and the opening enlarged so as to permit a free escape of any retained pus. This will give great relief to the patient. Day by day the softened slough or core may be gently pressed out by using cotton sponges saturated with boric acid solution or a weak bichlorid of mercury solution, and when the cavity is cleansed healing will take place very promptly. No free incision, no curetting or injections into the cavity will render any more satisfactory service, but will aggravate and prolong rather than shorten and relieve the trouble.

#### Camphorated Phenol.

Longenecker, in the *Pennsylvania Medical Journal*, discusses the use of this product in infected wounds.

Bufalini recommends the combination of carbolic acid with camphor under the name of camphorated phenol, asserting that the camphor moderates the caustic and disorganizing character of the phenol without destroying its useful effects. This mixture is composed of camphor 2 parts and carbolic acid 1 part. On being rubbed together, or simply left to stand and shaken occasionally a clear solution is formed. The formula in the U. S. Dispensatory directs that this solution be washed in water, but for what reason is not stated. The author thinks this washing can be omitted, as at the present day both camphor and phenol may be obtained in sufficient purity for our use without further purification.

The solution has a specific gravity of 1.006, is non-corrosive and non-toxic to wounds, and can be applied in many conditions. The results following its use are most excellent in all cases. No untoward symptom has ever, in the author's experience, resulted from its application. Gangrene of the finger

has frequently been reported as following the use of weak solution of carbolic acid and water, but this has never occurred even with this full strength solution, which contains 33 per cent. carbolic acid.

The application of camphorated phenol is almost without limit. It can be applied alike to sound skin, wounds and mucous surfaces, such as mouth, nose, vagina, or to abscess cavities, in its full strength and painlessly. Its only limitations seem to be the eye, ear and urethra; to these parts he finds the burning produced by it is rather unpleasant but of short duration, and it may be advisable to use less than full strength, although he has frequently applied it over a limited area even to these parts by the use of cotton on an applicator, in its full strength, without inconvenience to the patient. Camphorated phenol is soluble in alcohol and ether, but insoluble in water. It is miscible with oils and with some other substances, such as tincture of iodine and ichthyol, which serve to modify its action and widen its field of usefulness. Ease of preparation and cheapness are also greatly in its favor.

#### Flatulence.

*Le Progrès Medical* recommends the following formula:

R. Sodii bicarbonatis	
Magnesii carbonatis, āā.....	3i 4
Pulv. rhei	
Olei fœniculi	
Olei cari	
Olei menth. pip., āā.....	3ss 2

M. Ft. pil. No. xx. Sig.: Two pills to be taken after each meal.

## Medicolegal

**Records of Free Hospital Patients.**—Chapter 330 of the Acts of Massachusetts of 1905 provides that hospitals, supported in whole or in part by contributions from the commonwealth or from any municipality, incorporated hospitals offering treatment to patients free of charge, and incorporated hospitals conducted as public charities, shall keep records of the cases under their care and the history of the same in books kept for that purpose. Such records shall be in the custody of the person in charge of the hospital, and shall be admissible as evidence in the courts of the commonwealth as to all matters therein contained. But Section 17 of Chapter 35 of the revised laws declaring public records to be open for inspection shall not apply to such records, and they shall not be open to public inspection until they are produced in court by the person having the custody of the same.

**Hospital for Prisoners Having Tubercular Disease.**—Chapter 355 of the Acts of Massachusetts of 1905 provides that, with the approval of the governor and council, the board of prison commissioners shall have authority to erect, on the land now occupied by the temporary industrial camp for prisoners at Rutland, suitable buildings to be used as a hospital prison for the confinement and treatment of prisoners having tubercular disease. When such buildings are ready for occupancy the prison commissioners may remove thereto any male prisoner in the state prison, the Massachusetts reformatory, the state farm, or in any jail or house of correction, who appears by the certificate of the prison physician to be suffering from consumption or any disease of a tubercular nature. They may at any time return to the original place of imprisonment any prisoner so removed. A prisoner shall be held in the place to which he is so removed or returned according to the terms of his original sentence. A prisoner removed to said hospital prison shall be held in the custody of the superintendent of said temporary industrial camp for prisoners, and shall be governed, employed and treated according to such rules and regulations as may be established by the board of prison commissioners with the approval of the governor and council. Prisoners held in said hospital prison shall be subject to all the laws that are now applicable to the temporary industrial camp for prisoners.

**Lighting, Heating and Ventilating School Buildings.**—No. 193 of the Laws of Pennsylvania of 1905 provides that, whereas it is of great importance to the people of that commonwealth



that public-school buildings hereafter erected shall be properly heated, lighted and ventilated, no schoolhouse shall be erected to cost more than \$4,000 until the plans and specifications for the same shall show in detail the proper heating, lighting and ventilating of the building. Light shall be admitted from the left or from the left and rear of class-rooms, and the total light area must, unless strengthened by the use of reflecting lenses, equal at least 25 per cent. of floor space. School-houses shall have in each class-room at least fifteen feet of floor space, and not less than two hundred cubic feet of air space per pupil, and shall provide for an approved system of indirect heating and ventilation, by means of which each class-room shall be supplied with fresh air at the rate of not less than thirty cubic feet per minute for each pupil, and warmed to maintain an average temperature of 70 degrees Fahrenheit during the coldest weather.

**Some Provisions for State Department of Health.**—No. 218 of the Laws of Pennsylvania of 1905, entitled "An act creating a department of health, and defining its powers and duties," provides that such department shall consist of a commissioner of health and an advisory board of six members, to be appointed by the governor, with the advice and consent of the senate. The commissioner of health, who shall be the head of the department, shall be a physician of at least ten years' professional experience, and a graduate of a legally constituted medical college. The term of office of the commissioner first appointed shall expire March 1, 1907, and the term thereafter shall be four years. The commissioner is to receive an annual salary of \$10,000, and expenses actually and necessarily incurred in the performance of his official duties. Of the advisory board a majority shall be physicians, graduates of legally constituted medical colleges and of at least ten years' experience in the practice of their profession, and one shall be a civil engineer. They are to receive no salary, only actual traveling and other expenses while engaged on the actual duties of the board. On the appointment and qualification of the commissioner, the terms of the members of the state board of health and the secretary of such board shall expire, and no appointments shall thereafter be made to those offices. It shall be the duty of the advisory board to advise the commissioner on such matters as he may bring before it, and to draw up such reasonable orders and regulations as are deemed by such board necessary for the prevention of disease and for the protection of the lives and health of the people of the state, and for the proper performance of other work of the department of health. The commissioner may employ such clerical and other assistants as are necessary and distribute appropriate powers and duties to employees of the department. He may also, from time to time, employ competent persons to render sanitary service and make or supervise practical and scientific investigations and examinations requiring expert skill, and prepare plans and reports relative thereto. It shall be the duty of the commissioner to protect the health of the people of the state, and to determine and employ the most efficient and practical means for the prevention and suppression of disease. He shall cause examination to be made of nuisances or questions affecting the security of life and health in any locality, and shall have power to order nuisances detrimental to the public health, or the causes of disease and mortality, to be abated and removed, and to enforce quarantine regulations. It shall be the duty of the commissioner to have the general supervision of the state registration of births, marriages, deaths and diseases; of practitioners of medicine and surgery; of midwives, nurses and undertakers, and of all persons whose occupation is deemed to be of importance in obtaining complete registration of births, deaths, marriages and disease. In order to insure the official registration of vital statistics and the management of the sanitary affairs of the different parts of the state, he may apportion the latter into ten districts and appoint a health officer in each who shall be a physician of at least five years' professional experience, a graduate of a legally constituted medical college, and who shall receive an annual salary of \$2,500 and necessary expenses. The commissioner may revoke or modify any order, regulation, by-law or ordinance of a local board of health,

concerning a matter which, in his judgment, affects the public health beyond the territory over which the local board has jurisdiction. He is also to have all the powers conferred, and perform all the duties heretofore imposed by law on the state board of health, or any member, committee or officer thereof, including the secretary.

**Additional Alcoholic Compounds to be Taxed.**—Referring to Internal Revenue Circular No. 673, reported on page 1025 of THE JOURNAL of Sept. 30, 1905, James C. Wheeler, Acting Commissioner of Internal Revenue, rules, under date of October 9, that, although the ruling in Circular No. 673 has special reference to compounds composed of distilled spirits and drugs or other medicinal substances, yet in spirit and meaning it may also be extended to include other alcoholic liquors; and as fermented malt liquor, of which every malt extract is largely composed, is an alcoholic liquor, it is for the manufacturers of every such malt extract to show that it comes within that clause of Circular No. 673 in which it is stated that "where substances *undoubtedly medicinal* in their character are combined with . . . alcoholic liquor and are used in sufficient quantity to give a medicinal quality to the liquor other than that which it may inherently possess, such compound is, of course, not to be included in this ruling." In answer to an inquiry by a druggist, Mr. Wheeler further rules that the ruling of Circular No. 673 does not apply to toilet articles, whatever the quantity of alcohol contained therein may be; nor does it apply to the various essences or extracts sold as essences of lemon, vanilla, cinnamon, etc., if these preparations are such as are known to the legitimate grocery or drug trade as household articles for culinary and other uses, and not as beverages. Where, however, alcoholic compounds called "essences of lemon, vanilla, cinnamon," etc., or so-called tinctures or essences of ginger contain "a mere trifle of medication, the main constituent being alcohol," and these preparations, "usually sold by country merchants, especially in prohibition districts," are found by the local internal revenue officers or agents to be generally sold or used as beverages, every merchant thus selling them without holding the requisite special-tax stamp as a liquor dealer under the internal revenue laws will be liable to criminal prosecution in addition to the assessment against him of special tax and penalty; and the manufacturers of these so-called essences and extracts, who are shown by the facts elicited to have made these alcoholic compounds for sale in prohibition districts, will be held liable to special tax and penalty as rectifiers and liquor dealers.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia, Pa.

October 14.

- 1 \*Patent Urachus. G. T. Vaughan, Washington, D. C.
- 2 \*Quarantine, the Delirium Ferox of American Sanitation. J. S. Fulton, Baltimore, Md.
- 3 \*Normal Short Sleep, Sleeping-Sickness, and Sleep in Animals. J. S. Christison, Chicago.
- 4 Professional Responsibility in the Care and Diagnosis of Insanity. A. C. Brush, Brooklyn, N. Y.
- 5 \*Seven Cases of Bilharzia Hematobium. C. A. Smith, Atlanta, Ga.
- 6 \*Hemorrhagic Typhoid with Typhoid Parotitis, Recovery. B. D. Black, Las Vegas, N. M.

1.—See abstract in THE JOURNAL, July 29, 1905, page 347.

2. Quarantine, the Delirium Ferox of American Sanitation.—Fulton discusses the "quarantine madness" prevalent in the Gulf states during the yellow-fever epidemic. He believes that rational, uniform and effective inland quarantine, such as can only be obtained through the medium of the federal government, would reduce to insignificant proportions or perhaps abolish forever the detention camp, military cordon and other costly features of inland quarantine and would concentrate the more intense activities on and immediately around the infected areas.

3. Insomnia and Its Treatment.—Christison enters into a full discussion of the short periods of sleep among men of eminence; the phenomena of exhausted soldiers marching while sound asleep; the control of sleep by the will; age in



relation to length and depth of sleep; quantity of food and the seasons of the year in relation to sleep; some long sleepers; sleeping sickness; suspended animation in man and animals; effects of forced privation of sleep; habits of sleep in animals—day and night sleepers.

5. *Bilharzia Hematobium*.—Smith reports seven cases found among the Boers and the South African negroes who were with the Boer War Spectacle at St. Louis during the World's Fair. The seven cases were apparently chronic, as macroscopic inspection did not indicate the presence of any blood or blood clots in the urine.

6. *Hemorrhagic Typhoid with Typhoid Parotitis*.—Black reports a case ending in recovery. The patient gave a history of an arrested pulmonary tuberculosis. There was no hemophilia or syphilis. The patient was a total abstainer. Hemorrhages occurred about the seventeenth day of illness. Intestinal oozing was followed by oozing from mouth, throat and nose, hematemesis, hemorrhage from bladder and urinary tract. The purpura involved the right leg, and there were pressure points on the posterior surface of body. There were multiple hemorrhages for eleven days. A complicating parotitis seemed to have a marked effect on the hemorrhagic tendency. Medication was unsatisfactory. As a last resort, when other stimulants failed, camphorated oil was given hypodermically in doses of from 15 to 30 drops, as was necessary. Its action was satisfactory.

#### Medical Record, New York.

October 14.

7 \*Office Treatment of Diseases of the Rectum, with a Description of Some New Methods. C. B. Kelsey, New York.

8 \*Vapor Method of Anesthesia. J. T. Gwathmey, New York.

9 Etiology and Elimination of Diabetes. G. L. Curtis, New York.

10 \*Cost of Modern Hospitals. S. S. Goldwater, New York.

7. *Office Treatment of Diseases of Rectum*.—For securing local anesthesia, Kelsey prefers eucaïn to cocain, and he also believes that this agent is much to be preferred to the injection of water for the same object on account of the large amount of fluid required in the latter case. Local anesthesia is open to the serious objection, however, that by it the sphincters can not be stretched without pain, on which account a very large proportion of rectal surgery is left dependent on general anesthesia. In speaking of fissure, Kelsey says that, while not the method of choice, still almost as many cures can be effected by incising the sphincter under local anesthesia as by stretching it under gas or ether. The application of the actual cautery for pruritus is, if anything, more satisfactory if done in several sessions under local anesthesia than if but one treatment is given under general anesthesia. Fistula can sometimes be treated satisfactorily in the office, but much judgment is necessary in selecting the cases. Kelsey also describes a new office treatment for hemorrhoids, which he has practiced for some time with good results. It consists in punctate cauterization of the tumors with a needle heated by electricity, the parts being first rendered insensitive by injecting a few drops of weak eucaïn solution. Only one or two applications are made at a time, and the treatment should not be repeated oftener than twice a week at first. The patient is not expected to be confined to the house or kept from his ordinary business. The time consumed by the treatment in an ordinary case is usually about three months, though it can be done in much less. Kelsey has not observed any complications during ten years' use of the method, and he considers it a valuable procedure in cases in which, on account of the patient's timidity or for other reasons, the clamp and cautery or ligature are not used.

8. *Vapor Method of Anesthesia*.—Gwathmey describes a modification of the Braun and Harcourt inhalers. The apparatus is intended to be used with ether and chloroform administered with or without the admixture of oxygen, but ethyl chlorid or nitrous oxid may also be used in inducing anesthesia. Anesthesia with his inhaler is said to be better than that induced by the drop method, as the concentration of the anesthetic mixture is accurately controllable instead of being dependent on the patient's manner of breathing, and while the gas-ether sequence is the quickest and safest routine method of anesthetizing, it is unphysiologic and will probably

be superseded by the vapor method, or some other, in the near future. The advantages claimed for the method, in addition to the exact control of the anesthetic vapor and the ability to change from ether to chloroform instantly at will, are the ease and pleasantness of induction, and the fact that excitement is usually absent or is very slight, the breathing is regular and natural, the lid reflex is never entirely absent, the breathing and pulse are usually normal, the amount of anesthetic used is very small, after-effects are absent in most cases, the technic can be acquired more rapidly than with other methods, and a continual narcosis may be kept up without danger to the patient. The apparatus is illustrated and details of its application under varying conditions, particularly in surgery about the mouth, are given.

10. *Cost of Modern Hospitals*.—Goldwater analyses at length the conditions which cause the cost of the modern hospital building to be so much in excess of what was the case a generation ago. He estimates that a hospital of 1870, of 450 beds with a space allowance of 6,000 cubic feet per patient, could be built to-day at a cost of \$1,200 a bed. A modern hospital with the same space allowance would cost double, or \$2,400 a bed, while in a hospital recently built 11,000 cubic feet were allowed for each patient, and the cost was approximately \$4,400 a bed. The author then analyses at length the various features entering into the construction of the modern hospital which contribute to raise its cost to so great a degree, such as fireproof construction, electric light and power, laundry, kitchen, refrigeration, surgical facilities, disinfecting and sterilizing plants, accommodations for the staff, nurses and employes, laboratories, etc. He summarizes by saying that, aside from economic causes which are beyond our reach, the high prevailing cost of construction is apparently due to new methods of disease classification and treatment, to better nursing, to the discovery of scientific methods of diagnosis, to an application of the principles of hygiene to wards, workrooms and living rooms, to the desire to release from the wards during part of the day convalescents to whom the atmosphere of the sick room is detrimental, and, finally, to the evolution of the fireproof, and to a certain degree germ-proof, building. If we apply to all these improvements the rigid tests of result, we shall find that the test is fairly met; but while we may grant that to build a general hospital embodying all the features enumerated is to tread the path of wisdom, we may nevertheless question the propriety of investing so much capital in the construction of such a plant. The author then proposes the plan of having the hospital maintain in the country a less expensive branch building for the reception of the convalescent patients, and shows that in this way a much larger number of patients can be provided for at the same expense. For example, the sum of \$1,000,000 will provide a city hospital for 250 patients, but invested in a city hospital with country annex it will furnish accommodations for 300 patients. The conditions of operating will also be such as to render this the most economical system of managing the hospital, and he urges universal adoption of the plan.

#### Medical News, New York.

October 14.

11 Teaching of Failures. F. L. Hupp, Wheeling, W. Va.

12 Symptomatic Treatment of Tuberculosis. J. R. L. Daly, New York.

13 \*Four Cases of Cerebrospinal Meningitis Probably Due to the Pneumococcus. R. N. Willson, Philadelphia.

14 \*The Gynecologic Bladder. A. E. Gallant, New York.

15 Ideal Dental Narcosis. M. Green, New York.

13. *Cerebrospinal Meningitis Due to Pneumococcus*.—These cases are reported by Willson for two reasons: First, because they demonstrate that the popular teaching to the effect that pneumococcus meningitis is, *a priori*, a fatal condition, is not altogether warranted by clinical evidence; and, second, because from the similarity of the clinical pictures they offer an opportunity of discriminating between this and other forms of cerebrospinal inflammation. A diplococcus representing the pneumococcus was obtained on examination of the cerebrospinal fluid of three of the cases. Two patients also had some pneumonic involvement. In one case no bacteria could be found. In three of the four cases the onset was sudden. In the fourth case the prodromal symptoms extended over the greater portion of a month, consisting mainly of occipital



headache and eventually the symptom-complex of optic neuritis. Cephalalgia was present and intense in every case from the start until delirium or coma set in. Delirium was present early in all the cases, except one in which it appeared after a long prodromal period, and in all it disappeared after drainage of the cerebrospinal canal. The patellar and plantar reflexes were absent in all cases on both sides very early and throughout the course of the disease. The ocular reflexes were almost normal in every case and at all times. Kernig's contracture was present in the hamstring muscles in all the cases. The tendon reflexes of the upper extremity appeared intermittently and irregularly and then were abnormal. The treatment in all the cases was identical and consisted in the prompt withdrawal of all the obtainable cerebrospinal fluid, with the object of relieving intracerebrospinal hypertension. Willson is convinced that this procedure may render mild an otherwise grave condition.

**14. Gynecologic Bladder.**—Of 500 cases seen by Gallant, 213 gave a history of some abnormality or symptom referable to the bladder. Six of these cases occurred in children between 5 and 15 years of age. Gallant is convinced that frequent and painful micturition is met with in about one-third of the females who apply for gynecologic advice. In 25 per cent. this is due to specific gonorrheal urethritis, often associated with vaginitis, etc., although but few cases of gonorrheic infection are met with after the age of 32. Vesical prolapse and intrapelvic or abdominal tumors are the most common factors after 30. Uterine displacement, inflammation involving the broad, the uterosacral ligaments, the tubes and ovaries must be reckoned with and relieved by appropriate measures before the bladder symptoms can be cured. As changes in the urine-producing symptoms do not occur in more than 5 per cent. of all cases, after medical treatment has been tried for a time and found wanting, the pelvis should be explored digitally and the anal region inspected, not infrequently the rectum and sigmoid as well. Whenever urinalysis points to calculi or infection in the bladder, ureter or kidney it is Gallant's custom to pass the cystoscope and to catheterize the ureter.

#### Boston Medical and Surgical Journal.

October 12.

- 16 \*Diagnosis of Cancer and Ulcer of the Stomach by the Use of Expert Methods of Clinical Procedure. H. F. Hewes, Boston.
- 17 \*Brief Consideration of the Surgical Treatment of Diseases of the Stomach. J. T. Bottomley, Boston.
- 18 Resection of the Nasal Septum. L. E. White, Boston.

**16. Diagnosis of Cancer and Ulcer of Stomach.**—Hewes details the result of an experimental study of the subject by modern clinical methods of observation with special reference to the indications obtained by the use of those particular methods specially adapted to the study of the stomach, that is, the study in which the value of the indications offered by the clinical findings obtained is proven or tested by the pathologic findings found at the operation or postmortem. In 21 cases of stasis which came to operation or postmortem the cause of the condition was found to be ulcer at the pylorus in 10 cases, cancer at the pylorus in 10 cases, and adhesions about the pylorus in 1 case. Hewes believes that he is justified in saying that the finding of stasis in any case of stomach disorder is in itself a very suggestive point in connection with the possibility of the existence of ulcer or cancer at the pylorus. When this sign is taken in connection with other findings, as the size and location of the stomach, the presence of blood, an anemic condition of the patient, etc., it frequently confirms the diagnosis of cancer or ulcer. Hewes examined the contents of the fasting stomach at least twelve hours after the ingestion of food or material of any kind. The findings in the fasting contents which are indicative of stasis are (1) the presence of an abnormal food residue and (2) the presence of abnormal fermentation in the stomach. Of 160 cases examined for blood, it was found present in none of the chronic cases, except those which were later proved to be cancer or ulcer of the stomach. In 18 cases of stenosis from all causes blood was found in 9.

**17. Surgery of Stomach Diseases.**—Bottomley says that a surgeon should be asked to see a gastric case (1) just as soon as there is even a suspicion of cancer; (2) in a case of sup-

posed acute gastric ulcer just as soon as a reasonably long course of medical treatment has failed to give a very definite improvement, after from five to eight weeks; (3) just as soon as there is doubt in the diagnosis of any gastric case; (4) in all chronic ulcers; (5) in all complications and sequelæ of both acute and chronic gastric ulcers.

#### New York Medical Journal.

October 14.

- 19 An Address Introductory to the Course of Study Delivered Before the Medical School of McGill University, Montreal, September 19, 1905. A. Jacobi, New York.
- 20 Reflex Irritations from Lesions in the Male Urethra. L. B. Bangs, New York.
- 21 Surgery of the Gall-Bladder and Ducts. J. M. Baldy, Philadelphia.
- 22 \*Three Cases of Extraperitoneal Rupture of the Bladder Complicating Fracture of the Pelvis with Recovery. J. R. Eastman, Indianapolis.
- 23 Relation of Certain Extreme Emotional States to Insanity. T. H. Kellogg, Riverdale-on-Hudson, N. Y.
- 24 High Frequency Current in Non-toxic Amblyopia. D. H. Coover, Denver.
- 25 Case of Polycythemia and Cyanosis. A. J. Zimlick, Philadelphia.

**22. Extraperitoneal Rupture of Bladder.**—Eastman reports three cases of extraperitoneal rupture of the urinary bladder complicating fracture of the pelvis, in which the treatment consisted in combatting shock (chiefly with normal salt solution and adrenalin), in the removal of the clot, suture of the rent in the bladder, appropriate bladder drainage, rest, and the application of a bandage in such a manner as to prevent movement of the pieces of bone which were broken off. In the first case cited a large spicula of bone from the right horizontal ramus of the pubis was found thrust through the anterior bladder wall below the peritoneal fold. The second case was one in which the rectum and urinary bladder were transfixed by impalement on some sharp object in a railway wreck. In the third case the anterior wall of the bladder and roof of the prostatic urethra were torn for a distance of two and one-half inches as the result of a crushing injury in the region of the pelvis inflicted by being caught under a falling mass of frozen gravel while at work in a gravel pit.

#### Lancet-Clinic, Cincinnati, Ohio.

October 14.

- 26 Diagnosis and Treatment of Incipient Skin Cancer. F. B. Wynn, Indianapolis, Ind.
- 27 Therapeutic Value of Heat and Cold Applied to the Spinal Cord. W. F. Glenn, Nashville, Tenn.
- 28 Nasopharyngeal Adenoids. J. A. Stucky, Lexington, Ky.

#### St. Louis Medical Review.

October 14.

- 29 Curiosities of Ancient Chinese Medicine. J. Knott, Dublin, Ireland.
- 30 College Course on Tuberculosis. W. Porter, St. Louis.

#### American Journal of Obstetrics, New York.

October.

- 31 Malignancy in Uterine Myomata. H. P. Lewis, Chicago.
- 32 \*New Method of Perineorrhaphy. G. R. Holden, Baltimore.
- 33 Diagnosis and Treatment of Pneumonia in Children. G. N. Acker, Washington, D. C.
- 34 Mauquest De La Motte and His Treatise on Obstetrics. C. G. Cumston, Boston, Mass.
- 35 Relation of Conception and Birth to Season and Hour. C. S. White, Washington, D. C.
- 36 Leucocytosis in Gynecology. H. C. Taylor, New York.
- 37 Closing of Vesicovaginal Fistulae. J. C. Reeve, Jr., Dayton, Ohio.
- 38 Anatomy of a Case of Tubal Pregnancy. D. W. Prentiss, Washington, D. C.
- 39 Fundal, Incidental and Cervical Unavoidable Hemorrhage: New Descriptive Terms for the Two Types of Antepartum Hemorrhage from Placental Separation. J. L. Andrews.
- 40 Chronic Interstitial Mastitis. W. P. Carr, Washington, D. C.
- 41 \*Mortality in Operations on Fibroid Tumors of the Uterus. J. M. Baldy, Philadelphia.

**32. New Perineorrhaphy.**—Holden demands a triangular shaped area on the vaginal surface, the apex of the triangle being from 4 to 6 centimeters from the outlet in the median line. From this point the denudation runs out to the lower part of the remains of the hymen, the upper and outer lateral limit being about the same as in the Emmet operation. The external denudation is brought down to a point which is usually just above the position of the sphincter ani. The limits of the denudation are first marked out with the knife, then the vaginal mucosa is removed with the Emmet scissors. The border of the levator ani muscle on one side is now felt by palpation with the finger just behind the ischiopubic ramus. Under the guidance of the palpating finger this broad edge of



muscle is seized with the mouse-tooth dissecting forceps through the overlying fascia and connective tissue and drawn out toward the median line. A round needle bearing a silk suture transfixes the fascia and muscle. The suture is not tied. The ends are clamped, and the suture is used to draw the muscle forward and to make it prominent when later in the operation it is necessary to pass sutures through the muscle. A second suture is next passed through the muscle of the opposite side in a similar manner. The denudation of vaginal mucosa, of course, should extend high enough on the lateral walls of the vagina to allow the muscles to be brought together easily in the median line. Two external sutures of silkworm gut are now introduced, each suture passing through skin and subcutaneous tissue, through the levator ani on the same side, then through the opposite muscle from before backward, and finally out through the skin and subcutaneous tissue on that side. When the needle is passed through the levator ani, an assistant pulls on the silk traction suture which has previously been passed through the muscle, making it stand out, and a deep bite can be taken, passing through the entire muscle. The lowest suture is put near the rectum, the left forefinger of the operator pushing the rectum down so that it is not injured. The second suture is placed about 2 centimeters above the first suture. When these two sutures are drawn tight the borders of the two muscles are closely approximated, as are also the edges of the skin incision. The muscles are also held firmly against the skin and subcutaneous tissue. The silkworm gut sutures are not tied until after the internal stitches are placed and tied. The temporary traction sutures through the muscles may now be removed, if desired, as the muscles are well splinted out and rendered sufficiently prominent by the silkworm-gut sutures. The first internal stitches are of plain catgut and begin at the apex of the triangle. Three or four stitches are usually taken, uniting the cut edges of the mucosa and catching enough of the denuded surface between to prevent leaving any dead space and to stop all bleeding. A figure-of-eight stitch is next placed. Formalin or chromic catgut is used. The stitch starts on the right-hand side and passes through mucosa and underlying tissue to the posterior surface of the muscle. Without touching the muscle of that side it is carried to the opposite side and pierces that muscle from behind forward. It then passes to the anterior surface of the muscle on the first side and passes through that from before backward. Finally, passing to the second side, it is brought out through the mucosa and underlying tissue in the same way as it entered on the first side. Two such stitches are inserted. The first one pierces the muscles between the two silkworm-gut sutures, the second goes through the muscles above the uppermost silkworm-gut stitch. By tying these two figure-of-eight sutures the borders of the levator ani muscles are brought together, the cut edges of the vaginal mucosa are nicely approximated and the mucosa, as a whole, is bound down firmly to the posterior surface of the muscles. By tying the silkworm-gut sutures the anterior part of the muscular perineal wall is covered by skin and subcutaneous tissue, the muscles are still more closely approximated and are firmly bound to their covering of subcutaneous tissue and skin in front. One or two superficial stitches of plain catgut are sometimes necessary to approximate the skin or mucosa at the upper part of the wound. The advantages of the operation are said to be as follows: A thick, firm perineal body is built up, which narrows the outlet. The axis of the outlet is lifted up out of the direction in which the intra-abdominal pressure is transmitted downward in the upper part of the vagina. A vaginal sphincter of the voluntary muscle is incorporated in the perineal body. The muscles are brought together in front of the rectocele. The rectocele is, therefore, pushed back and obliterated, not partially incorporated into the perineal body, as in the Emmet operation. A good cosmetic result is obtained and an even linear scar is left. Holden has used this method in about twenty cases with uniformly good results. The silkworm-gut sutures are removed on the twelfth day.

**41. Mortality in Operations on Fibroids.**—From 1896 to March, 1905, Baldy operated on 248 cases of fibroid tumor of the uterus, with a mortality of 8.4 per cent. In the last 128

patients operated on during the past 39 months, the mortality was 2.3 per cent. The greatest mortality, 9.21 per cent., occurred in 219 cases of supravaginal hysterectomy. Fourteen cases of panhysterectomy had a mortality of 7.14 per cent. Eleven cases of abdominal myomectomy, three cases of vaginal hysterectomy, two cases of vaginal myomectomy and one case of vaginal myomectomy (Downes) gave no mortality.

#### Bulletin Johns Hopkins Hospital, Baltimore.

October.

- 42 Early Diagnosis and Radical Cure of Carcinoma of the Prostate. H. H. Young, Baltimore.
- 43 Action of the Toxic Agent of Lobar Pneumonia; Therapeutics. W. V. Brem, Jr., Baltimore.
- 44 \*Case of Unusually Large Aortic Aneurism. W. H. Hough, Washington, D. C.
- 45 \*Acute Pericarditis Complicating Acute Lobar Pneumonia. J. A. Chatard, Baltimore.
- 46 Rise of the Present Conceptions as to the Cause of the Heart Beat. E. G. Martin, Baltimore.

**44. Unusually Large Aortic Aneurism.**—The case reported by Hough is interesting not only because of the unusual size of the aneurism, but also because of the presence of a collateral venous circulation. The patient, aged 60, occupation baker, gave a history of having exerted himself considerably at times lifting barrels of flour. He never, however, noticed any bad effects from this. Two years ago he began to complain of pain in the chest, which seemed to be worse at night, interfering considerably with his sleep. Later he developed a slight cough and dyspnea, with some harshness of the voice. A swelling developed gradually near the right border of the sternum, between the second and fourth costal cartilages, which finally reached the size of a small lemon. It was pulsating and expansile. There was no pulsation of the vessels of the neck, and no evidence of venous compression nor of irritation of the sympathetic. About a year later there was noticed an enlargement of the superficial veins of the right half of the body. These veins rapidly became more dilated and tortuous, the flow being from above downward. The veins entering into this collateral circulation were, in the order of their size, the right superficial epigastric, a large branch from the left superficial epigastric joining its mate near the umbilicus, several lateral thoracic veins, the right jugular and a network of superficial veins over the tumor and over the superior and anterior surfaces of the right shoulder. This collateral venous circulation was thought to be due to pressure on the right innominate vein and perhaps also slightly on the superior vena cava. One month later well-marked tracheal tugging set in and an area of softening appeared at the summit of the tumor. At no time was there any weeping or leakage of blood. Death ensued two months later, caused by gradual failing in strength and dyspnea.

**45. Acute Pericarditis Complicating Pneumonia.**—Chatard reports on 665 cases of acute lobar pneumonia admitted at the Johns Hopkins Hospital during a period of sixteen years. These figures include all cases, both those admitted with the disease and those developing terminal pneumonias. Acute pericarditis was present in 31 patients, or 4.66 per cent. In 13, or 41.9 per cent., pericarditis was recognized during life. In the remaining 18 patients it was only recognized at autopsy. Autopsies made in 26 instances confirmed the diagnosis of acute pericarditis or showed its presence when not suspected before death. The average age of the patients was 32.5 years. The complication occurred more frequently in young adults, only 5 patients out of the last 19 in this series being above the average age (32.5 years); the majority were much younger. There were 22 males and 9 females. Of the males 10 were white and 12 colored; among the females 5 were white and 4 were colored. The average duration was 6 days. The mortality was extremely high, 29 patients out of the 31 dying, or about 93.5 per cent. A marked history of alcoholism was given by 10 patients. Occupation had little bearing on the disease, the majority being laborers, as in most hospital series. Two patients gave a history of previous attacks of pneumonia. Another had a pneumococcus infection, the organism being cultivated from the blood during life. Four cases were admitted in active delirium and two patients became delirious during the course of the disease—delirium, therefore, occurring in 19.3 per cent. There were two instances of terminal pneumonia, or 6.45 per cent. The pneu-



mococcus was obtained in culture in 16 instances and found microscopically in cover-slip smears made at autopsy 7 times when the cultures were negative, a total of 23 in 29 autopsies. From the pericardium the pneumococcus was cultivated 12 times and the smears showed its presence in 7 other cases. Consequently, in 19 of the 29 cases of pericarditis the pneumococcus was the organism present. No other important organisms were cultivated, in most instances the cultures of smears being sterile or contaminated. The treatment of patients in whom the pericardial rub was recognized during life was of the general supportive character usually employed in pericarditis. Locally ice bags and blistering were tried. All treatment, except in the cases of two patients who recovered, seemed to be unavailing. In no instances was aspiration or free drainage tried. Chatard concluded that pericarditis, developing during the course of an acute lobar pneumonia, is a most serious and important complication, occurring more especially in young adults, frequently insidious, latent, and often not recognized during life. It appears to arise as frequently by a metastatic process as by direct extension. Treatment is very unsatisfactory and often unavailing, except when fluid is present, in which case it is more surgical than medical. In all patients with pneumonia a most careful watch should be kept on the heart, as this complication appears to be much more frequent than is generally supposed, and urgent treatment in the early stages may materially reduce a high mortality.

#### Medicine, Detroit, Mich.

October.

- 47 Echinococcus Multilocularis—A Graduation Thesis. W. R. Smith.
- 48 Case of Aortic Insufficiency, with Postmortem Examination. R. M. Ladova, Chicago.
- 49 Aneurism in Tabes. F. H. Brandt, Chicago.
- 50 Erotic Symbolism. H. Ellis, Cornwall, England.
- 51 \*Bloodless Resection of the Rectum. E. Laplace, Philadelphia.
- 52 Syphilis Infection and Paretic Dementia. J. G. Kiernan, Chicago.

51. Bloodless Resection of the Rectum.—La Place describes his operation as follows: The patient, under anesthesia, is placed in a recumbent position with the thighs flexed on the abdomen and the pelvis somewhat elevated. The abdomen is brought up to the full extent of the prolapse by means of a volsella forceps and secured in this position by assistants. A curved, large Hagedorn needle, armed with stout twisted silk, is introduced through the double thickness of the rectum on a level with the margin of the anus. The ligature is then cut in half, resulting in two free ligatures, and left in this condition for a moment. About an inch away, on the same level, the needle armed with a similar ligature is introduced through the double thickness of the rectum. A finger introduced within the inner circumference of the rectum will guide the needle; it is brought out and the ligature cut in half as before. One end of the thread from the first ligature is tied to one end of the thread of the second ligature, making a knot within the inner cylinder (caliber) of the rectum. This is then drawn tight to the outside. These two threads are now tied together as tightly on the outside. Thus all the tissues comprised in the double thickness of the rectum between the point of entrance of the first suture and the second suture have been absolutely and completely compressed. There is a free thread left from the second ligature. A third ligature is introduced in the same manner an inch away from the second, and on being cut one of the threads is united within the rectum with the remaining thread from the second ligature, thereby making a continuous thread within the rectum. The two corresponding ends are now tied tightly on the outside, compressing all the tissues of the rectum between suture No. 2 and suture No. 3; and thus sufficient sutures are placed circularly around the rectum on a level with the margin of the anus until the last ligature is introduced. Supposing seven ligatures to have been thus introduced, there is one free thread left from ligature No. 1 and this is tied to the free end of the last inserted suture within the cut. In this way all the tissues of the double thickness of the rectum beyond the margin of the anus have been effectively compressed and ligated. An amputation knife is then used to remove bodily and at once all the rectal tissues below the ligatures. There is almost complete absence of hemorrhage. In order to suture the margin of the anus

with the cut extremity of the rectum, each ligature, beginning with No. 1, is removed singly. This gives an area about one inch in length to be dealt with for arrest of hemorrhage and for suturing the cut extremities together. On removing the ligature any hemorrhage which takes place is controlled by forceps and a silk ligature applied. Suturing the parts is accomplished by through-and-through continuous suturing with chromicized catgut. As many sutures are placed as are necessary for solid union of the parts; and when the distance between the first and second ligature has been closed the second ligature is cut away. Having arrested the hemorrhage by the same method, suturing is done as before. This method is carried on until the whole circumference of the gut has been reunited. It is possible thus to resect as much as eight inches of the rectum with very little hemorrhage and with great facility. Further treatment is practically *nil*. The patient is put on a liquid diet, and an enema administered daily keeps the parts clean. The catgut drops away in time and no complications are likely to set in. The procedure is also free from postoperative pain.

#### International Journal of Surgery, New York.

October.

- 53 \*Stenosis of the Cervix Uteri. A. H. Goelet, New York.
- 54 Tuberculosis of the Shoulder Joint, with Radical Operation for Its Removal. W. L. Allison, San Antonio, Texas.
- 55 Present Treatment of Fractures of the Forearm. J. E. King, Richmond, Ind.

53. Stenosis of Cervix Uteri.—Goelet considers the two-branch dilator an ideal instrument inasmuch as the required dilatation may be accomplished gradually and without injury if ordinary care is observed and it is not permitted to slip out. The degree of dilatation should be only sufficient to permit the easy accomplishment of the work to follow. Goelet finds very much less necessity for employing the steel dilator in these cases now than formerly, and believes it is only necessary in the very few cases that do not yield to negative electrolysis, employed intelligently to accomplish a certain purpose, and not haphazard. Some method of dilatation, however, is essential when curettage is necessary or when the uterine stem is to be inserted. Forceful dilatation, he says, serves only to expand the caliber of the canal temporarily, and unless the condition that produces the constriction is done away with recontraction is certain to follow sooner or later. The result obtained with negative electrolysis is more certainly permanent if it is employed properly, because it stimulates an altered circulation and nutrition, softens indurated tissue and effects drainage of the cervical gland as well as drainage from the uterine cavity. With it the cervical canal can be rendered more certainly and permanently patulous than by any other means; on the other hand, it is capable of doing an infinite amount of harm if it is used improperly. For removal of granulations at the internal os and in the canal the sharp curette must be used after dilatation with the steel dilator, and a patulous condition of the canal must be maintained thereafter by appropriate treatment until a normal condition has been restored. On removal of the granulations with the curette Goelet makes an application of pure carbolic acid to that location only and does not carry it up into the cavity of the uterus. Subsequently, beginning a week after removing the granulations, applications of negative electrolysis are made to the canal by means of conical electrodes, selecting the size that may be inserted without any force. These applications are made at first every second or third day, and later at gradually increasing intervals until the cervical stricture is softened and the canal remains normally patulous. Care is observed never to use the current long enough each time or strong enough to produce cauterization; therefore, never more than a 10-mp. current is used for more than three minutes. Under these applications the mucous membrane heals without contraction and the canal will remain patulous. The same method of negative electrolysis is applicable when the stenosis is due to diseased and occluded glands, and it may be preceded or not by dilatation with the steel dilator, as may be required. It is also effective in all simple uncomplicated cases of stenosis due to chronic inflammation with thickening of the mucous membrane, or simple congestion with edema, and for the conical elongated cervix and undeveloped uterus. Goelet limits the



application of the intrauterine stem to those cases of stenosis due to or associated with hyperplasia and induration of the cervical structure and for flexions. It is never kept in the uterus, however, for a longer period than a week, and during that time the patient is confined to bed. This stem is made of glass tubing, open at each end to permit free drainage, and it is retained in position by loose packing of gauze in the vagina. It is removed repeatedly during this time, cleansed and replaced. Subsequently the applications of negative electrolysis will be necessary in some cases to supplement the action of the stem in restoring a normal condition of the uterine wall, for that is its purpose. Its presence in the canal stimulates an altered circulation and nutrition, and consequently alters the condition of the cervical structures. Within a few days after it is introduced the whole cervix becomes noticeably softened, and the caliber of the canal is so much enlarged that it is difficult to retain the stem in position, though it was at first grasped firmly by the constriction of the cervix.

University of Pennsylvania Medical Bulletin, Philadelphia.  
September.

- 56 \*A Study of Metabolism in Leukemia, Under the Influence of the X-Ray. J. H. Musser and D. L. Edsall, Philadelphia.  
57 Fractures of the Radius; an Experimental study and Report of Cases. T. T. Thomas, Philadelphia.  
58 \*Bacteria Encountered in Suppurations. D. H. Bergey, Philadelphia.  
59 Volume of Nitrogen Evolved from Uric Acid by the Action of Alkaline Sodium Hypobromite Solution. J. Marshall and L. A. Ryan, Philadelphia.

56.—See abstract in THE JOURNAL, June 3, 1905, page 1801.

58. Bacteria Encountered in Suppurations.—Bergey examined thirty pus cases, including 6 that were diagnosed as tuberculous; 4 were abscesses of the inguinal and rectal region; 2 were cases of empyema; 1, carcinoma of the breast; several were superficial ulcers, and the remainder were either suppurating wounds or cases in which suppuration followed various operative procedures. In 24 of the 30 cases staphylococci were encountered either alone or in conjunction with other organisms. Streptococci were found six times. *Bacillus pyocyaneus* was found in 9 cases. In 4 of the cases *Bacillus coli* was encountered. Aside from these organisms, *Bacillus proteus vulgaris* was encountered once, and several bacilli the exact identity of which was not definitely determined. In 13 of the cases an organism having morphologic characters simulating those of *Bacillus diphtheriae* was encountered. *Bacillus pseudodiphtheriticum* was found in 13 cases, or 43.3 per cent. of the cases examined. In many of the specimens of pus *Bacillus pseudodiphtheriticum* was present in very large numbers, far exceeding in number all the other bacteria. The results of Bergey's investigations indicate that, aside from the usually recognized pyogenic organisms—namely, the staphylococci, streptococci and *Pseudomonas aeruginosa*—a very large proportion of suppurations contain, in addition to one or more of these organisms, *Bacillus pseudodiphtheriticum*. The experiments and observations made thus far with *Bacillus pseudodiphtheriticum* indicate that it has distinct, though rather mild, pyogenic properties. The results of the investigation indicate that it is capable of producing a soluble toxin, but, on the other hand, like the staphylococci and streptococci, it produces an endotoxin.

Southern Medicine and Surgery, Chattanooga, Tenn.  
September.

- 60 \*Lessons To Be Learned from the Present Epidemic of Yellow Fever. G. A. Baxter, Chattanooga.  
61 Mosquitoes and Disease. C. L. Pribble, Topeka, Kan.  
62 The Menopause. W. L. Peple, Richmond, Va.  
63 Crime, a Disease with Some Suggestions for Its Cure. H. L. Appleton, Gadsden, Ala.  
64 Typhoid Fever Limited. A. G. Brown, Jr., Richmond, Va.

60. Lessons to be Learned from the Yellow Fever Epidemic.—Baxter states that he is convinced that, as a result of the present epidemic of yellow fever, uniformity of quarantine regulations will result, but not till all matters relating to public health and quarantine are relegated by the states to the general government, which alone can act with fairness and justice to all. To attain this he urges physicians to advocate such a course in all communities in the South. He states that this is the most important question which confronts the South to-day in view of the closer communication which will be had with South American ports in the near future. Another les-

son which has been taught by the present epidemic is the necessity of municipal cleanliness in regard to malaria as well as yellow fever.

Archives of Pediatrics, New York.  
September.

- 65 \*Results of Decapsulation of the Kidneys for Nephritis in Children. E. E. Graham, Philadelphia.

65. Decapsulation of Kidneys for Nephritis in Children.—The histories of ten recorded cases are reviewed by Graham and one personal case is added. Graham found that a careful study of the patients operated on shows that if the nephritis is of comparatively recent origin, the urinary evidences of the nephritis being perhaps only of some months' duration, and if under the best medical care the patient is not improving, but is growing progressively worse, and there is more or less renal insufficiency, a rapid improvement may follow a decapsulation. In Graham's series of 11 cases there were 5 deaths, or 45.4 per cent. Of these five deaths, one patient lived in a much improved condition for a year and died from an attack of acute nephritis. One was distinctly improved by operation. There were four probable, or at least possible, complete cures, or 36.3 per cent. Two patients were not improved. Graham believes that all the patients would probably have died if not operated on. The forms of nephritis most benefited by operation are the acute and subacute cases, but only those patients should be operated on who are not doing well under appropriate medical treatment. The results in the chronic cases are not favorable. Regeneration of the kidney tissue in the child is more likely to occur, and the kidney lesions in the child are less likely to be complicated by degenerations in other portions of the body, and, hence, improvement possible in the first few months following decapsulation is more apt to be permanent in the child. The eye-ground changes are less significant in the child than in the adult.

California State Journal of Medicine, San Francisco.  
September.

- 66 \*Unity, Peace and Concord. W. Osler, Oxford, England.  
67 Clinical Features of Gall Bladder and Gall Duct Affections. H. C. Moffitt, San Francisco.  
68 Preliminary Education. L. Cothran, San José.  
69 Report of the Work of the Board of Examiners. D. Tait, San Francisco.  
70 Uses and Abuses of the X-Ray. A. B. Grosse, San Francisco.  
71 Indications for Roentgen Therapy. W. Lehmann, San Francisco.  
72 Syphilitic Keratoderma, Case Simulating Erythema Keratodes or "Brooke's Disease." A. Garceau, San Francisco.  
72½ Poisoning from Ceanothus Velutinus Resembling Rhus Poisoning. R. F. Rooney, Auburn.

66. See abstract in THE JOURNAL, Aug. 5, 1905, page 365.

Columbus Medical Journal.  
September.

- 73 General Consideration of Hernia. S. Leach, Columbus.  
74 Abortion, Its Etiology, Symptomatology and Treatment. C. M. Wanzer, Urbana, Ohio.  
75 Intestinal Indigestion. W. H. Benner, Tiffin, Ohio.

Albany Medical Annals.  
September.

- 76 Anomalies of the Intelligence in Delirium. H. Elliott, Troy, N. Y.  
77 Perforating Thoracic Aneurism Pointing Externally Through the Sternum with Non-Fatal Rupture. H. C. Gordinier, Troy, N. Y.  
78 \*End Results in Surgery of the Kidney, Based on a Study of 90 Cases, with 123 Operations. A. Vander Veer, Albany, N. Y.

78. Id.—July 29, 1905, page 346.

Kentucky Medical Journal, Louisville.  
September.

- 79 Puerperal Convulsions. T. H. Garvin, Horse Cave, Ky.  
80 Climate and Relapses in Pulmonary Tuberculosis. A. Dixon, Jr., El Paso, Tex.  
81 Random Thoughts on Medicine. C. W. Altkin, Lexington.  
82 Colles' Fracture. W. E. Savage, Cincinnati.  
83 Historical Sketch of the Early History of Medicine in Kentucky; President's Address, Kentucky Valley Medical Association, Torrent, Ky., June 22, 1905. A. H. Barkley, Lexington.  
84 \*Infamy of Patent Medicines. D. H. Erkiletian, Laytonsville, Ky.  
85 Diagnosis and Treatment of Gallstones. B. M. Ricketts, Cincinnati, Ohio.  
86 Typhoid Fever. L. B. Cook, Stanford, Ky.

84. The Infamy of Patent Medicines.—Erkiletian states that there is an independent moral duty in the life of a physician which obliges him to uphold the honor and dignity of the profession, to enrich the resources of his knowledge, to be loyal to the laws of his conscience, his country and his God, and to



equip himself against prevailing evils. He considers the patent medicine evil a menace to our civilization. He declares that no reputable physician will ever prescribe a patent medicine or support its cause, and that there exists no evil which needs to be more seriously considered by the advocates of clean scientific medicine than this one of patent medicines. He calls attention to the fact that more harm has been done to the medical profession through the activities of the patent and proprietary medicine manufacturers than by any other means. Erkiletian criticises some widely advertised remedies and calls on every physician to aid in the fight against them. He advises educating the public in regard to patent medicines and appealing to the legislature for more stringent laws. He also advocates a higher standard of education for the physician, thus eliminating those who through ignorance of the action of drugs prescribe proprietary remedies.

#### New York State Journal of Medicine.

September.

- 87 A Glance at the Horoscope of Medicine. C. N. Palmer, Lockport.
- 88 Acetanilid Poisoning. E. B. Probasco, Glens Falls.
- 89 Typhoid Fever. S. J. Sornberger, Cortland.
- 90 Early Clinical Diagnosis of Cancer. B. W. Stearns, Blughamton.
- 91 Carcinoma of the Breast. E. C. Thompson, Newburgh.
- 92 Urine and Urinalysis. M. E. Dunning, Newburgh.
- 93 Catheterism of the Ureters. W. Ayres, New York.
- 94 Puerperal Sepsis. J. C. Taylor, New York.
- 95 Study of the Milk Supply in New York. S. W. S. Toms, Nyack.

#### International Journal of Surgery, New York.

September.

- 96 Treatment of Stenosis of the Cervix Uteri. E. Van de Warker, Syracuse, N. Y.
- 97 Subparietal Injuries of the Kidneys. W. Fuller, Chicago.
- 98 Salpingitis—Tuberculous and Otherwise. H. E. Pearse, Kansas City, Mo.
- 99 Gonorrhea in Women. A. S. Jaeger, Indianapolis, Ind.

#### New Orleans Medical and Surgical Journal.

September.

- 100 Yellow Fever Data. S. E. Chailé, New Orleans.
- 101 Microbiologic Researches in Syphilis. H. Metchuikoff and E. Roux, Paris.
- 102 European Notes—Vienna. I. I. Lemann, New Orleans.
- 103 Success in Medicine. L. Lazaro, Washington, La.
- 104 Early Diagnosis of Carcinoma of the Stomach. S. K. Simon, New Orleans.
- 105 Comparative Frequency of Ulcer of the Stomach in the Caucasian and Negro Races as Determined Clinically. J. A. Storck, New Orleans.

#### Journal of Mental Pathology, New York.

September.

- 106 The Degenerate Ear. Anatomico-Anthropologic Sketch. V. V. Voroblev, Moscow.
- 107 Electrocuting; an Experimental Study with an Electric Current of Low Tension, Illustrated with Cardiographic and Respiratory Tracings. L. G. Robinovitch, Paris.

#### Archives of Physiological Therapy, Boston.

September.

- 108 X-Ray in the Diagnosis of Pulmonary Tuberculosis. G. E. Pfahler, Philadelphia.
- 109 Radium Photographs of the Stomach. M. Einhorn, New York.
- 110 Penetrating Power of the Static Current. A. Decker, Chicago.
- 111 New Film Carrier and Indicator for Dental Radiography, with Projection on a Horizontal Plane. S. Tousey, New York.
- 112 Differential Diagnosis Between Central and Peripheral Motor Lesions by Electricity. A. C. Geyser, New York.
- 113 Cure of Apparently Permanent Deafness by Vibratory Stimulation. A. K. Scholl, Philadelphia.
- 114 Roentgen Therapeutic Technic. W. L. Brosius, Gallatin, Mo.

#### Texas State Journal of Medicine, Fort Worth.

September.

- 115 Examination and Consultation in Personal Injury Cases. C. E. Cantrell, Greenville.
- 116 Testimony of Company Surgeons in Railway Damage Suits; Its Effect on the Jury. M. Smith, Sulphur Springs.
- 117 Invisible Railway Injury. C. T. Kennedy, Greenville.
- 118 Advances in Gynecology. J. W. Gilcrease, Gainesville.
- 119 Creeping Eruption. J. B. Shelmire, Dallas.
- 120 Tuberculosis in Texas. M. M. Smith, Austin.
- 121 Management and Treatment of Typhoid Fever. A. L. Hatchcock, Palestine.

#### Medical Standard, Chicago.

September.

- 122 Pruritus Ani. C. J. Drucek, Chicago.
- 123 Puerperal Infection as Seen by the Country Practitioner. H. F. Thompson, Buffalo Center, Iowa.
- 124 Three Cases of Cesarean Section with Hysterectomy. B. Robinson, Chicago.
- 125 Renal Diagnosis. L. E. Schmidt, Chicago.
- 126 Clinical Points in Chorea. J. H. Adams, Paoli, Pa.

#### American Journal of Surgery, New York.

September.

- 127 Advances in the Treatment of Muscular Palsies. B. Müller, Hamburg, Germany.
- 128 Surgery of the Stomach. H. Lilienthal, New York.
- 129 The Appendix and Its Relation to Pelvic Disease. C. W. Barrett, Chicago.

- 130 Paraffin in Surgery. (Continued.) W. H. Luckett and F. I. Horu, New York.

- 131 Aural Conditions of Special Interest to the General Practitioner. J. F. McKernon, New York.

#### Northwestern Lancet, Minneapolis, Minn.

September 1.

- 132 Family Physician as a Factor in the Tuberculosis Problem and His Obligations to His State. P. E. Jones, Salt Lake City, Utah.

- 133 Congenital Dislocation of the Hip. S. C. Baldwin, Salt Lake City.

#### Kansas City Medical Index-Lancet, Kansas City.

September.

- 134 Operation in the Patient's Home. H. Hill, Kansas City.
- 135 Pyorrhea Alveolaris and Some Comments. R. E. Darby, Springfield, Mo.
- 136 The Profession of Getting Hurt. J. Panton, Kansas City.
- 137 Use of Antitoxin in Other Diseases than Diphtheria. G. B. Dorrell, Republic, Mo.
- 138 The Right Heart in Pneumonia. O. L. McKillip, Kansas City.
- 139 Ancient Medical Prescriptions. R. L. Sutton, Kansas City.

#### Denver Medical Times.

September.

- 140 Normal Obstetrics, Management of the Puerperium. T. M. Burns, Denver.

#### Brooklyn Medical Journal.

September.

- 141 Teaching Methods in Gynecology and Obstetrics. C. Jewett, New York.
- 142 The Making of a Surgeon. G. R. Fowler, New York.
- 143 The Cure of Carcinoma of the Breast. L. S. Pilcher, Brooklyn.
- 144 Cancer of the Stomach; Problems of Early Diagnosis and Operative Treatment. R. W. Westbrook, Brooklyn, N. Y.
- 145 Surgery of the Gall Bladder. A. T. Bristow, Brooklyn.
- 146 Surgical Anatomy of the Gall Tract. W. F. Campbell, Brooklyn, N. Y.

#### FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

#### British Medical Journal.

September 30.

- 1 \*Surgical Treatment of the Non-malignant Diseases of the Stomach. B. G. A. Moynihan, R. Saundby, H. Hartmann, J. M. T. Finney, C. M. Moulin, F. Eve, and others.
- 2 \*Further Experiments on the Sterilization of the Hands and the Skin. C. L. Green.
- 3 Congenital Dislocation of the Hip Joint and Its Modern Treatment. J. J. Clarke.
- 4 \*Sterilization of the Hands. C. Y. Pearson.
- 5 Spontaneous Gangrenous Formations in the Vermiform Appendix. J. D. Malcolm.
- 6 Surgical Treatment of Chronic Gastric Ulcer and Gastric Dilatation by the Operation of Gastrojejunostomy and Jejunojunostomy. T. G. Atkins.
- 7 Surgical Treatment of Malignant Disease of the Rectum. C. Ball, F. S. Edwards, H. Hartmann, E. S. Bishop, T. G. Atkins, S. White and others.
- 8 Unusual Condition of the Large Intestine Associated with Carcinoma in Two Sisters, Together with Carcinoma in a Third Sister. C. P. Child.
- 9 Case of Gangrenous Appendicitis. T. G. Atkins.
- 10 Cystic Tumor of Omentum. L. A. Bidwell.
- 11 Acute Osteomyelitis and Periostitis of the Spine. A. H. Tubby.
- 12 \*Two Cases of Operation Involving the Thoracic Duct. R. Bucknall.

1. Non-malignant Disease of Stomach.—Hartmann has performed 119 operations for non-malignant diseases of the stomach. Among these were 4 for perforated ulcers, 5 pylorotomies, 1 excision of the lesser curvature, 2 gastropexies and gastropexies combined, 1 gastropasty, 1 pyloroplasty, 1 duodenostomy, 1 gastrolisis, and 1 section of kink of the pylorus. The operation which Hartmann generally considers the best in the treatment of the non-malignant diseases of the stomach is gastroenterostomy, an operation which he has performed 102 times. These 102 cases are divided into three series. The first series embraced 21 cases, with a mortality of 23.7 per cent. The second series consisted of 34 cases, with a mortality of 8.8 per cent. In the third series there were 47 cases, with a mortality of 6.3 per cent. The operation resembles, in many respects, that of Mayo Robson and Moynihan. It is a posterior gastroenterostomy. Hartmann does not use clamps. The patient is placed in a slight degree of the Trendelenburg posture so that the contents of the stomach are in the cardiac part, and if the patient is well anesthetized nothing escapes when the stomach is opened. Hartmann leaves about 8 or 9 cm. between the duodeno-jejunal flexure and the anastomosis so that the gut descends in a straight line from the flexure to the posterior wall of the stomach. The sutures are made with silk. The inner one embraces all the coats. It closes the eavi-



ties and is hemostatic. The outer one includes the serous and muscular coats. A long fixation is made of the intestine, going obliquely downward and to the right. The stomach and bowel are opened at the level of the inferior right part of the apposed portion. Hartmann observed the vicious circle only once, in a case in which the stomach was not fixed satisfactorily at the opening in the mesocolon, which lead to an ascent of the intestinal loop through the opening. He found that in case of pyloric stenosis and in moderate hemorrhage recurring many times the patients are cured by gastroenterostomy. The remote results are also good in intractable ulcer not cured by medical treatment and in patients who suffer from hyperacidity. A tonic dilatation with gastropexy is rarely an indication for surgical interference. In pyloric stenosis, the operative treatment is indicated as soon as the diagnosis is made. In chronic ulcer, surgical treatment is indicated only in the case of an ulcer with mechanical troubles and in those of an ulcer which gives the pyloric syndrome. In cases of excessive hematemesis, Hartmann operates only when there is distension or peristaltic contraction of the stomach, and then he does only a gastroenterostomy.

**2. Sterilization of Hands and Skin.**—Green carried on a series of experiments to determine the relative value of aqueous and alcoholic solutions of sterilizing agents used for the purpose of sterilizing the skin of the patient. Experiments with aqueous solutions of all the antiseptics in common use, even those of the greatest strength that could be tolerated, proved that far from rendering the skin more sterile they had rather the opposite effect. Not only did the compress fail to destroy the micro-organisms situated on the skin, but it loosened the surface epithelium, rendering it easily detachable under the surgeon's manipulations. On the other hand, Green found a decided advantage in the prolongation of the action of the spirituous antiseptics. A greater proportion of the tests made proved sterile, and in no case was there any marked infection. He is convinced that alcoholic compresses readily and materially reduce the infectivity of the skin to a degree which at present is not possible to attain when treating the hands.

**4. Sterilization of Hands.**—Pearson describes his method as follows: For hands not already prepared for sterilization, a preparatory process has to be gone through, which consists of careful trimming of the nails, washing with ordinary soap and hot water, then, if the skin is at all rough, they are well rubbed with sterile sea sand so as to render the skin smooth and to remove redundant epithelium. This preparatory process is not necessary in the case of those whose hands are already in good cosmetic condition. The only form of nail cleaner employed is a piece of sterilized orange wood. The disinfection is divided into three stages: 1. Washing for five minutes with spirit of green soap and very hot water. The scrubbing is done under a tap of running water, and two sterile nail brushes are used in succession. 2. Dehydration by carefully rubbing the hands and forearms with pieces of gauze soaked in methylated spirit; this occupies three minutes. 3. Disinfection proper by rubbing for two minutes with gauze soaked in a 1 to 500 solution of mercuric biniodid in 70 per cent. alcohol. The biniodid is washed off with methylated spirit; the hands are then washed in normal saline solution. Out of the 18 cultural experiments made from normal hands treated as above, absolute sterility was obtained in 8, and practical sterility was obtained in all the experiments, the greatest number of colonies in any one experiment being 10. Out of the 12 experiments conducted on hands infected with highly resisting organisms, such as the spore-bearing hay bacillus, practical sterility was attained in 9, absolute sterility in 1; in 2 there was moderate infection. Pearson has met with only one person whose hands were irritated by this method.

**12. Operations Involving the Thoracic Duct.**—In the first case reported by Bucknall the thoracic duct was accidentally torn open during an operation for the removal of some tuberculous glands from the root of the neck in a man aged 54. The wound of the duct was not recognized at the time of operation, but twenty-four hours later there was a copious flow of lymph and chyle from the wound, and the patient lost

strength and weight in a remarkable manner. Plugging having proved ineffectual, the torn ends of the duct were exposed and ligatured on the sixth day. No more fluid escaped, and with the reabsorption of chyle the patient rapidly recovered his strength and gained in weight. Two months later, however, he suddenly developed signs of widespread general tuberculosis, and rapidly died of this malady. In the second case the convexity of the thoracic duct in the root of the neck was caught up in some malignant glands in the posterior triangle, secondary to a cancer of the breast, which had previously been removed. The lumen of the part of the duct involved was entirely obliterated; it was, therefore, removed with the glands and its free ends were ligatured, without giving rise to any definite symptoms afterward.

#### The Lancet, London.

September 30.

- 13 Circulatory and Anatomic Abnormalities of an Acardiac Fetus of Rare Form. M. Campbell and H. D. Shepherd.
- 14 \*Observations on Twenty-six Consecutive Cases of Gastroenterostomy. A. R. Anderson.
- 15 Empyema in the Posterior Ethmoidal Labyrinth with Paralysis of the Conjugate Movements of the Eyes and Bitemporal Limitation of the Visual Fields. W. Glegg and P. J. Hay.
- 16 Notification of Pulmonary Tuberculosis in Blackburn. A. Greenwood.
- 17 Complete Extirpation of the Penis for Epithelioma in a Hawaiian, aged 28 years; Recovery. E. H. Armitage.
- 18 Two Interesting Cases of Imbecility with Epilepsy. R. G. White.
- 19 Difficulties and Dangers of the Mastoid Operation, the Vicissitudes of Convalescence, and the Ultimate Result to the Patient. C. A. Ballance.
- 20 \*Case of Mitral Incompetency and Ascites Treated with Apocynum Cannabinum. A. J. B. Duprey.
- 21 Influence of Nasal Obstruction on the Form of the Face. W. B. Parsons.
- 22 \*Sanatoriums for the Poor and the Eradication of Consumption. R. C. Macfie.
- 23 \*The Occurrence of a Spirillum in the Blood of Patients Suffering from Secondary Syphilis. G. M. O. Richards and L. Hunt.
- 24 Secondary Effects on the System which May Be Produced by Chronic Enlargement of the Tonsils. H. B. Gardner.
- 25 Essential Conditions of Steam Disinfection. W. Defries.

**14. Gastroenterostomy.**—Anderson reports on 26 consecutive cases of gastroenterostomy. The operation was performed for recent ulcer in one case, chronic ulcer in 11 cases, pyloric stenosis in 8 cases, and cancer in 6 cases. Three of the patients died, a mortality of 11.6 per cent. In one of these fatal cases the patient had a carcinomatous ulcer at the pylorus which involved the stomach wall and head of the pancreas. The patient lived eleven days after the operation. The second case was one of large chronic ulcer at the pylorus, with stenosis. The patient died from bronchopneumonia and cardiac failure. The third case was one of chronic ulcer on the anterior wall. The patient died on the eleventh day from chronic obstruction and debility. All the carcinoma cases terminated fatally. In the case of 5 of these patients temporary relief was afforded by the operation.

**20. Mitral Incompetency and Ascites Treated with Apocynum Cannabinum.**—The ascites in Duprey's patient developed so rapidly that the man had to be tapped once every four to six weeks. Finally he was placed on tincture of apocynum cannabinum, the dose being gradually increased from 1 to 10 minims, three times a day, with the result that from a very small quantity of concentrated urine, about half a pint, the daily excretion rose to several pints, and whereas tapping before using the drug was urgently needed every month or six weeks, the patient went along for six months without being tapped, and the probability is that if he had not stopped using the drug the fluid would not have reaccumulated.

**22. Sanatoriums for the Poor.**—Macfie discusses the question whether sanatoriums, as at present conducted, are the best offensive and defensive measures against consumption. He is of the opinion that sanatoriums under the present conditions involve a terrible waste of lives and money and, although with conjoint colonies and competent administration they might be made most useful weapons against consumption, yet they must not be permitted to divert philanthropic energy from more profitable and proven measures. Consumption will be most speedily and economically abolished, not by means of sanatoriums, but by hygienic improvements, better food, better housing, more open spaces, etc., and by direct measures



against the disease, along with notification, isolation, disinfection, and house-to-house visitation. An effort to make a few foul, infectious houses clean and airy and sunny will do more to eradicate consumption than can be wrought by many costly colossal sanatoriums.

**23. Spirillum in Blood of Syphilitics.**—Richards and Hunt examined films from every case of venereal sore seen by them and in some they succeeded in finding the organism described by Schaudinn and Hoffman. It appeared to occur in three forms, probably involution forms of the same organism, differing only in thickness, length and the number of spirals; one form being thick and straight or slightly curved, a second of the same thickness as the first but with spirals, and the third one exceedingly thin, distinctly spiral, with a large number of turns and very long. The first two varieties appeared to exist in the secretion and the superficial part of the sore, while the third variety only occurred in the deep scrapings, and in a film from such scrapings the organism could be seen lying among the blood cells. As the secondary stage of syphilis appears clinically to be a stage in which the infection is blood borne, and drawing an analogy from the rose spots of typhoid fever in which bacilli have been found, they took a case of secondary syphilis with a rash of a few days' duration, pricked a typical spot and made the blood films, taking the greatest care to avoid contamination by cleaning the skin with soap and then spirit and using specially clean slides. The films were then stained for five minutes by Giemsa's stain diluted 1 in 3 with distilled water, and on examination were found to contain a spirillum exactly like the fine form found in a sore. Other cases were taken and they have now observed the same organism in three patients. Films were taken from spots on the abdomen, chest and arm. The spirilla do not occur in large numbers and often require a long search and in some of the films only one has been seen. In one patient the organism was seen in a blood film taken on each of ten successive days and in the three cases in which the organism was found in the blood it had previously been seen in all forms in the primary lesion. Richards and Hunt consider the presence of the spirochete in the venereal sore as diagnostic of syphilis.

#### L'Obstétrique, Paris.

*Last indexed XLIV, page 165.*

- 26 (X, Nos. 1-2.) \*Enlarging the Pelvis by Pubiotomy.—Elargissement du bassin par la pubiotomie. van Cauvenberghe.
- 27 \*Nécessité d'une direction médicale dans l'allaitement au sein (in breast nursing). F. Quillier.
- 28 Des assurances sur décès d'enfants (premium on death of children). P. Budin.
- 29 "Infant Consultations."—Consultation de nourrissons à la mutualité maternelle de Vienne et de l'Isère. Vivien.
- 30 Sur l'inversion utérine. Ferré.
- 31 Quelques cas de grossesses gémellaires avec fetus antéposés (twin pregnancies). Lequeux.
- 32 (No. 3.) Deux observations de colibacillose au cours de la puerpéralité. Roquel and Papin.
- 33 De la pasteurisation du lait (of milk). Perret.
- 34 \*Les infections naso-pharyngées et leurs conséquences chez le nouveau-né (in the new-born). G. Laurens and L. Pierra.
- 35 (No. 4.) \*Influence of "Infant Consultations" on the Affections and Mortality of Early Infancy.—Influence des consultations de nourrissons, etc. M. Mocquot.
- 36 \*Résultats obtenus par les consultations de nourrissons ("infant consultations.") P. Budin.
- 37 \*Des affections mammaires dans leur rapport avec l'allaitement maternel (in relation to breast nursing). G. Jeanin and Barlerin.
- 38 No. 5.) Des hémorragies multiples chez le nouveau-né (in the newly born). C. Maygrier and Lemeland.
- 39 La version dans les cas l'insertion vicieuse du placenta. L. Demellin.
- 40 \*L'eau de mer en injections isotoniques sous-cutanées (sea water). O. Macé and R. Quilton.
- 41 Les kystes de la face fœtale du placenta. Plauchu.

**26. Extramedian Symphyseotomy.**—Van Cauvenberghe has been conducting research at Leopold's clinic to determine the practicability of Gigli's method of enlarging the pelvis by sawing the pubic bone aside from the median line. He experimented on cadavers and gives seventeen tables showing the various diameters when the cut edges were separated to different distances. The bladder and the urethra retain their supports along the median line, and for this as well as for other reasons, the operation is far simpler and less serious than symphyseotomy. He saws the bone on the side where the head presents or will present after version, except in case of varices, a hernia or other obstacle on this side. When the cut edges are separated by 3 cm., the true conjugate diameter

gains 1 cm., the transverse diameter gains 1.4, and the oblique diameters 1.3 cm. Separation to a distance of 4 cm. does not entail laceration of the capsule of the articulation, but this is liable to occur if the parts are separated to 6 cm., although in some of his experiences there was no laceration even when the distance between the cut edges was 8 cm. Laceration is not a very serious occurrence, but it is better to avoid it. In regard to the limits of the contracted pelvis Leopold has thus delivered a woman with a true conjugate diameter of only 7 cm., the child weighing 3,820 gm. The children are more apt to be small in case of primiparæ, and he has frequently had women spontaneously delivered with a true conjugate diameter of only about 7.5 cm. The limit for symphyseotomy is generally accepted as 7 cm., but van Cauvenberghe is convinced that this limit can be lowered for pubiotomy to 6.75 or even 6.5 cm.

**27. Necessity for Medical Supervision in Breast Nursing.**—Quillier quotes Budin to the effect that the raising of an infant is a science and a very delicate one. The most devoted and enlightened mother love can not supplant the necessity for this science, and only the trained physician is its exponent. The general notion that breast nursing does not require the same supervision as artificial feeding is an erroneous one. The breast may be given too often, too long, or the milk may be deficient in quantity or quality. Quillier gives a number of curves and tables to show the benefit derived from medical supervision of breastfed infants, avoiding disturbances and arresting incipient troubles, and aiding the child to develop into unusual health and strength.

**34. Nasopharyngeal Infections in Young Infants.**—The prognosis is always more or less grave, and every effort should be made to prevent infection of the nose and pharynx in the new born. Veillard advocates disinfection after birth of the nasopharyngeal cavities the same as of the eyes. Laurens admits the advisability of this, but—on account of the anatomy of the parts at this age—warns against the air douche or introduction of any fluid; dry gauze or cotton alone should be used. Another suggestion that has been made is not to allow children with coryza to remain lying down all the time. The Eustachian tube slopes so that mucopus is liable to find its way into the middle ear when the child lies on its back. If paracentesis is necessary, he rinses out the cavity with oxygenated water, first instilling a few drops of liquid vaselin. Certain patients may require more energetic surgical measures. If the trouble is due to the streptococcus alone, an anti-serum might be used to advantage in the general treatment, but the infection is generally mixed. The conformation of the nasopharynx in the new born seems to invite infection and to render its treatment difficult. A rhinitis may lead to infectious processes in the eyes, digestive tract, lungs, sinuses or pharynx, or to epidemic cerebrospinal meningitis. Fluids introduced into the nose to rinse it out are liable to make their way into the middle ear or into the bronchi, and thus to carry infectious material to sound regions. For this reason the use of fluids has been entirely abandoned for the purpose by Budin and Brindeau. Intubation of the nose is also dangerous as it is liable to injure the mucosa. The nose can readily be cleared out by instilling some emollient, and when the obstruction has thus been removed, Laurens then instills four times a day four or five drops of neutral oxygenated water (12 volumes), diluted with boiled water to from one to five times its volume. The face should be kept clean of infectious material, especially around the eyes, and the child's head should be slightly raised so that the secretions will have less tendency to run into the pharynx and tubes. Another valuable adjuvant is the instillation into each nostril, five minutes before the child is given the breast or bottle, three or four drops of a 1 to 10,000 solution of adrenalin hydrochlorid. By inducing vasoconstriction in the mucosa this will temporarily restore the permeability of the nose. If this fails the child will have to be fed with a spoon.

**35 and 36. "Infant Consultations."**—THE JOURNAL has frequently referred to the out-department of the Paris maternities, in which the healthy children are brought back week after week for medical inspection and advice, a combination



of dispensary, baby show, mothers' club and lecture on hygiene. The influence of these "consultations" on the average growth and development of the children has surpassed all expectations. Budin here reports the results in his personal experience, and Mocquot in the "consultations" he has established in six country communities.

37. **Mammary Affections and Breast Nursing.**—Jeannin tabulates the cases observed at the Tarnier clinic in the last four years, and their effect on the mammary functions: The proportion of morbid processes in the breasts was about 10.2 per cent. of the 5,746 women who were able to nurse their children. The majority were observed in the spring. They coincided with uterine infection in from 10 to 22.6 per cent. of the cases in the various years. Breast nursing was apparently normal in 87.5 per cent. of the women who had had but a single attack of lymphangitis; in 57 per cent. of those with recurring lymphangitis; in 68.7 per cent. of those with galactophoritis, and in 40 per cent. of those with mammary abscess.

40. **Sea Water for Subcutaneous Injections in Debility.**—Macé and Quinton report that experiences with 40 weakly children have shown that subcutaneous injection of sea water has a decidedly favorable effect in raising the general tone.

#### Revue de Gynécologie, Pozzi's, Paris.

*Last indexed XLIV, page 1488.*

- 42 (IX, No. 2.) \*Les petits kystes hemorrhagiques de l'ovaire. C. Daniel.
- 43 \*Les péritonites à pneumocoques. C. Lenormant, and P. Lecène.
- 44 \*Des sténoses intestinales tardives consécutives à l'étranglement herniaire (strangulation in hernia). G. Cotte and R. Lerche.
- 45 Etude clinique et anatomo-pathologique sur les ulcères de l'estomac, et en particulier sur l'ulcère calleux (callous gastric ulcers). E. Ries (Chicago).
- 46 (No. 3.) \*Le sarcome de l'utérus. Etiologie, anatomie path. du sarcome du corps. G. Piquand.
- 47 \*Les kystes du mésentère dans l'enfance. A. Broca and C. Daniel.
- 48 \*Sur la chirurgie du cardia. L. Sencert.
- 49 \*Etude de la tuberculose rénale, et particulièrement de son traitement chirurgical. V. Pauchet (Amiens).
- 50 (No. 4.) \*Le sarcome de l'utérus. Sarcomes du col (of cervix). G. Piquand.
- 51 \*Un nouveau traitement des perforations typhiques de l'intestin. T. Domela (Tunis).
- 52 Hydrocolpos congénital. D. J. Cranwell.
- 53 \*Traitement des invaginations intestinales chroniques. X. Delore (Lyons).
- 54 \*Le rectum bilharzien. M. Letulle.

42. **Small Hemorrhagic Cysts in Ovary.**—Daniel remarks that cysts of this kind occur more often than is generally supposed, and that they show no tendency to spontaneous retrogression. He gives the history in full of fifteen cases he has found in the literature, including Boldt's case of peritonitis from rupture of a hematoma of the ovary. Treatment can only be surgical.

43. **Pneumococcus Peritonitis.**—A case of circumscribed and another of diffuse peritonitis are described, both due to the action of the pneumococcus. The diffuse form was observed in 29 out of the 74 cases of pneumococcus peritonitis on record, and in 16 of these the peritonitis was secondary. The only treatment for the circumscribed variety is early extensive incision with ample drainage. This primary, isolated form is the most common, especially in children. The sudden, high temperature, palpation of an encysted effusion, and diarrhea are its main features. The primary diffuse form presents a syndrome exactly like that of appendicitic peritonitis. The only chance of recovery is by early operation, but the results are less promising than with the encysted variety. The secondary form is generally masked by the primary affection, and differentiation is difficult, but prompt surgical intervention offers the only chance for saving the patient. Some individuals have recovered after an operation in secondary encysted peritonitis, but no case is on record as yet of recovery after operation in the secondary diffuse form.

44. **Tardy Stenosis After Incarceration of Hernia.**—The only treatment is removal of the constricted portion, but greater attention should be paid to prophylaxis of such conditions. Cotte preaches the necessity for abstaining—on principle—from all attempts at taxis, except possibly at the very beginning of the incarceration. If the incarceration has lasted several hours no attempt should be made to reduce the hernia

for fear of injury to the intestine with consequent tardy stenosis. If part of the intestine is to be resected, the gut should be removed to far beyond the strangulated portion. In 23 cases treated by surgical measures, the mortality was considerably less than after laparotomies for intestinal occlusion, and the patients rapidly recuperated.

46. **Sarcoma of the Body of the Uterus.**—Piquand's extensive monograph reviews the history of uterine sarcomata. He has collected 416 cases of sarcoma in the body of the uterus, and relates the details of 7 cases of circumscribed sarcoma of the uterine parenchyma personally observed, and of an eighth case showing giant cells, and a ninth exhibiting a sarcomatous polyp. Metastases, he states, are usually located in the lungs or peritoneum, the bladder having been involved in only one case, the intestine in 6 and the lymphatic ganglia in 7.

47. **Cysts in the Mesentery in Children.**—Broca could find only 22 cases in the literature, but has encountered 2 in his own experience. In one the cyst was included in a hernial sac; the patient was a boy of 4. The empty pocket was 15 cm. long, 8 cm. wide at the upper end and 4 cm. at the tip, enclosed in the inguinal hernia. The child recovered rapidly after the operation. Morton published the report of a somewhat similar case in 1896, but the patient was a young man. Broca's second patient was a girl of 6, healthy until four months previously, when violent colic and vomiting occurred and recurred at varying intervals. Symptoms of peritonitis finally developed, the presumptive diagnosis being tuberculous peritonitis with an encysted pocket, as a fluctuating tumor could be palpated in the right side below the umbilicus. There was no fever, but the pulse was 130, the eyes were sunken and bilious vomiting was frequent. The laparotomy revealed a large multilocular cyst in the mesentery, with smaller cysts around it. The large cyst was removed, but the child succumbed the next day. Two small cysts were found on the other side of the mesentery, extending into and through the muscle and mucosa of the intestine. The mucosa was very thin in one of the cysts and had perforated in the other, and this had been the unrecognized cause of the terminal peritoneal septicemia.

48. **Surgery of the Cardia.**—Sencert's illustrated anatomic and experimental study of the surgery of the cardia concludes with a recommendation of esophago-gastrostomy for stricture in this region. He has successfully resected the cardia in living dogs and worked out the technic on the cadaver, as he describes in detail.

49. **Tuberculosis of Kidneys.**—Pauchet publishes the details of a case of primary hematogenic tuberculosis of the kidney cured by nephrectomy eight years ago. He discusses the diagnosis. Nine times out of ten the bacillus arriving by way of the blood infects the cortical zone of one kidney alone. This infection causes hematuria and cystalgia during the first stage, which is essentially chronic, but curable by removal of the focus. The diagnosis should be made before the syndrome is completed by pyuria, bacilluria, pains and enlargement of the kidney. The patient first applies for relief from the cystalgia, as a rule. Urination is painful, and desire to urinate abnormally frequent. No tumor nor ulceration can be seen with the cystoscope, but the mouth of one ureter is congested and swollen. The hematuria is spontaneous, not following fatigue or walking, and may come on at night. It lasts for several days, stopping as abruptly as it began, and is seldom so severe as to affect the general health. The hematuria may or may not be accompanied by ureter colic. The blood is mixed thoroughly with the urine, or it may appear in the form of worm-like clots, from 10 to 15 cm. long. Painless, profuse, spontaneous, hematuria, with the features of renal hematuria, occurring in a young patient should always suggest primary tuberculosis of the kidney. At a later stage the lower end of the kidney will be found abnormally low or enlarged. Tuberculosis of one kidney does not affect the general health in the early phases. When the kidney has been exposed an exploratory incision will decide whether the trouble is due to calculi, cancer or tuberculosis. The entire organ should be removed in case of the latter, resisting the temptation to do a partial nephrectomy. The microscope will reveal tuberculous follicles in the apparently sound parts.



50. **Sarcoma of the Cervix.**—Piquand summarizes 29 cases of hydatidiform sarcoma of the cervix from Weber's, published in 1867, to Williamson's, published last March. He has further collected 41 cases of other varieties of sarcomata of the cervix, and devotes considerable space to a discussion of the histogenesis of sarcomata of the uterus in general. (See 46 above.)

51. **Treatment of Typhoid Perforation.**—Domela insists on the fact that the deaths which have occurred after suture of a typhoid perforation have always been the result of another perforation above or below. The sutured perforation has always been found well healed. The danger of these successive perforations should emphasize the necessity for more radical measures than merely suturing the perforation found at the laparotomy. He proposes that the entire diseased portion of the intestine should be excluded from the balance of the digestive tract, and be allowed to recuperate in peace. He suggests total, unilateral exclusion by an anastomosis between a loop of the intestine above and another below the usual site of the typhoid ulcerations. When the abdomen is opened to suture the perforation, the operation would not be rendered much more serious by an ileocolostomy, while the grave prognosis of typhoid perforation amply justifies any measure that brightens the outlook. If perforations occur afterward in the excluded portion of the gut, there is every reason to believe that they would be comparatively harmless in the empty, resting bowel, and would heal spontaneously in time. He concludes with a discussion of the technic.

53. **Treatment of Chronic Invagination.**—Delore reports 3 cases of chronic invagination treated by operative measures. In the first case he resected the whole invaginated portion and the patient succumbed to the effects of this too radical procedure. In the other cases he resected merely the inner part, drawing it out through an incision in the outer part of the sheath. Both of these patients promptly recovered. The lesser gravity of the latter technic commends it; the results are the same as from total resection. It is described in the text-books as the Maunsell or König method. In 2 of Delore's cases the invagination had been caused by a small tumor which was found in the tip of the invaginated resected part.

54. **Bilharzia Rectum.**—Letulle observes that "of all the chronic ulcerating affections of the intestine, bilharziosis is most liable to be erroneously diagnosed; and yet its differentiation is extremely easy and as certain as it is elegant." The rectum presents a cylindrical induration of its walls, with numerous ulcerations and adenomata scattered over the non-ulcerated portions. The ulcerations never extend beyond the muscularis mucosæ, while all the elements of the mucosa display a tendency to hypertrophy. The chronic inflammation is generally restricted to the pelvic portion of the large intestine. The resulting rectitis causes so much pain and cachexia that surgical intervention should be considered.

#### Archiv f. Gynäkologie, Berlin.

*Last indexed page 292.*

- 55 (LXXVI, No. 1.) \*Untersuchungen über Anomalien der Plazentar-Struktur hypoplastischer Uteri und deren Folgen. O. Schaeffer.
- 56 Ueber Cysten-Bildung an der menschlichen Plazenta. E. Runge.
- 57 Pregnancy in Accessory Cornu. Beitrag zur Kenntnis der Nebenhornschwangerschaft. R. Werth.
- 58 Beitrag zur Lehre von der Struma ovarii colloides. J. Eversmann.
- 59 Ueber Retractions-Ring und inneren Muttermund (internal os). G. Martin.
- 60 Beobachtungen und Erfahrungen über Myome der Gebärmutter (uterus). Engelmann.
- 61 \*Ueber die sog. "Conglutinatio orificii uteri externi." H. von Bardeleben.
- 62 Ueber Autolyse der Plazenta. G. L. Basso.
- 63 Zur Histologie der desmoiden Vulvartumoren, mit Berücksichtigung ihrer Abstammung vom Ligamentum rotundum. G. W. Maly.

55. **Placentation in Hypoplastic Uteri.**—The conditions in a hypoplastic uterus are not favorable for normal placentation. After expulsion of the fetus there is liable to be retention of parts of the membranes, entailing amenorrhea for months and absence of the mammary secretion and involution of the uterus. Treatment should be the cautious curettement of the upper necrotic layer of the mucosa. This cures amenorrhea from this cause. Intrauterine treatment should also be insti-

tuted to promote hyperemia afterward, such as tamponing with iodoform gauze for several days. Curettement is contra-indicated in all other cases of hypoplasia of the uterus, puerperal or postpuerperal, as the mucosa is liable to become regenerated and transformed, improving conditions for subsequent pregnancies. The histologic findings in 5 cases are shown in colored plates.

61. **Prevention of Dilatation of External Os.**—Bardeleben describes 5 cases of what is generally known as conglutination of the external orifice of the uterus. He prefers the term "prevention of dilatation of external os uteri." The cause may be stenosis and rigidity in elderly primiparæ, or it may be due to cicatricial strictures or adherence of the lower pole of the ovum or to overfilling of the amnion, each presenting different indications for treatment.

#### Beiträge zur klin. Chirurgie, Tübingen.

*Last indexed XLIV, page 1232.*

- 64 (XLV, No. 1.) \*Examination of Trachea in Case of Goiter.—Untersuchungen der Luftröhre und die Verwendung der Tracheoskopie bei Struma. O. Wild (Zurich).
- 65 \*Zur Pathologie der bakteriellen Peritonitis. A. Peiser.
- 66 \*Ueber subkutane Darmverletzung und ihre Behandlung (injuries of intestine). S. Lillienfeld.
- 67 \*Experimentelle Untersuchungen über Radium-Wirkung. C. Blauel.
- 68 Hypernephroma renis. P. Kuzmik.
- 69 Untersuchungen über die Progenitur Thyreopraver. O. Lanz (Amsterdam).
- 70 (No. 2.) \*Symmetrical Swelling of Lachrymal and Salivary Glands in Relation to Pseudo-Leukemia.—Die sym. Schwellung der Thränen- und Speicheldrüsen in ihren Beziehungen zur Pseudoleukämie. M. v. Brunn.
- 71 \*Total Tearing Off of the Face.—Totale Abreissung der Gesichtsmaske. H. Kaposi.
- 72 \*Pseudospastische Parese. Id.
- 73 Ueber die Naht des Nervus hypoglossus (suture). A. Wolfer.
- 74 \*Ueber Dauer-Resultate der Colopexie bei hochgradigem Rectum-Prolaps. F. Pachnio.
- 75 \*Zur Trepanation bei Meningitis. G. Hirschel (Heidelberg).
- 76 Coxa vara im Gefolge von Ostitis fibrosa. M. v. Brunn.
- 77 Ueber die Luxatio pedis talo. Trendel.
- 78 Sponge Holder in Twelve Compartments for Steam Sterilization.—Ein mehrtheiliger Tupferbehälter für den Dampfsterilisator. C. Blauel (Tübingen).
- 79 Ueber Harnblasegeschwülste (bladder tumors). Riegner.
- 80 \*Behandlung und Dauer-Ergebnisse bei Verletzungen und Verengerungen der männlichen Harnröhre (injuries and strictures of male urethra). G. Schmidt (Breslau).
- 81 Zur Kenntnis des primären Magen-Karcoms (of stomach). Oberst.

64. **Tracheoscopy in Case of Goiter.**—Wild has had opportunity to examine the trachea through the tracheoscope in 1,000 cases of goiter and describes the various findings. His article of 110 pages is illustrated.

65. **Defenses Against Bacterial Peritonitis.**—The conclusions of Peiser's clinical observation and experimental research are to the effect that after the peritoneum has become infected its power of absorption becomes temporarily diminished. This, he thinks, is evidently a defensive reaction on the part of the organism against threatening septicemia and general intoxication from absorption of the bacteria and their toxins in the peritoneum. The essential struggle against the bacteria takes place in the peritoneum, and the latter must conquer in the struggle or the general organism is doomed. The idea that absorption by the peritoneum is one of the means of defense against bacterial peritonitis and that delayed absorption favors it is erroneous, he thinks, and exactly the reverse he believes is true. He also found that injection of adrenalin into the abdominal cavity retarded absorption by the peritoneum. Exner has recently made the same discovery in regard to absorption of poisons in the stomach. He discovered that an intraperitoneal injection of adrenalin retarded the absorption of ingested poisons. Peiser adds that encapsulation, adhesions and fibrin deposits are only further efforts on the part of the organism to prevent absorption by the peritoneum in case of bacterial invasion. He is convinced that his experimental findings apply also to man to a certain extent.

66. **Contusions of Intestine.**—Lillienfeld has operated in 4 cases of laceration of the intestine from abdominal contusions in the last three years. One of the patients recovered after laparotomy with extensive drainage and rinsing of the intestine and suction drainage through the hole as large as a penny found in the cecum. The diffuse suppurative peritonitis rapidly subsided and convalescence was disturbed only by



an infarct in the lung which caused transient trouble. The fistula into the cecum was closed in less than a month. The favorable outcome in this case was the more surprising, as thirty hours had elapsed after the injury from the sharp edge of a board, flung by some machinery, before the patient was received at the clinic. The feces that had escaped from the opening in the cecum were solid, and did not make their way into every nook and corner like the thinner contents of the jejunum when the small intestine is injured. No attempt was made to suture the perforation and it was retained for an artificial anus. This provided the best possible conditions for the paralyzed intestine and for the subsidence of the peritonitis, as has been frequently observed in diffuse suppurative peritonitis treated by making a large opening into the intestine with aspiration drainage if necessary and possibly also lavage of the stomach to relieve the alimentary canal further. In the case described no attempt was made to rinse out the abdominal cavity; it was merely sponged out with compresses wet with salt solution, the peritoneal exudate being swabbed up with dry sponges. This mechanical cleansing was done as cautiously as possible, supplemented by copious subcutaneous infusion of salt solution. In a fifth case the intestinal wall was merely crushed and no signs of perforation could be discovered, although there were evidences of diffuse suppurative peritonitis. The general condition was poor and no attempt was made to resect the crushed intestinal wall, as at first intended. The loop involved—the lower loop of the ileum—was wrapped in gauze and an opening made into the cecum to relieve the intestine. The copious peritoneal exudate was sponged away and the abdominal cavity drained with gauze, not rinsed. The injured loop apparently fully recuperated as the symptoms gradually subsided, and the patient was dismissed in good health in less than two months.

**67. Experimental Research on Action of Radium.**—Blauel remarks that the action of the radium rays is not felt below 1 cm. from the surface. Primary injury of the vessels was never observed in any of his numerous tests, but the radium rays have an injurious influence on all the tissues. The cells which are physiologically less resistant are the first to succumb. In normal tissues these susceptible cells are the more highly differentiated ones, especially the epithelial cells, and in tumors, the tumor cells. The epithelium of rabbits' kidneys exposed was the first to display evidences of injury, and in human carcinoma and sarcoma only the specific tumor cells. These findings corroborate Werner's suggestion that the action of radium is an intoxication with the products of the destruction of lecithin, as the epithelial and tumor cells are peculiarly rich in lecithin.

**70. Symmetrical Swelling of the Lachrymal Glands in Leukemia.**—The symmetrical swelling of the lachrymal and salivary glands, which Mikulicz first described in 1892, has many points in common with pseudoleukemia and leukemia. The patients presenting these symmetrical swellings have been followed and the connection with pseudoleukemia has been established by the further history of the cases. They ran into pseudoleukemia or leukemia of the severest type, and are probably only different degrees of the same affection, or at least have a common origin with pseudoleukemia. The causal agent is probably some hematogenic infection.

**71. Total Loss of the Face.**—A woman of 54 was standing on a ladder leaning against a lamp-post. The ladder was not on the hook placed to hold it, and it fell. As the woman fell with it, her chin caught on the hook and it tore out her entire lower jaw and all the soft parts above to just below the orbits. The face was left hanging like a mask on the hook, and was sent to the clinic the next day by mail. The case is illustrated and the successful results of the plastic operations which restored the woman's looks. She was fed at first through a stomach tube, but later learned to use a nursing bottle, and can now eat semi-solid food. Her speech at first was absolutely unintelligible, but she can now make herself understood. The surgeons restored most of the cheeks and proposed to make a new chin with an artificial lower jaw, but she refused any operation beyond what was absolutely necessary, and now wears a false face of vulcanized rubber, which is held in place by spectacles and a rubber band around the neck.

**72. Pseudo-spastic Paresis.**—Kaposi describes a case similar in some respects to those published under the heading "pseudo-spastic paresis with incessant tremor, subsequent to trauma." The patient, a young man, previously healthy, was hit on the head by the broken, flying head of a heavy hammer. The convulsions and tremor were noticed immediately as the patient fell after being struck. Kaposi discusses the nature and classification of the case.

**74. Remote Results of Colopexy in Case of Large Rectal Prolapse.**—Pachnio reports the recent examination of 11 cases of rectal prolapse treated by colopexy at Garré's clinic. The prolapse recurred in 6 of the cases. The cases in which no relapse has occurred show the benefit of the colopexy when the patients can refrain from heavy work thereafter or do not have to pass through the stress of childbirth. Under other circumstances colopexy alone is liable not to be radical enough to insure a permanent cure. The remote results are known in only 22 out of the 58 cases in the literature, but a relapse was observed in 13 of these.

**75. Trephining in Meningitis.**—Hirschel states that two cases of suppurative meningitis have been treated by trephining at Czerny's clinic in the last seven years. In one case the meningitis was consecutive to empyema of the frontal sinus, in the other to a contusion over the right eye in a patient with erysipelas of the face. The assumption of a localized process justified the intervention in each case, but in both it failed to arrest the fatal course of the affection. Transient improvement was observed; in one case the hemiplegia subsided, but the thrombosis and softening persisted and entailed a fatal termination.

**80. Injuries and Strictures of Urethra.**—Schmidt here reviews a year's material at Mikulicz' clinic—a total of 140 cases of injury or stricture of the male urethra, with the remote results after treatment. This experience shows that an organic stricture is a very serious affection, as is evidenced by the high mortality and the recurrences. Improvement and cure are obtained only by long and tedious treatment in which the patient must co-operate with great perseverance. Measures to prevent development of a stricture are of the utmost importance on this account. Bougie treatment should be commenced at the slightest sign of stricture formation, and be kept up as long as necessary, with systematic, periodical examination afterward. Gonorrhea is the chief cause for these strictures. Injury from without frequently entails stricture formation, but such a stricture has better prospects of a cure from operative measures, especially from resection and suture of the urethra. Non-operative stretching is also liable to prove successful, but whether so permanent is still a question. Abrupt, violent bougie treatment should be avoided. If cautious use of the bougie does not answer the purpose, and if energetic measures are necessary, then the bladder should be punctured, with continuous drainage, or the perineum should be incised. The patient should then be referred to a specialist for further treatment. The desire to get along without a cutting operation should not be allowed to interfere with intervention in time, before local and general damage results.

*Deutsche medizinische Wochenschrift, Berlin and Leipsic.*

- 82 (XXXI, No. 36, Sept. 7.) \*Pavy's Test for Sugar.—Ueber die Verwendbarkeit der Pavy'schen Zuckertitrationsmethode für die Klinik und den praktischen Arzt, und über einige technische Modifikationen derselben. Sahli.
- 83 \*Zwei Fälle von primärem Larynx-Erysipel. L. Blum.
- 84 \*Zur Frage der Untersuchung der pleuritischen Exsudate auf Tuberkel-Bacillen. E. v. Zebrowski.
- 85 \*Zur Chemie der Krebsgeschwülste (cancer). P. Bergell and T. Dörpninghaus.
- 86 *Spirochæte pallida* und *refringens* nebeneinander im Blute bei hereditärer Lues. G. Nigris.
- 87 Spring-Box for Cotton Dressings.—Sterilisierbare Wattenbüchse für das Sprechzimmer. E. H. Oppenheimer.

**82. Pavy's Quantitative Test for Sugar in Urine.**—Sahli regards Pavy's titration with ammoniacal copper solution as a very simple, rapid and reliable method. He discusses the various points to bear in mind and its application in the clinic and for the general practitioner, proposing several modifications to simplify the technique. He also preaches the necessity for the practitioner to make his own sugar tests, not trusting them to a third party. Only the physician himself is able to



appreciate the shades of difference in the reactions and to control them. Trusting to others for such an important element in the diagnosis is liable to avenge itself. He has recently known of an instance in which a physician treated a patient for months on the diagnosis of diabetes based on the finding of sugar by a third person. The diabetic diet had reduced the patient to an emaciated condition when it was finally discovered that there had been a mistake in regard to the discovery of sugar in the urine. The quantitative tests should also be made by the physician if he is to apply therapeutic measures understandingly.

**83. Primary Erysipelas of the Larynx.**—The diagnosis in the two cases described was difficult, but it was finally confirmed by the spreading of the erysipelas to the face. A subacute laryngitis, lasting for several weeks, had preceded it in one case, and in the other it followed the crisis in a croupous pneumonia. The clinical picture was the same as described in the text-books, except that in the second case there were no signs of stenosis.

**84. Determination of Tubercle Bacilli in Pleuritic Effusions.**—Jousset's "inoscopy" has been described in these columns. It is based on the fact that the solid particles in blood, etc., do not become precipitated, but remain in suspension until they are included in the coagulum. By digesting out the fibrin in the clot, the tubercle bacilli can be detected in the residue. Zebrowski has been testing this method of detecting tubercle bacilli and suggests a modification of it which he thinks is more reliable and much easier. It is just the reverse of the Jousset technic. He aims to prevent coagulation in the fluid and accomplishes this by adding a 0.5 per cent. solution of sodium fluorid to an equal amount of the aspirated effusion. The mixture is set aside in a cool room until the next day, when the sediment is centrifuged, and slides made according to Ziehl's technic. He has thus examined the effusion in 34 cases of pleuritis and in 2 of peritonitis. In 83 per cent. of the cases of secondary pleurisy he found tubercle bacilli and in 55 per cent. of the primary cases.

**85. Chemistry of Cancer.**—Bergell has been investigating the aminoacids in cancer tissues by Fischer's ester method as a means of determining the character of their albuminous content. He found that the albumin in the cancers examined contained an unusually large proportion of the four amino acids, and also of diaminic acid, with a remarkably small proportion of leucin in comparison to other animal tissues.

#### Jahrbuch f. Kinderheilkunde, Berlin.

*Last indexed page 663.*

- 88 (LXI, No. 6.) \*Die diagnostische Tuberkulin Reaktion im Kindesalter (in children). B. Schick.
- 89 Zur Charakteristik der akuten, nicht pustulösen Exantheme und ihre Mischformen. D. Galatti.
- 90 Morphologische und biologische Untersuchungen über die Darm bakterien des Säuglings (of infant intestine). E. Moro.
- 91 Proportion of Fat in Human Milk.—Ueber den Fettgehalt der Frauenmilch. P. Reyher. Id. W. Freund. (First part in No. 4.)
- 92 (LXII, No. 1.) Untersuchungen der Leipziger Marktmilch, mit besonderer Berücksichtigung der in derselben nachweisbaren Streptokokken (in market milk). H. Brüning.
- 93 Raw Milk in Infant Feeding.—Ueber rohe Milch als Säuglingsnahrung. M. Hohlfeld.
- 94 Congenital Cardiac Defects and their Coincidence with Other Deformities.—Zur Lehre von den kongenitalen Herzfehlern und ihrer Koinkidenz mit anderen Missbildung (Allenie). O. Krause. Two cases.
- 95 Measles After or During Scarlet Fever.—Masernerkrankungen nach Scharlach. H. Risel.
- 96 Ueber Angina ulcero-membranosa Plauti und Stomatitis ulcerosa (identity of). Z. W. Eichmeyer.
- 97 \*Rhythmic Jerking of the Head in Sleep.—Ueber nächtliche Kopfbewegungen bei Kindern (Jactatio capitis nocturna). J. Zappert.
- 98 Fall von kongenitalem Leber-Sarkom und Nebennieren-Sarkom mit Metastasen (sarcoma in liver and suprarenals). A. W. Bruck.
- 99 (No. 2.) Bladder Tumors in Children.—Zur Lehre von den Harnblasengeschwülsten im Kindesalter. G. Hüsler. 2 cases.
- 100 Zur Kenntnis der Hysterie im Kindesalter (in children). O. Meyer.
- 101 "Mongolian Birth Marks" in European Children.—Sogen. Mongolen Geburtsflecken der Kreuzhaut bei europ. Kindern. K. Fustjawa.
- 102 2 Fälle von Pachymeningitis hemorrhagica interna. P. Misch.

**88. Tuberculin Test in Children.**—Schick writes from Esch-erich's clinic at Vienna to urge the more general adoption of the tuberculin test in dubious cases of tuberculosis in chil-

dren. It was applied in 120 cases in the clinic, the age of the children ranging from three months to 14 years. The special features of the response to the test in children are the frequency of an intense reaction at the point of injection and the length of the general reaction. This sensitiveness to small doses is the more pronounced the shorter the interval since infection.

**97. Rhythmic Jerking of the Head in Sleep.**—This habit was observed for several years in the seven children whose cases are described. When the child lay on its back the head was moved to and fro, but when it lay on its side the head was lifted from the pillow each time. The sleep was tranquil, and other signs of a nervous affection or hysteria could not be found in some of the children. The habit continued from the third year into late childhood. In one instance three of the children in a single family had this habit. One child exhibited it also during its waking hours. It seemed to be pleasurable rather than otherwise to the children affected.

#### Hospitalstidende, Copenhagen.

*Last indexed page 665.*

- 103 (XLVIII, Nos. 23-26.) \*Early Operative Treatment of Appendicitis.—Den tidlige operative Behandling af den akute Blindtarmsbetændelse. Tage-Hansen.
- 104 \*From My Service as Volunteer in the Havana Mosquito Brigade.—Fra min Tjeneste, etc. K. Pontoppidan.
- 105 \*Tidlig bakterioskopisk Diagnose af Lunge-Tuberkulose (early diagnosis). C. A. Blume.
- 106 \*Om Fund af Spirochæte pallida (Schaudinn). V. Jensen.

**103. Appendicitis.**—Tage-Hansen believes in early operation in appendicitis. He found pus in 23 out of 25 patients operated on last year, and the pus was putrid in all but 2 cases. Fecal concretions were found in the appendix in 10 instances. The operation was undertaken in 3 cases after one day, in 7 after two days, in 5 after four days, and in others from the fifth to the fourteenth day after the onset of symptoms. Since he has made it a rule to operate at once, except in the mildest cases, he has not lost a patient in his last series of 30 cases.

**104. Volunteer Service in the Havana Mosquito Brigade.**—Pontoppidan pays a high tribute to the work of the Americans in demonstrating the rôle of the mosquito in tropical pathology, and describes the details of his volunteer service in the mosquito brigade at Havana during the American occupation.

**105. Early Diagnosis of Pulmonary Tuberculosis.**—Blume was unable to obtain sputa for examination in several cases in which tuberculosis was suspected. He finally succeeded in obtaining material by scraping the larynx with a cotton wound probe, and was able to detect tubercle bacilli in the mucus thus obtained from the throat.

**106. Spirochetes in Syphilis.**—Jansen reports confirmatory findings of spirochetes in syphilis and their absence in control cases.

### Books Received

DEPARTMENT OF THE INTERIOR BUREAU OF GOVERNMENT LABORATORIES. I. The Polypodiaceae of the Philippine Islands. II. New Species of Edible Philippine Fungi. By E. B. Copeland, Ph.D. Paper. Pp. 146, with illustrations. Manila: Bureau of Public Printing, 1905.

DEPARTMENT OF THE INTERIOR BUREAU OF GOVERNMENT LABORATORIES, CHEMICAL LABORATORY. I. Autocatalytic Decomposition of Silver Oxide. II. Hydration in Solution. By G. N. Lewis, Ph.D. Paper. Pp. 97. Manila: Bureau of Public Printing, 1905.

DEPARTMENT OF COMMERCE AND LABOR BUREAU OF STATISTICS. No. 2. Series 1905-06. Monthly Summary of Commerce and Finance of the United States, August, 1905. Paper. Pp. 859. Washington: Government Printing Office, 1905.

PRINCIPLES OF BACTERIOLOGY. A Practical Manual for Students and Physicians. By A. C. Cabot, M.D., Seventh Edition, 100 illustrations, some in colors. Cloth. Pp. 689. Price, \$2.75. Philadelphia: Lea Brothers & Co., 1905.

THE BARTON FIRST-AID TEXT-BOOK. Manual for the Student in First Aid. By H. H. Hartung, M.D., Illustrated by R. G. Wells, Cloth. Pp. 82. Boston: New England First Aid Association.

REPORT OF THE SURGEON GENERAL OF THE ARMY TO THE SECRETARY OF WAR for the Fiscal Year Ending June 30, 1905. Paper. Pp. 208. Washington: Government Printing Office, 1905.

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN. For Physicians and Students. By B. Sachs, M.D. Second Edition. Cloth. Pp. 571. Price, \$4.00. New York: Wm. Wood & Co.

FIRST AID IN ACCIDENTS. By C. R. Dickson, M.D. A Manual of Instruction. Cloth. Pp. 127. Price, 50c. Boston: National First Aid Association of America.



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## Original Articles

### THE PATHOLOGY OF INTESTINAL AMEBIASIS.\*

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AND

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MANILA, P. I.

In former papers, one of us (Musgrave) has dealt with the subjects of the cultivation of amebas, and the etiology, diagnosis, prognosis and treatment of intestinal amebiasis. To complete the series, there remained, then, the pathology, complications and sequelæ, and to the pathology of the intestinal amebic disease the following remarks will be limited.

It may be well to state at the outset that we can see no valid reason for departing from the nomenclature of Lösch. He described a *pathogenic* ameba from a diseased intestine and called it *Amœba coli*. Why this term should be applied to a supposititious non-pathogenic organism is difficult to say. We shall, in referring to the cause of intestinal amebiasis, use the name introduced by Lösch.

Among the many articles in the literature of amebiasis, there are but few which are of special value from the pathologic side. Chief among these are those of Councilman and Lafleur,<sup>1</sup> Harris,<sup>2</sup> Howard,<sup>3</sup> and Rogers.<sup>4</sup> Taken together, these works give a very complete picture of the disease as we have seen it.

The material has been obtained from various sources, among which have been the First Reserve Hospital (the records of Strong and Musgrave), Bilibid Prison and the Civil Hospital, all in Manila. Other material has been obtained from the private practices of Drs. McDill and Musgrave, also in Manila.

#### METHODS.

Bits of tissue from autopsies were fixed in Zenker's solution, in absolute alcohol, Flemming's solution, and Kaiserling, and ultimately imbedded in paraffin.

Sections from alcohol tissues were stained by Mallory's thionin and oxalic method, those from Flemming's solution in safranin and safranin-picro-indigo-carmin, those from Zenker's in Magenta-picro-indigo-carmin (Borrel), Gentian-violet-picro-indigo-carmin, eosin-methylene-blue, eosin and toluidin blue, hematoxylin and eosin, hematoxylin and picro-fuchsin (Van

Gieson), chlorid of iron hematoxylin (Mallory), and Heidenhain's iron hematoxylin.

After some preliminary staining it was evident that for simple diagnosis of amebas from alcohol tissues, the eosin-toluidin-blue and thionin-oxalic-acid methods were satisfactory in the order given; for others, sublimate or chrome tissues, hematoxylin and eosin were most useful. It was evident, however, that for careful examination and cytologic study the best results could be obtained with Heidenhain's iron hematoxylin and Borrel's stain, or in the case of Flemming's solution sections with safranin-picro-indigo-carmin. Borrel's method may be modified by using gentian violet in the place of magenta with excellent results.

Borrel's staining gives most brilliant results in sublimate tissues producing very clear distinct pictures and only surpassed in clearness and delicacy by Heidenhain's iron hematoxylin. Both of these stains have the additional advantage of showing the bacteria when differentiation is properly carried out.

Hematoxylin and eosin is a very satisfactory routine method for demonstrating the amebas although the contrasts are not so distinct and the finer elements can not be so well demonstrated.

Harris' method, when applied to sections of the intestine, gives a considerable contrast between the amebas and other cells. By its use the organisms are easily found with the lower powers of the microscope.

Kaiserling tissues respond best to hematoxylin and eosin, but are of little comparative value for detail, and have been used almost exclusively to demonstrate the lesions in a gross microscopic way. From such tissues, serial sections have been made of various types of lesions and their form and extent studied in that way.

#### GROSS LESIONS.

Many writers say that the macroscopic lesions of intestinal amebiasis are pathognomonic. While in certain cases—perhaps in the majority—this is true, there are others in which the picture may be very deceptive. We have seen cases from the appearance of which at autopsy we could not say definitely whether or not we were dealing with amebiasis, tuberculosis or some other ulcerative condition. We have seen some cases, few to be sure, in which the majority of the ulcers were not of the classical undermined type, in which the undermining was either incipient or healing was in progress. A truly pathognomonic picture, however, is presented when the mucous membrane shows all the types of lesions, and this is not uncommon, and in which the walls of the gut are thickened and edematous.

The various lesions may not be sharply distinguished, for the process is a progressive one, and one type shades into another very gradually, so that it is for purposes of convenience in description that we shall apply epithets to arbitrary stages of the gross process.

\* At the joint meeting of the Section on Pathology and Physiology and the Section on Practice of Medicine at the Fifty-sixth Annual Session, July, 1905, this paper was read in abbreviated form by Dr. Musgrave in connection with the article on Amebiasis which was published in THE JOURNAL Sept. 16, 1905.

1. Johns Hopkins Hosp. Reports, 1891, vol. ii, 395.

2. Amer. Jour. Med. Sc., 1898, vol. cxv, 384.

3. Buck's Reference Handbook, 1900.

4. Brit. Med. Journ., 1903, vol. i, 1315.





Fig. 1.—Thin-walled gut, with shallow ulcers, some slightly undermined, others punched out.



Fig. 2.—Sigmoid. Irregular ulceration with diphtheritis.



Fig. 3.—Colon. A moderately thickened gut with various types of ulcers.



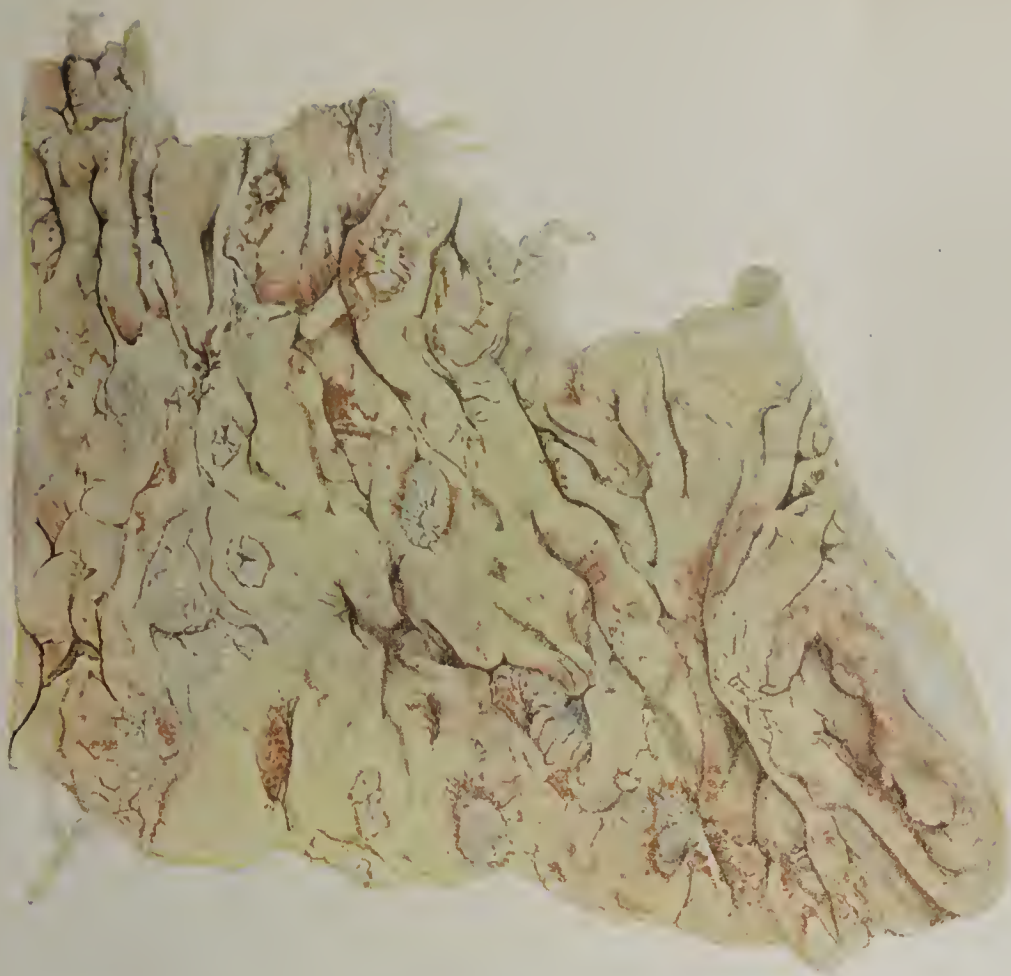


FIG. 10—Cecum.  
Shows all stages of ulceration.  
The smallest red points  
indicate the positions of  
preulcerative lesions.



FIG. 9—Colon. Earliest lesions.  
The specimen had been  
very much decolorized.



FIG. 27—Amebas from a culture.  
Drawn with Zeiss oil immersion.  
1/12, comp. oc. 8.

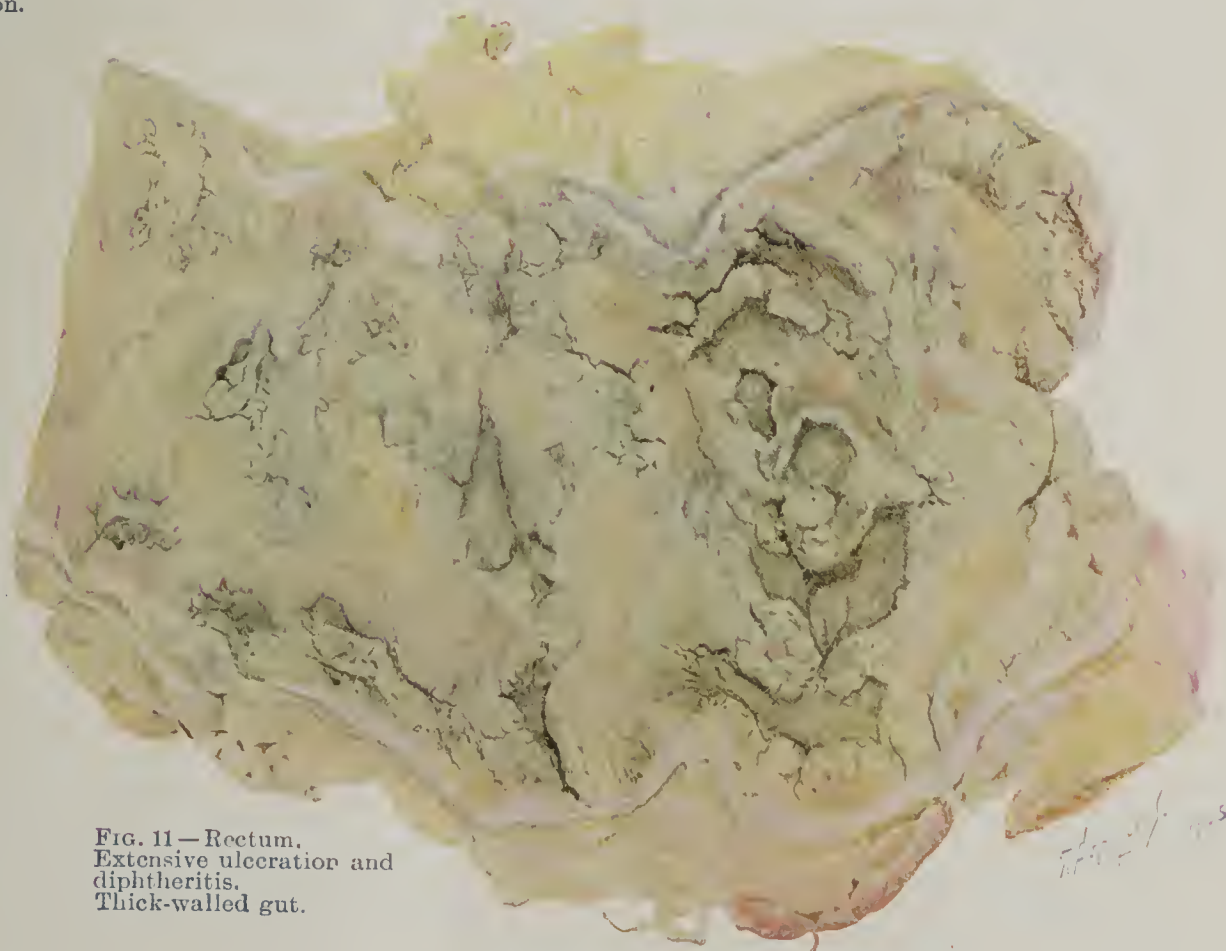


FIG. 11—Rectum.  
Extensive ulceration and  
diphtheritis.  
Thick-walled gut.









Fig. 4—Cecum. Marked degree of disorganization of the bowel with shreds of muscularis and submucosa. Perforation.



Fig. 5.—Rectum. Extensive ulceration and diphtheritis. Thick-walled gut.

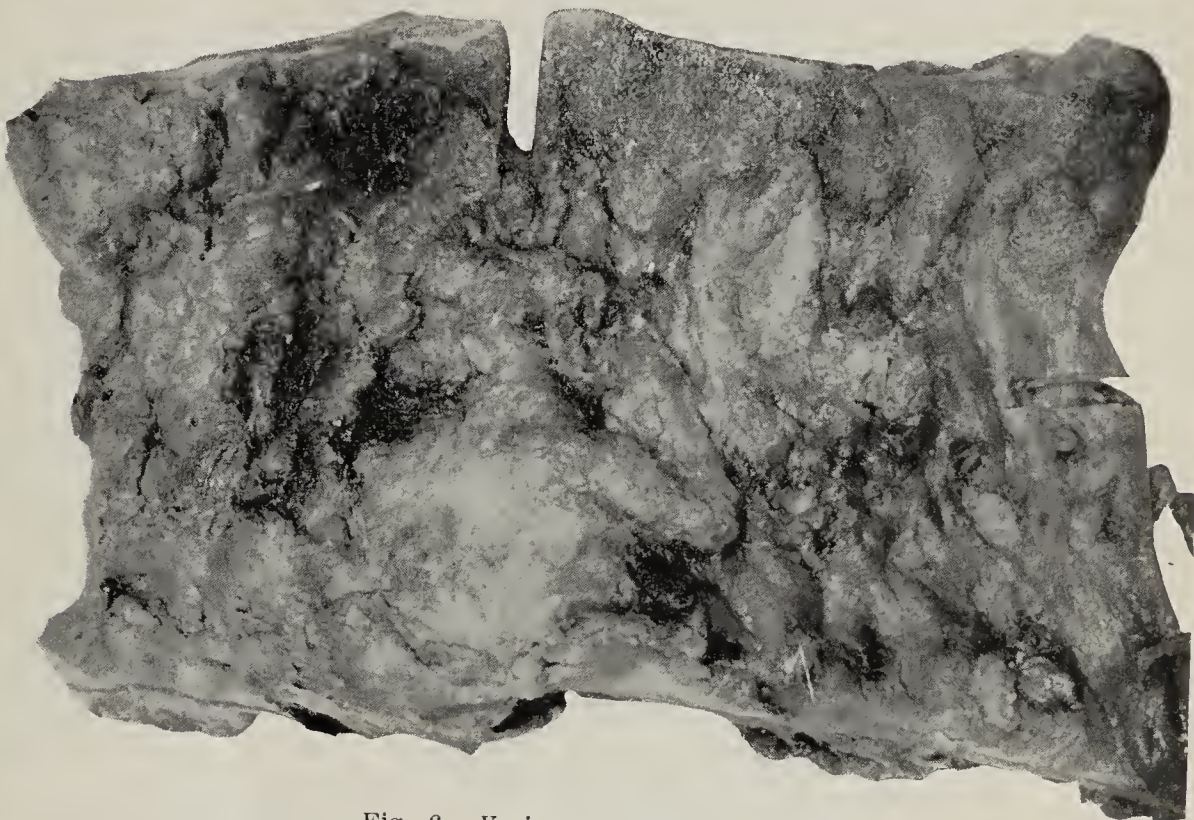


Fig. 6.—Various stages of ulceration.



Fig. 7.—Colon. Extensive distribution of punched-out ulcers; some slightly undermined.



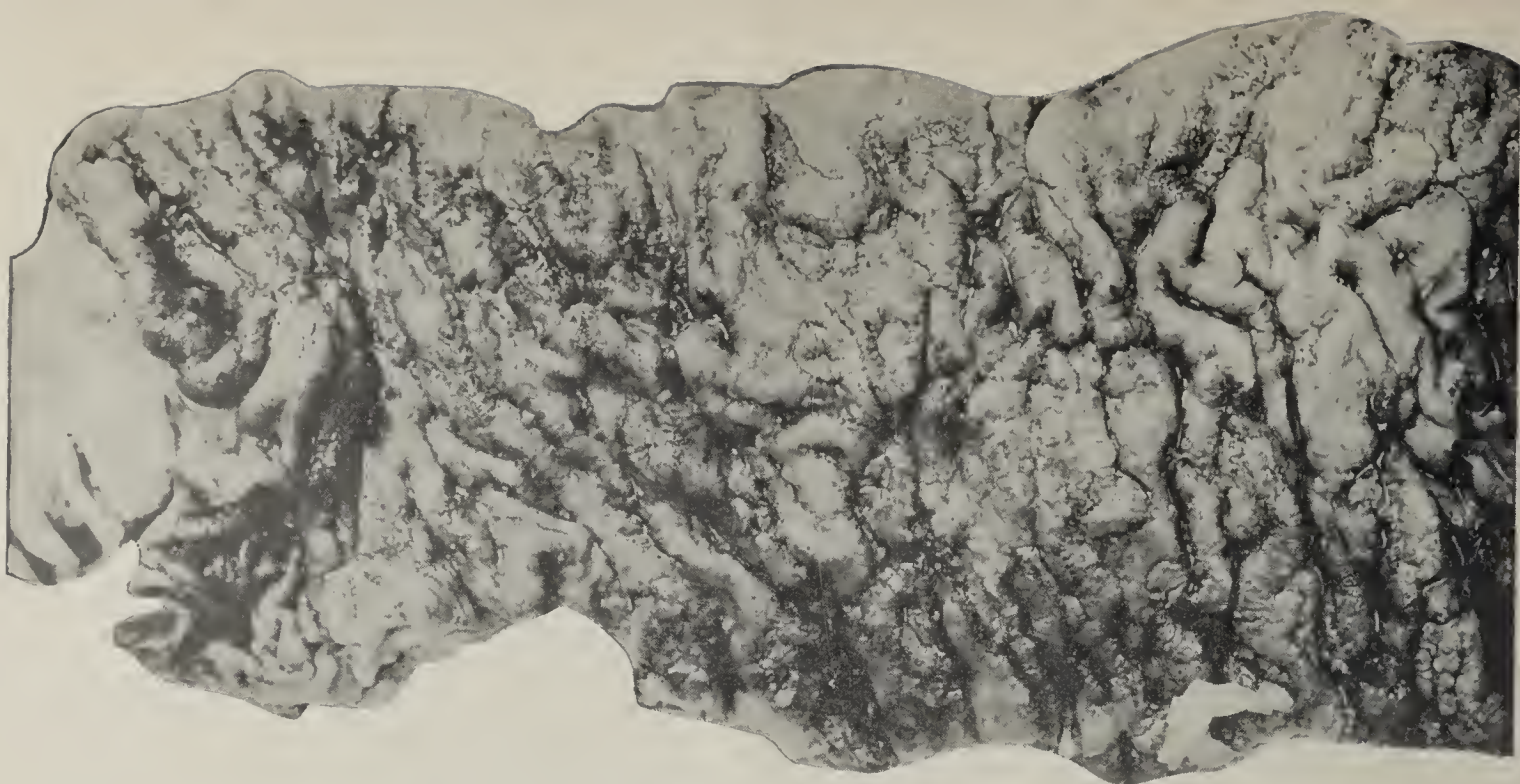


Fig. 8.—Colon. Thickened bowel with some large ulcers and some very early ones.



Fig. 12.—Early intestinal lesion. Shows superficial necrosis, glandular distortion, and round-cell infiltration. Borrel's stain. Zeiss obj. AA, oc. comp. 4, bellows at 30 cm.

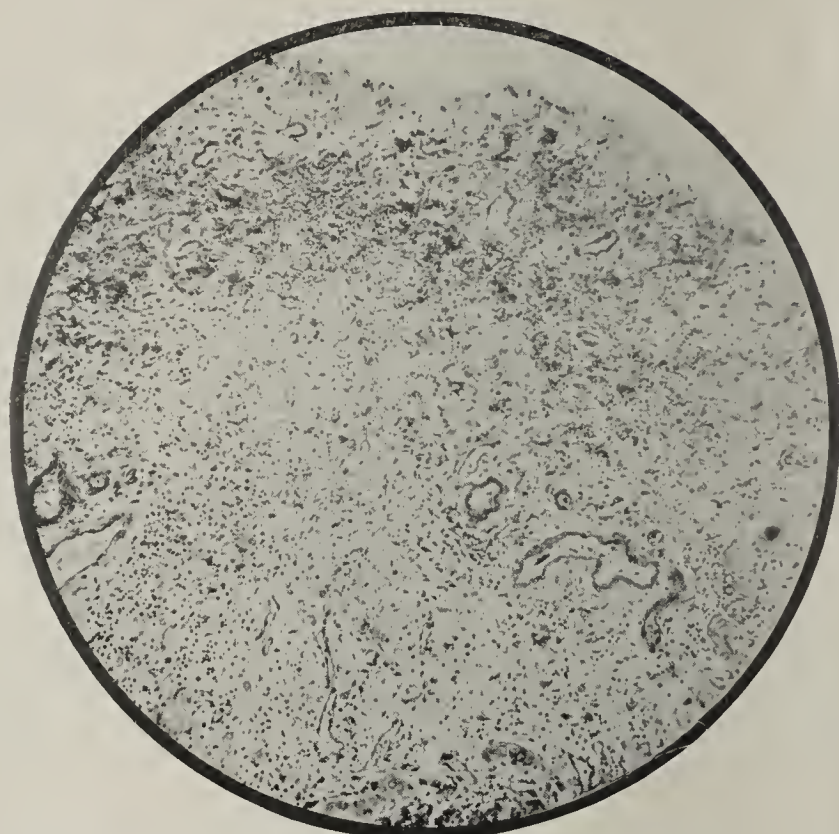


Fig. 14.—Submucosa in an early lesion. Borrel's stain. Zeiss obj. AA, comp. oc. 4, bellows at 30 cm.

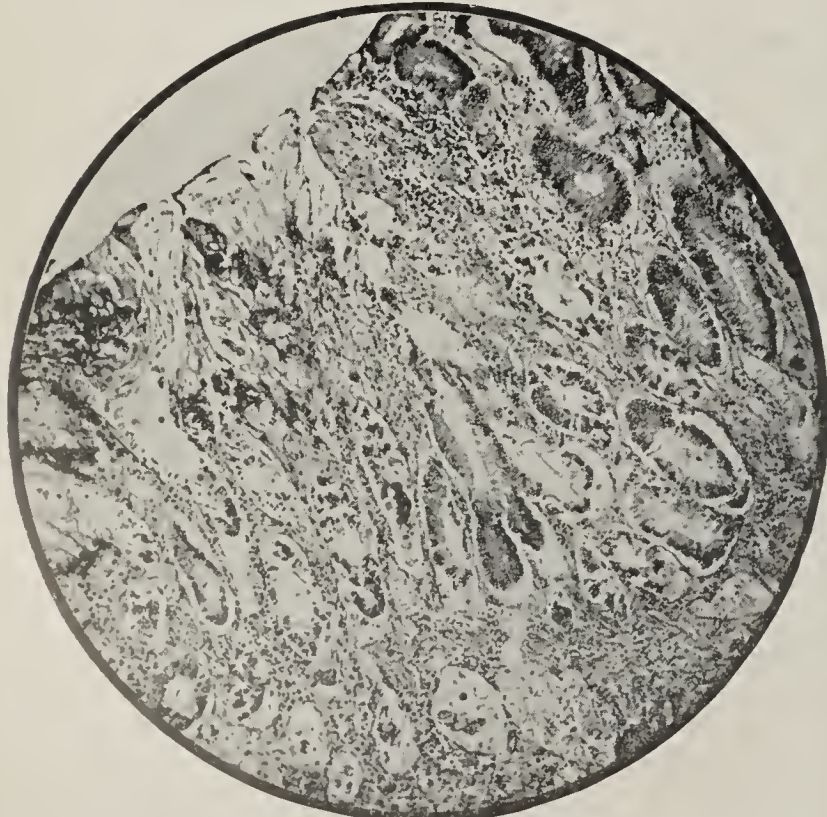


Fig. 13.—Early lesion. Extending necrosis, destruction of glandular epithelium, invasion of amebas, and round-cell infiltration. Borrel's stain. Zeiss obj. AA, comp. oc. 4, bellows at 30 cm.



Fig. 15.—Thrombosis of blood vessels of the mucous membrane of the colon. Borrel's stain. Zeiss obj. DD, comp. oc. 4, bellows at 50 cm.



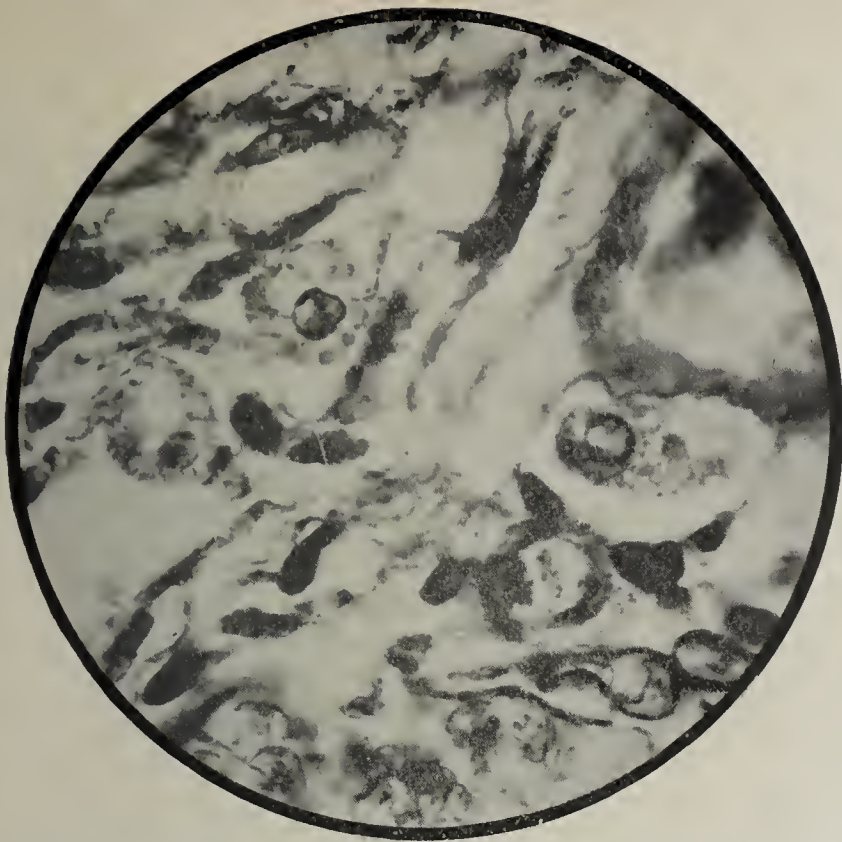


Fig. 16.—Amebas in the muscularis mucosa. The section is the same as that shown in Fig. 13. x 500.

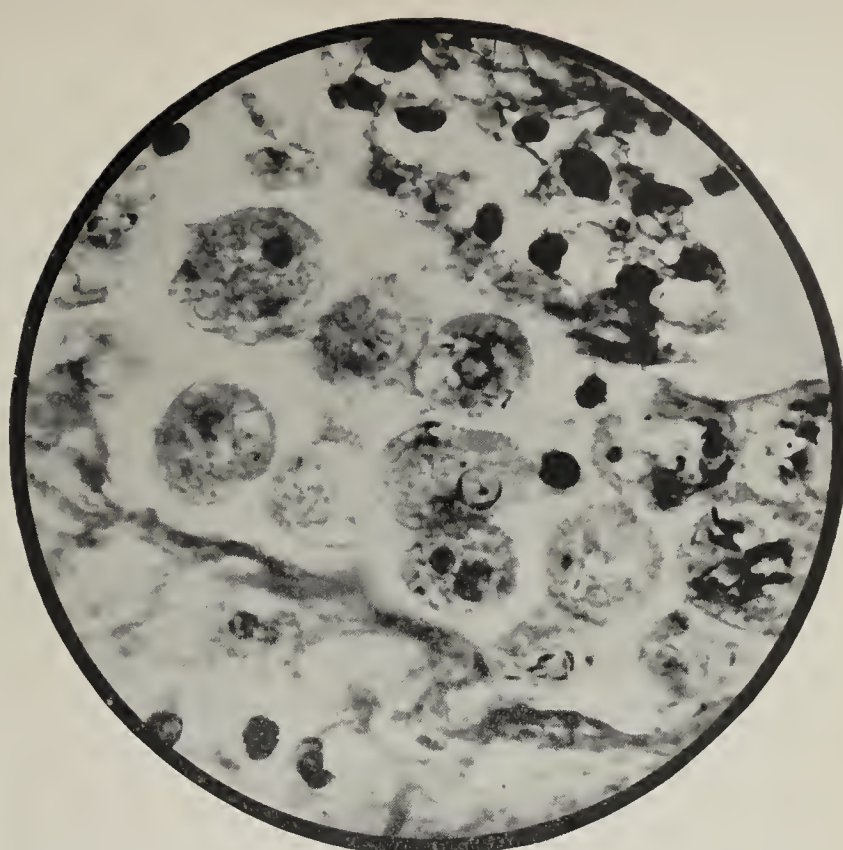


Fig. 19.—Amebas in a blood vessel. Borrel's stain. x 500.

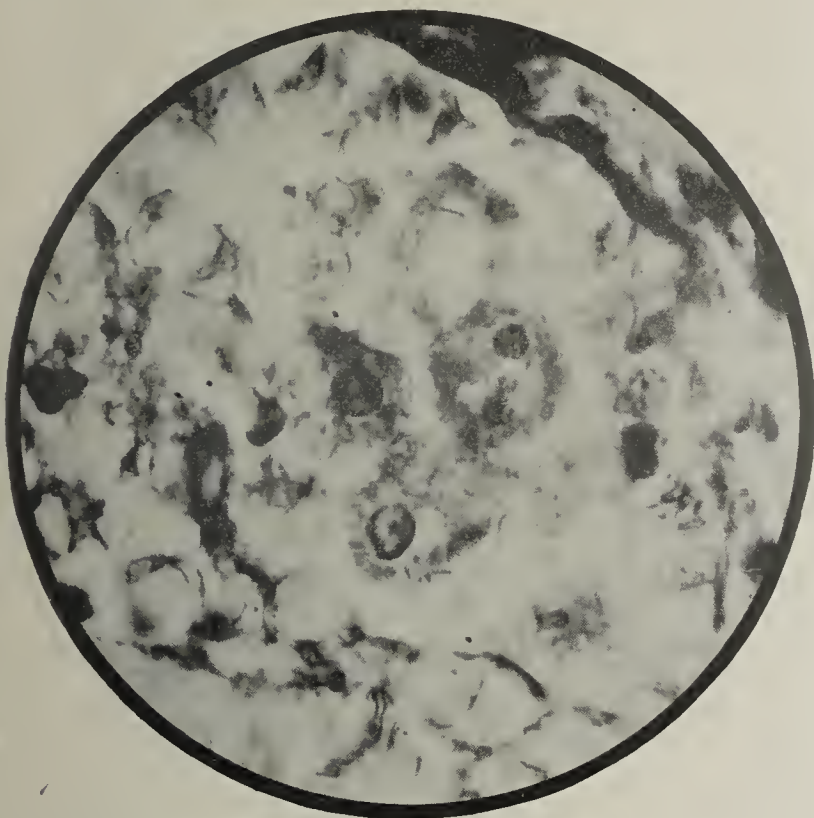


Fig. 17.—Amebas in an area of hemorrhage in the submucosa. Borrel's stain. x 500.

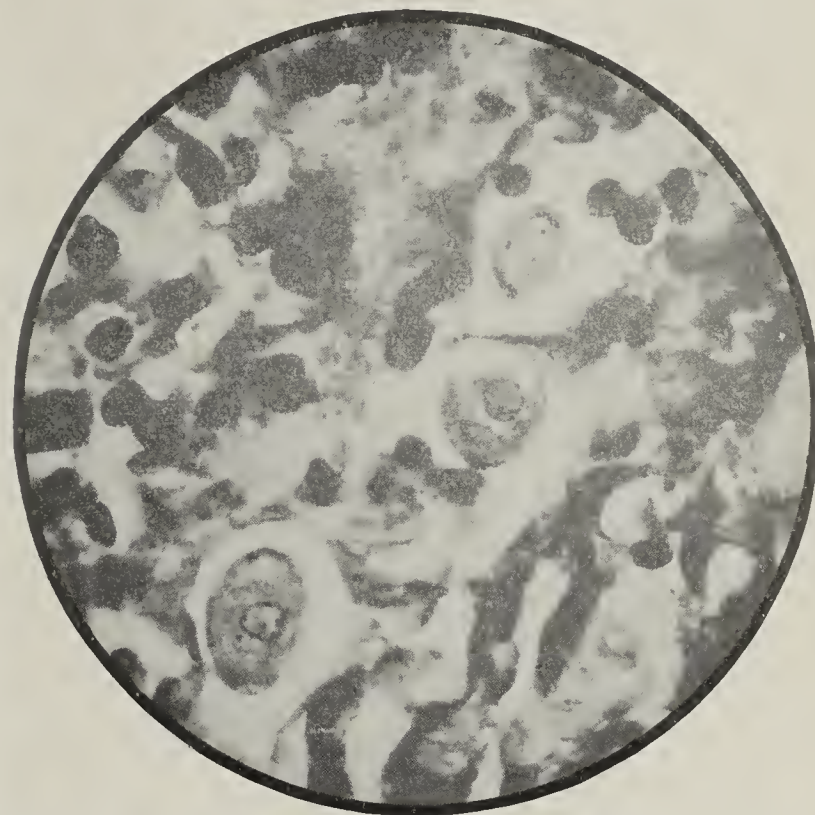


Fig. 20.—Amebas in the lymph spaces of the submucosa. Borrel's stain. x 500.

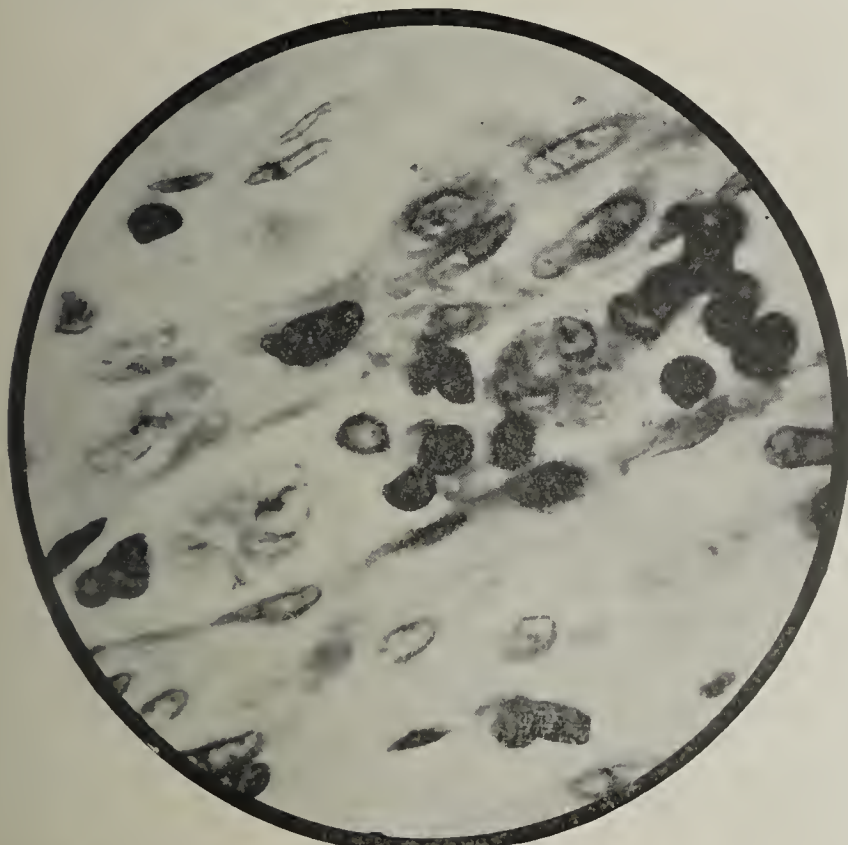


Fig. 18.—Amebas in a blood vessel. x 500. Heidenhain's iron hematoxylin.

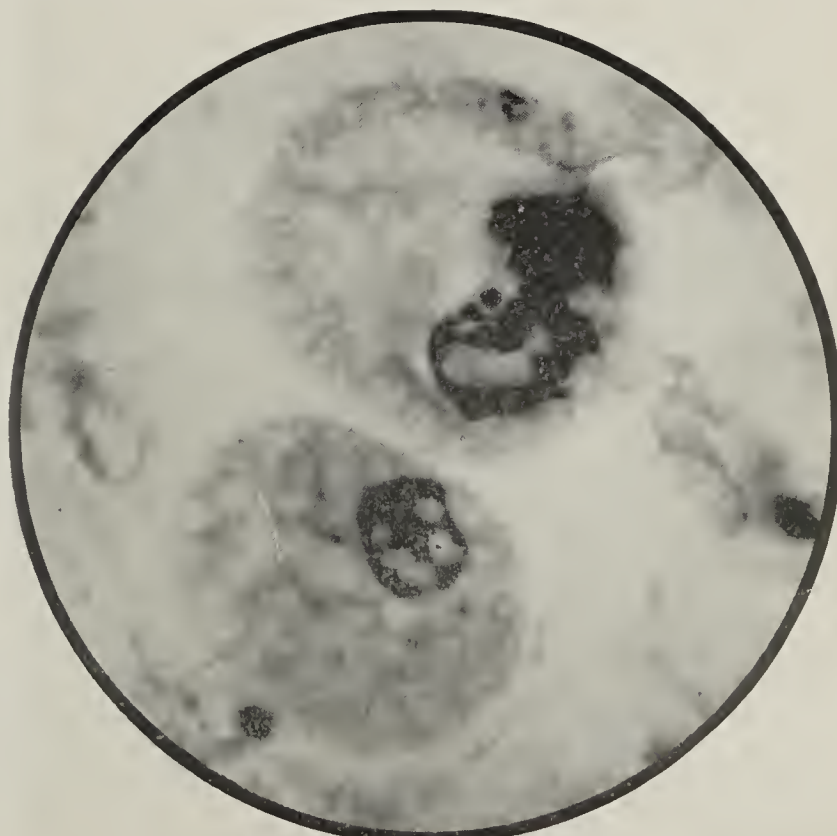


Fig. 21.—Amebas in tissues. Borrel's stain. x 1,400.



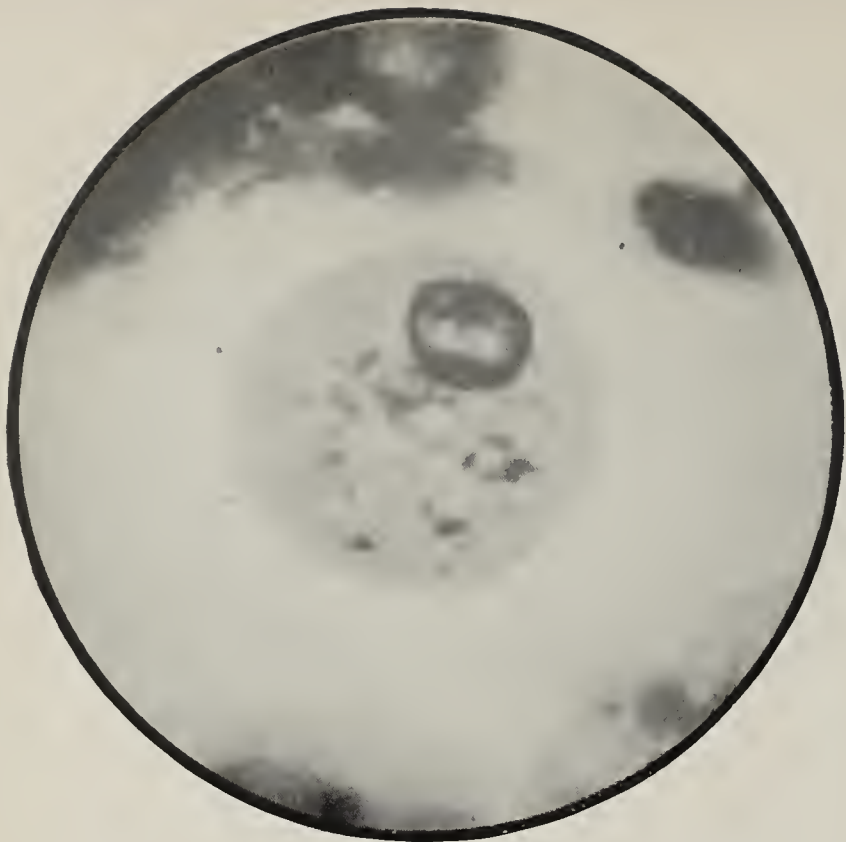


Fig. 22.—Amebas in tissues. Borrel's stain. x 1,400.

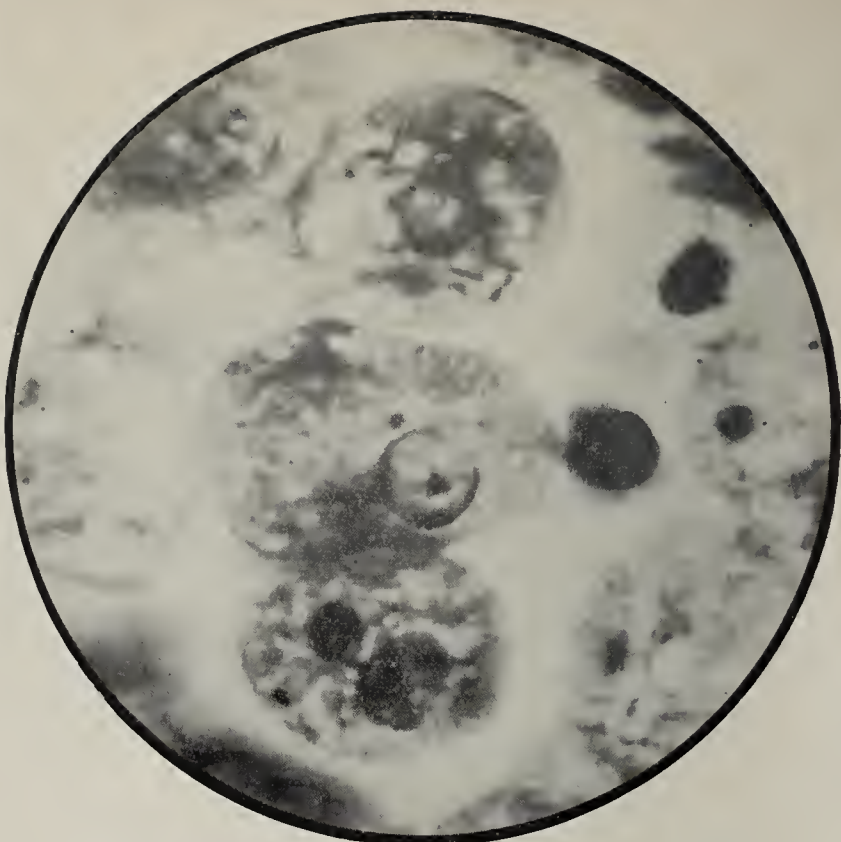


Fig. 24.—Amebas in tissues. Borrel's stain. x 1,400.

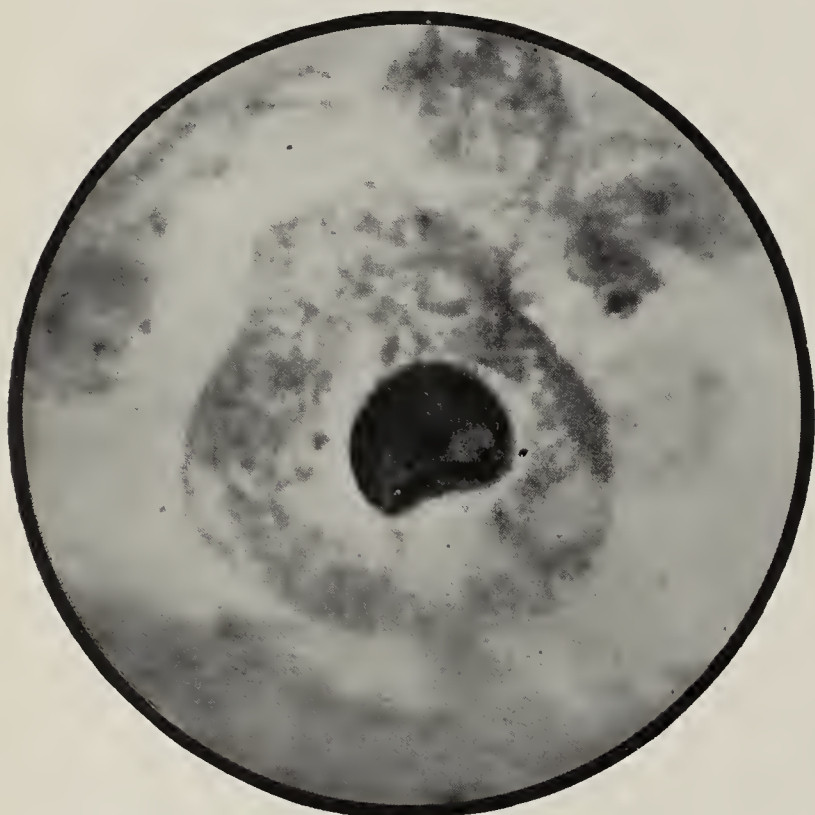


Fig. 23.—Amebas in tissues. Borrel's stain. x 1,400.

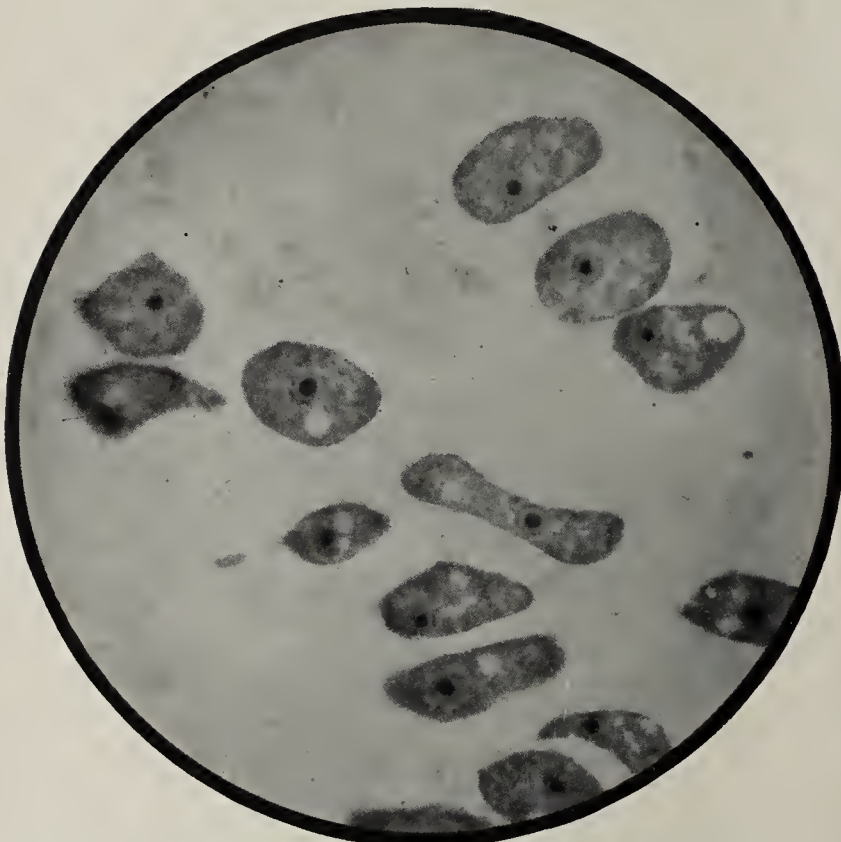


Fig. 25.—Amebas from a culture. Impression preparation. Borrel's stain. x 500.



Fig. 26.—Amebas from a culture. Impression preparation. Borrel's stain. x 1,400.



1. *Preulcerative Lesions*.—These are the “small raised dots” of Rogers. They vary in size from 0.5 to 2.0 mm. in diameter and are intensely congested. As a matter of fact, when studied macroscopically, they are seen to be composed of one or more capillary hemorrhages into the intraglandular tissue. Usually associated with this condition is one of erosion of the superficial layers of the mucous membrane. These erosions, however, may be encountered in the absence of any marked congestion, although a moderate injection, at least, is the rule. With both of these processes there is little of the marked thickening of the submucosa that is so constantly seen in the more active ulcerative stages of the disease. These early lesions may be seen in any portion of the affected gut. By using the sigmoidoscope we have demonstrated them low down in the rectum within a couple of inches of the anus. They are most frequently encountered and are most numerous in the more acute cases, but may be seen also in quite chronic ones.

2. *Ulceration*.—A.—Type of Harris: These lesions, though rarer than the classic type, are nevertheless not uncommon. They are possibly the result of the process of erosion mentioned above and are primarily confined entirely to the mucous membrane. As Harris says, they “generally reach into the submucosa and rarely to the circular muscle, but never deeper.” They probably commence as a very circumscribed erosion and spread laterally as rapidly as they do downward. Macroscopically, the edges are abrupt, sometimes giving the ulcer a “punched-out” appearance. They are round or oval in form and their edges are usually thickened and marked by intense congestion. Their bases are comparatively clean, grayish and edematous. They are often situated on the apices of intestinal folds and have a tendency to increase in the direction of the short axis of the bowel. This type of ulcer has a general distribution and may be encountered in any part of the bowel. It is less frequently seen in the more advanced and very chronic stages. The fact that it is most common in those bowels that show the preulceration lesion speaks for its being intermediate between the very early petechial lesions and the undermined ulcer. This is the type most common in the ileum.

B.—Classic or Undermined Ulcers: These are seen in an early stage as minute yellowish or grayish spots in the mucosa of the bowel, frequently at the centers of the petechiæ spoken of as the preulcerative stage of the disease, and are usually surrounded by a zone of congestion more or less well marked as the case may be. These spots represent the mouths, filled with necrotic material, of passages leading to larger or smaller cavities in the submucosa, which are also filled with the same material. As the process extends, the pocket in the submucosa is enlarged parallel with the surface in all directions, and, although the necrobiosis eventually involves all the coats of the bowel, the muscular layers and the mucous membranes suffer less rapidly, so that there results an ulcer with its base on the circular muscle and with overhanging edges of mucous membrane. Such ulcers may be of sizes varying from that of a pinhead up to that of the palm of the hand, and may occur in any part of the large intestine and even in the lower part of the ileum, though in the latter they are smaller.

During the process of ulceration, the submucosa becomes generally thickened and edematous, as may also the muscular layers and the peritoneal coats.

During extension, such ulcers may coalesce beneath or on the surface, and it is no rare thing to find even

small submucous pouches communicating with each other by small tunnels, while the mucous membrane may show no more than a catarrhal condition.

In many of the larger lesions, the circular muscle fibers are exposed, forming the base of an ulcer, and shreds of this may be seen nearly separated from the rest, and these shreds may be removed by gentle scraping. In still more extensive cases the muscular layer may become necrosed or even perforated, and the ulcer may then be bounded externally by the peritoneum or omentum.

There are, perhaps, few diseases in which the omentum plays so important a protective part as in the one under discussion. Very early in the ulcerative stages this membrane may be found plastered on the peritoneal surface of the gut in preparation for the accidents that may follow.

Because of this function of the omentum, localized suppurations are common. Ulcers may also perforate into the subperitoneum at almost any point, and the abscess usually remains circumscribed or may furrow widely. In one case of this class, a furrowing abscess had perforated into the retroperitoneum in the cecal region and had extended upward and perforated into the right pleural cavity.

3. *Healing*.—As healing takes place, the mucous membrane gradually extends from the margins, so that in the early stages the ulcer seems to be lined with epithelium, except on its base. In the case of very small ulcers there may be complete repair, in other more advanced cases there is considerable formation of scar tissue which may lead to contractions. This we have not seen. The commonest outcome in cases of long duration, especially in those not treated systematically and continuously, is the establishment of a chronic catarrhal condition, with subsequent atrophy—a condition of chronic atrophic enteritis. This is recognized in various parts of the world as sprue or psilosis. It is not a result of amebiasis only, although it may be so in imperfectly treated cases. The gross features of the bowel in such a condition are thinness, absence of normal folds, atrophy of the mucous membrane and increased length. Combined with this atrophic condition may be one of localized hypertrophy, resulting in the formation of more or less well developed polypi.

#### EPITOME OF THE GROSS APPEARANCES.

In a general way, the process studied is as follows: In the early stages of the disease there occurs a catarrhal condition of the mucous membrane, with hypertrophy and cystic and mucoid degeneration. At various points, from the lower part of the ileum to the lower part of the rectum, small raised hemorrhagic spots occur, which later lose their mucous coverings and resemble erosions, and later still ulcerate. If abscesses have formed in the submucosa, they rupture into the bowel and form the early stage of undermined ulcers. The ulcers resulting from simple erosions are not, as a rule at least, of the undermined type, but they may become so. Undermined ulcers are usually, while the cause persists, progressive.

When secondary infections occur, the processes of the disease may be modified by diffuse congestion, hemorrhage, diphtheritis or gangrene. Perforations may occur in the course of the ulcerative stages of the disease, with resulting localized or general peritonitis, retroperitoneal abscess, etc.

The healing of small lesions may occur with complete repair, or of large lesions with the formation of scar tissue and with subsequent contractions. Peritoni-



tis may result in the formation of adhesions. Complete cure may be the eventual outcome, or a condition of chronic atrophic enteritis or chronic catarrhal enteritis may result.

Generally, and probably always in active cases, the intestine is thickened. This increase may be due to edema of all the layers, but chiefly of the submucosa. It may also be due to the presence of the abscesses and sinuses which are so common in that layer. In very severe cases the subperitoneal coat may be very much thickened, mostly from edema. The mucous membrane between the ulcers in uncomplicated cases usually appears normal.

DISTRIBUTION OF THE LESIONS.

There seems to be only a partial unanimity regarding the extent and localization of the lesions in the disease. To take recent remarks on the subject, Fletcher<sup>5</sup> says that the rectum in a majority of cases is uninvolved or is so only to a slight extent. Harris<sup>2</sup> remarks that in fully half the cases the lesions do not extend above the beginning of the transverse colon, and Rogers<sup>4</sup> writes that almost invariably the lesions are more marked in the cecum and ascending colon and frequently are limited to these areas.

In considering the presence of lesions above the ileocecal valve, Fletcher says that in two of 119 cases slight superficial ulceration was present in the last few centimeters of the small intestine. Rogers concludes that "the process never invades the ileum, which is contrary to frequent results in other forms of dysentery." Many writers speak of the more or less frequent involvement of the appendix. Such observations taken from literature might be multiplied many times, but these serve to show how different are the results of careful and accurate observations based on studies carried out in different countries and even in different parts of the same country.

STATISTICS.

Our statistics are based on two series of cases, each of which comprises one hundred cases.

Series A is composed of cases in which the treatment was either unsystematic by enemas or none at all.

Series B is composed of cases treated by rectal injections.

SERIES A.

Entire large bowel involved (except extreme lower part of rectum) .....	87
Lesions confined to cecum and ascending colon .....	5
Lesions confined to transverse colon .....	1
Lesions confined to descending colon, sigmoid and rectum ....	0
Not recorded .....	7
	100
Appendix ulcerated (with large intestine) .....	6
Ileum ulcerated (with large intestine) .....	2

SERIES B.

Entire large bowel involved .....	72
Cecum and ascending colon .....	18
Descending colon, sigmoid and rectum .....	9
Transverse colon .....	1
	100
Appendix involved (with large intestine) .....	8
Ileum involved (with large intestine) .....	5

The variations shown in the two series, and those in literature as well perhaps, may be at least partly explained. The factors to be considered are the duration of the disease at the time of death, the kind of treatment, its duration and the stage of the disease in which the patient was when treatment was commenced.

If we take the Johns Hopkins Hospital series as an example, we may be reasonably sure that the majority, if not all, of these patients were treated by irrigations by rectum, as in our cases of Series B. A rational conse-

quence of this might be that in many cases the lower lesions in the bowel had healed, and at autopsy only those that were inaccessible to treatment or which irrigations had not reached would be seen. This undoubtedly accounts, in part, for the variations manifested in our series, and this dissimilarity would undoubtedly be more prominent had a larger number been properly, consistently and persistently treated.

The duration of the disease at the time of death is unquestionably an exceedingly important factor in untreated cases and in those in which irrigation has been neglected. It may be said that without treatment the greater the duration of the disease the more extensive is the distribution of the lesions.

For the reasons indicated and for other obvious ones, it may be said that the findings at necropsy can not be taken as a guide to the distribution of the lesions at any period save that immediately preceding death.

We have selected from our series twenty-five cases in which death occurred from intercurrent disease early in the amebic process, and find that among these there is an increased proportion of cases showing ulceration confined to a portion of the intestine and a coincident decrease in the number showing ulceration throughout the large gut.

Ulceration confined to the cecum and ascending colon .....	11
Ulceration confined to the descending colon, sigmoid and rectum ..	8
Ulceration throughout the bowel .....	6
	25

Lesions of the small intestine, in our experience, have always been confined to the lower ileum and have been the apparent result of direct extension from the cecum, which is usually severely ulcerated in these cases. We have had one case in which ulceration extended 32 cm. above the ileocecal valve, but ordinarily the lesions consist of one or a few ulcers immediately above, or within 5 c.c. of, Bauhin's valve. When, however, there is a diphtheritis of the cecum, the membranous exudate more often extends above the valve for a longer or shorter distance, but without ulceration. In such cases amebas have not been demonstrated, and consequently the cases have not been included in our statistics.

As in the small intestine, so in the appendix, only cases with distinct ulcerative processes, in which amebas were demonstrated, have been included in our statistics. In many necropsies, this organ was found clinically diseased from causes other than amebiasis and occasionally showed an acute process which could not be proved to be due to amebas. All such cases have been excluded from the tables.

HISTOLOGY.

In general it may be said that the mucous membrane between the ulcers is but little changed. In many places no changes from normal can be noted. In the immediate neighborhood of the lesions, however, there is a tendency to hypertrophy, with mucoid degeneration and even cyst formation. The latter is less common in the cases we have studied than in those reported by Councilman and Lafleur. The most common change in the mucosa is in the immediate vicinity of the lesions and is shown by a tendency to more diffuse staining than is seen in normal epithelial cells; and whenever this, perhaps a sign of incipient coagulative necrosis, is seen, there is usually some distortion of the glands beneath the surface. Such changes are most frequently seen in the very early stages. In many cases, the cells lining the glands are separated from the basement membrane and lie singly or in clumps in the lumen. Under such circumstances it is not uncommon to see amebas lying

5. THE JOURNAL A. M. A., Aug. 22, 1903, p. 480.



among the desquamated epithelial cells or forcing their way between such cells and the basement membrane.

The most marked feature of the early lesions is congestion, often combined with capillary hemorrhages which are most noticeable immediately beneath the mucosa. This congestion may extend even to the submucosa, in which layer there is also a certain degree of thickening due chiefly to edema. Together with congestion, there is an increase of cellular elements of the lymphoid type in the interglandular tissue. The muscularis mucosa at this stage of the disease may show no changes or only a slight edema.

The most interesting feature of this early process lies in the distribution of the amebas. Not only may they be seen in the glands as described above, but they may also be present, sometimes in large numbers, in the interglandular tissues and blood vessels, in the muscularis mucosa and in the dilated veins of the submucosa, and this with changes scarcely perceptible to the naked eye or if only the low powers of the microscope are used. *In such lesions, bacteria are very few in number and often can not be found even after prolonged search, and none can be demonstrated in the amebas.* These show even in the blood vessels the peculiar rod-shaped or crystalline bodies that stain intensely with magenta and hematoxylin, the radiate structure of the ecto-plasin and ingested cells.

In sections from lesions slightly more advanced and showing a more extensive, though still superficial, necrosis, the glands immediately surrounding the lesions are hypertrophied and the cells show mucoid degeneration. There is the same lymphoid infiltration, with, if anything, a greater congestion. In the congested area each gland mouth seems to be surrounded by a zone of hemorrhages. The cells of the necrotic mucous membrane are incorporated, with occasional leucocytes, granular detritus, amebas and bacteria, into a more or less well-formed membrane. There is a more extensive separation of the glandular cells, and in such glands amebas usually can be seen either in the lumina or between the cells and the basement membrane. Within the interglandular connective tissue amebas may also be seen in the blood vessels and lymph spaces. As the process progresses and as the lesions become more advanced, the effect on the submucosa is more marked. The congestion is augmented, the edema is increased and the number of amebas is greater. There is usually also an increase in the mucoid changes of the epithelium surrounding the lesion. On the contrary, in a few cases we have seen a very low, atrophic mucous membrane and a comparatively thin-walled gut, although there were extensive ulcerations. It is reasonable to suppose that we were dealing in such cases with an infection of a bowel previously the seat of a chronic enteritis. In all the cases that we have studied, regardless of the state of the mucous membrane or submucosa, we have seen an extensive lymphoid cell infiltration and at least a moderate hypertrophy of the lymphoid apparatus.

In all lesions, whether early or late, the character of the cellular infiltration is the same in uncomplicated cases. It seems, if amebas can be demonstrated in the tissues and if at the same time there is a polymorphonuclear infiltration, that bacteria are playing an active part in the process, especially if with the infiltration there is any degree of nuclear fragmentation. In certain cases, infiltration with polymorphous leucocytes may be seen about the margins of the ulcers, although at the

base of the lesions and in the submucosa they were present in but inconsiderable numbers. In some cases, although there were some, or even many, bacteria present, there was no process that seemed to be directly attributable to these. It is possible that in such cases these were simply the non-pathogenic, harmless commensals of the amebas. In others, bacteria seemed to play at least as important a rôle as the amebas, noticeably in those cases in which there was diphtheritis and gangrene. It may be that the bacteria play an important part in determining whether or not hemorrhages shall occur, for it is certain that in uncomplicated cases thrombosis is a common and early occurrence. In many very early cases the interglandular vessels of the submucosa may be seen generally thrombosed. If an ulcer is filled with a diphtheritic slough which is carried away suddenly, the chances of the hemorrhages are much increased, as is the case in typhoid.

Usually the necrotic process extends for some distance beyond the ulceration and often beyond the amebas, but in many instances amebas seem to be present in healthy tissue, notably in the early lesions. It is a question whether this necrobiosis is the result of some secretion of amebas or whether it depends more on thrombosis. In some places one seems to be the predominating factor, in others the other, while in still others neither appears to be such. It is certain, however, that the thrombosis assists the amebas in extending their zone of action, as it may likewise assist the bacteria.

Necessarily the contents of the ulcers vary according to the degree of ulceration and to the character of the bacteria present. In uncomplicated cases, which microscopically show a rather clear, yellowish, gelatinous material in the opening, the ulcer contents are composed of a granular base of albuminous character, in which cells in various stages of degeneration are imbedded, together with amebas, bacteria and usually a few red blood corpuscles.

In all the lesions the amebas vary widely in size. Measured with a Zeiss-Scheiben micrometer, they range between 4 and 35 microns.

In the earlier stages of the amebic invasion, the edema affects the submucosa. In the later ones, the subperitoneal coat is also involved and adds considerably to the thickness of the gut. Eosinophiles are not uncommon in either the modified or unmodified amebic process. They occur, for the most part, in tissues at some distance from the lesions, usually in the neighborhood of blood vessels, and are not uncommonly encountered in the subperitoneal connective tissue when that layer has become edematous. These are, perhaps, more numerous in the secondary infections, as are also mast cells. Plasma cells are frequently seen in the submucosa. In the most extensive ulcerations the picture is modified only by the extent of the process. Whether the ulcers are undermined or not, there is always the same appearance of coagulative necrosis, with lymphoid infiltration, congestion and thrombosis, and comparatively little leucocytic invasion.

The two most evident features of the intestinal lesions, when viewed with a comparatively low power of the microscope, are the necrobiosis and the relative infrequency of leucocytes, features which suggest the important rôle of the amebas, for ordinarily in bacterial infection there is an associated local leucocytosis of varying intensity. A point of some importance is brought out by the fact that in the very early lesions—



the preulcerative stage—the amebas may be encountered not merely in the glands, but beneath the epithelium and within the lymph spaces and blood vessels of the interglandular tissue and the submucosa.

#### THE CHARACTER OF AMEBAS IN SECTIONS.

In toluidin blue and eosin the ectosarc stains fairly definitely and the vacuoles of the protoplasm show well. The bacteria also stain, as do the encysted bodies and fragments. The nucleus is very definitely stained and surrounded by a more or less distinct perinuclear space. The nuclear membrane is a clear deep blue. The nuclear protoplasm is pink and contains one or several deep blue-black bodies, or perhaps none. There may be several dark-stained thickenings in the nuclear membrane. As a rule, in well-stained sections the amebas, where they do not contain much extraneous material, such as bacteria and nuclear detritus, are less deeply stained than the cells of the intestinal mucous membrane. The protoplasm of those deep in the tissues is less intensely stained than that of those in the mucous membrane, and it may be that this phenomenon is due to the fact that in the more superficial layers the organisms have taken up more mucous material. That there is some reason for this supposition is shown by the fact that this stain is much less useful in studying the organisms in liver abscesses, where, of course, there is no mucus.

Perhaps the most brilliant stain for amebas in tissues is that of Borrel. This consists of:

1. Saturated aqueous solution of Magenta red.
2. Saturated aqueous solution of picric acid. Saturated aqueous solution of indigo carmin aa.

Stain with No. 1 for 20 minutes and wash.

Stain with No. 2 for 5 minutes, wash and differentiate with alcohol, xylol and balsam.

With this the amebas are not so readily distinguished by the low powers of the microscope as with the thionin or eosin toluidin-blue stain, but the finer organization is much more easily studied with high powers. Generally, with this stain the amebas are less deeply colored than the surrounding tissues, being a rather pale bluish or purple, or, in well decolorized specimens, of a greenish hue. The edge of the organisms shows as a fine blue line, which is more distinct about the body of the parasite and less distinct about the pseudopodia. The ectoplasm appears as a finely reticular or almost hyaline substance, the fibrillar or granular part of which is stained a very faint blue. The endosarc appears as a granular material more deeply stained than the ectosarc, and purplish, bluish or greenish, according to the degree of decolorization. Within this are spaces which remain uncolored, though in thick sections they have a bluish tint due to the underlying stained material. There may be bacteria also in the endosarc. There are also the rods of which Councilman and Lafleur speak, which are not seen in all cases, occurring in those in which there is more extensive sloughing or diphtheritis. It may be that these are crystalline, derived from the blood, or Charcot-Leyden crystals, which are occasionally found in leucocytes in certain conditions, and which Askanazy<sup>6</sup> says are oxyphilic.

The nucleus may be surrounded entirely or in part by a clear perinuclear space. The general color of the nucleus is violet or purplish. The outlines are sharp, and, if the section is not too decolorized, should be a clear crimson, which may be in the form of a complete ring or of an incomplete one, or may be nodulated on

its inner surface, corresponding to thickenings in the chromatin. There are also occasionally crimson granules within the nucleus and occasionally one perfectly round mass corresponding to the nucleolus.

Ingested cells, such as red blood corpuscles, leucocytes, etc., may also be seen within the protoplasm in various stages of degeneration, the stain depending on the extent of the process.

In sections so decolorized that the magenta is all removed, the nucleus appears a blue color deeper than the tint of the rest of the cell and with the chromatin material still more deeply stained.

Heidenhain's iron hematoxylin is as excellent a stain for amebas as it is for other tissues, although not so brilliant as the magenta-picro-indigo carmin. In carefully manipulated sections the nucleus of the amebas is somewhat more deeply stained than the cytoplasm and ordinarily appears as a dense blue-black ring, in the center of which is the round black nucleolus. The nuclear plasma is usually just of a blue tint and is divided by a mesh of delicate dark reticulum. There may be other deeply stained chromatic elements or granules within this. The radial striæ of the cytoplasm is well shown and the crystalline bodies are, when present, an intense black. The spongioplasm appears as a network of dark lines and the cell boundary is sharply differentiated. Red cells, when present, stain according to the state of degeneration, those most recently ingested being black, those least recently yellowish. Bacteria, when present, stain sharply and distinctly, when not too far degenerated or digested.

Amebas grown in cultures from amebic ulcers, when stained by Borrel's method, show somewhat different staining reactions.

Cover-glass impressions may be made in the following way:

A cover-glass is placed on the growths on agar plates, removed quickly and instantly plunged into a very hot saturated solution of mercuric bichlorid. They are then washed in Gram's solution or a weak tincture of iodine, and rinsed in 80 per cent. alcohol, after which they are washed in water. The stain is then applied in the usual way. After this process the preparations are differentiated in alcohol, cleared in xylol and mounted in xylol-damar. The amebas are seen in various conditions, as they were in the culture, and of various shapes and sizes. In many the pseudopodia have not been withdrawn and can be well seen. Under these circumstances the ectosarc has a pale, diffuse, blue color, or is perhaps very finely granular and has a very sharply differentiated limiting line. Usually, however, this is not well seen and the whole organism has a sharply circumscribed, blue, granular appearance. The contractile vacuole shows clearly as an unstained, ovoid or oval space, usually near the surface of the organism, but occasionally near the nucleus.

The nucleus is composed of a round, central, deep purple body, surrounded by a narrow, pale bluish, homogeneous zone, and this, in turn, is surrounded by a denser, blue, granular zone. About this, in turn, is ordinarily a second more or less faintly stained zone. The whole nuclear body is round or slightly oval. The nucleolus is always round.

Comparing the amebas in such preparations with those in sections, we can readily see that the relative size of the nucleus is the same, as is also the relation between the protoplasm and nucleus; but in the tissues the contractile vacuole is usually not so distinct and the

6. Munch. med. Wochft., 1904, vol. II, 1945.



nucleus does not present the same appearance. This may be due to the fixation or it may be due to the different degree of decolorization. The dissimilar nutritive conditions may also affect the microchemical staining reactions.

The small amebas, those the size of an erythrocyte or smaller, should show the same relation in the size of nucleus and cell body.

The distinguishing feature of the amebas is their generally irregular or oval shape, though they are often round, their relatively small, round nucleus, and the larger amount of granular or vacuolated protoplasm, which often contains foreign bodies.

#### RELATION OF THE AMEBAS TO THE TISSUES.

*The Mucous Membrane.*—It is not known whether the amebas are able to attack or to pass through an intact mucous membrane; in fact, it seems probable that in order for them to enter the deeper layers of the intestine there is some change from the normal (Schaudin). It is possible that catarrhal conditions, however slight, are accompanied by erosion, or necrosis of even a few, of the superficial cells, and would offer the necessary conditions for invasion. It is, at any rate, certain that the amebas have less influence on the epithelial cells than on the supporting tissue. That this is true may be demonstrated repeatedly. In many glands the amebas may be seen either in the lumen or between the lining cells and the basement membrane. As a rule in these cases the epithelium detached has lost no more of its normal character than might be expected, and if adherent it seems more healthy than would be imagined in the presence of an organism whose power of causing cellular destruction is as great as it is in the case of the ameba. Generally speaking, epithelium seems to have as great resistance to the ameba as has muscular tissue.

*Muscle.*—In all works on amebiasis attention has been called to the lack of resistance the connective tissue offers to the progress of the organisms. Attention has been repeatedly called to the fact that the extensive ulcerations are in form and situation dependent on this quality in the submucous layer of the intestinal wall. The preliminary feature of the changes in this position is edema, which, after invasion by the amebas, is followed by swelling of the fibers and cells, infiltration with round cells and lymphocytes, sometimes accompanied by fibrin formation. The nuclei of the swollen cells become paler, the appearance of fibrillation is lost and the tissue becomes hyaline or necrobiotic. A further feature of the process is that new tissue is found early and this has the appearance of granulation tissue. Suppuration, as previously indicated, probably does not occur in the uncomplicated disease.

*Blood Vessels.*—Just how the organisms enter the blood vessels can not be satisfactorily stated. In some sections they are seen in these vessels in large numbers, in the same or others they may be seen in the perivascular lymph spaces or they may appear immediately beside the endothelium of the capillaries. It is possible that they enter directly through the capillary walls by virtue of their inherent power of progression, in much the same way as the leucocytes wander in and out. There is the possibility that in the process of tissue destruction the vessel walls are so changed as to make this process more practicable, or that following capillary hemorrhages and before coagulation had occurred the organisms may enter the vessels and make

their way along. Certain it is that they do not necessarily cause thrombosis by their presence, although this appearance is by no means uncommon in tissues, and especially in the vessels of the interglandular tissues. So far as the blood cells are concerned, the amebas are able to ingest and to destroy apparently healthy erythrocytes and leucocytes.

*Cells.*—It was shown by Councilman and Lafleur, and forcibly insisted on by Howard, that leucocytic infiltration is not a feature of amebiasis. On the contrary, it is stated that the process is more in the nature of a subacute or chronic inflammation, in that the cells predominating in the infiltration are formative ones and lymphocytes. In addition to these last mentioned cells there is often a considerable number of eosinophiles, though this is not the rule. If the condition is a chronic inflammatory one, however, then this is the type of infiltration we should expect, for lymphocytes and eosinophiles are the cells which, par excellence, occur in such pathologic states.<sup>7</sup>

In one series of sections we saw considerable numbers of mast cells, which occurred chiefly in the glandular layer of the bowel. On what conditions the presence of these depends we can not say, except to note that in the bowel from which the sections were made there was considerable diphtheritis.

Plasma cells are not uncommonly seen in the submucosa, as Councilman and Lafleur state. If these cells are of lymphoid origin, we should expect them to be frequently met in subacute or chronic inflammation in which there is a proliferation of, and invasion with, lymphoid cells.

#### RELATION OF AMEBIAS TO BACTERIA.

From our experience it can not be said that the presence of bacteria limit the field of activity of the amebas. As a matter of fact the organisms seem to be about as numerous in cases complicated by bacterial superinfections as in uncomplicated ones, unless it be in those in which pyogenic cocci are present. In one case so complicated there were certainly fewer amebas in the lesions and there was very active leucocytic infiltration with marked coincident karyorhexis, a very uncommon picture for amebiasis.

When amebas are found in exudates rich in bacteria they show evidence within their bodies of a very active phagocytosis.

#### CONCLUSIONS.

1. Intestinal amebiasis is a peculiar ulcerative condition of the intestine caused by *Amœba coli* (Lösch) usually confined to the large intestine, though occasionally (7 in 200 cases) the ileum is affected and more often (14 in 200 cases) the appendix is involved.

2. In the majority of cases the condition affects the entire bowel (159 in 200 cases), though it may be limited to one or more portions, most commonly the cecum and ascending colon (23 in 200 cases).

3. The ulcers show a tendency to be undermined, due to the lack of resistance on the part of the submucous layer of the bowel.

4. The organisms may enter the blood vessels very early in the disease and may be transported to the submucosa without lesions of the muscularis mucosa.

5. The disease is a subacute chronic inflammatory process, as shown by the character of the exudate and infiltration, by the early formation of granulation tissue and by the absence of leucocytic infiltration.

<sup>7</sup> Muir. Brit. Med. Jour., 1904, II. 585.



6. Complete healing may be accomplished, or a condition of chronic atrophic enteritis or chronic catarrh may persist, which is known as sprue or psilosis.

The photographs and photomicrographs were made by the Government Photographer, Mr. Martin. The colored drawing (27) was done by Dr. W. B. Wherry. The other colored drawings were made by Mr. Espinosa, the artist of the Bureau of Government Laboratories. To these gentlemen we take occasion to express our thanks.

### THE CORRODING PROCESS OF THE OVUM IN ITS IMPLANTATION IN THE FALLOPIAN TUBE, A SOURCE OF HEMORRHAGE IN TUBAL PREGNANCY.\*

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NEW YORK.

The surgical history of ectopic pregnancy is dotted with puzzling cases in which undoubted symptoms of the condition were present, and in which on operation a greater or less quantity of blood was discovered in the pelvis, and yet careful microscopic examination of the tissues removed failed to show any trace of the products of conception. In many of these cases careful examination has failed to disclose the source of hemorrhage.

Some recent studies in biology bearing on the implantation of the ovum in the uterine mucosa have revealed a process which when transplanted, as in tubal pregnancy, sheds a flood of light on many of these obscure cases. The established teaching has been that the impregnated ovum when it reaches the uterine mucosa nestles among its follicles, which at once take on a hypertrophic development, reach out on all sides and envelop it in their arms. Later developments bring into existence the chorionic villi, the intervillous spaces and the entire mechanism of nutrition. The process of attachment of the ovum to the uterus is known now to be the work of the ovum itself. The ovum is the active agent, and embryologists designate this early attachment by the term implantation.

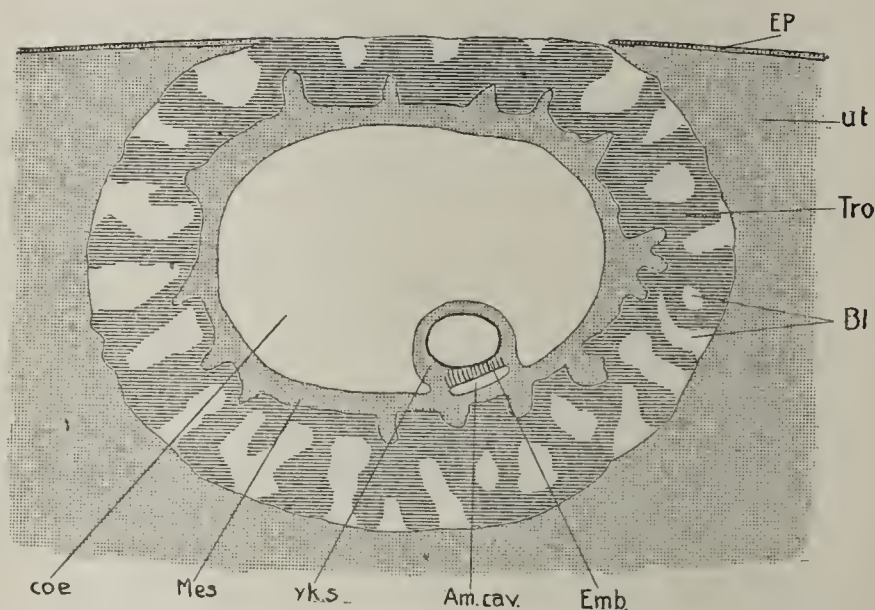
It may be of interest and perhaps instruction at this point to go quite fully into the details of this process. What I shall say has been gathered almost entirely from an address on the subject by Professor Minot<sup>1</sup> of Harvard Medical School, at the meeting last year of the American Gynecological Society. It has been discovered that certain tissues possess the property of attacking and destroying other tissues. This faculty consists in a process of digestion and is supposed to be chemical in character, from which the tissue itself does not suffer, but which will destroy other tissues with which it comes in contact. The destructive process of the phagocytes is doubtless analogous. It is known that certain young tissues of the embryo are endowed with this capacity, and, while it has not been absolutely demonstrated that the human embryo possesses it, the observations on the embryos of lower animals confirmed by less complete studies of the embryo of man lead to the belief that such a phenomenon attends the implantation of the human ovum.

The process of implantation as observed by Minot and others in various animals is as follows: The ecto-

derm of the chorion undergoes a peculiar proliferation by which its cells become very much more numerous. Some of the cells rapidly assume a distinctive character and are easily recognized by their large size. This layer of ectodermic cells is called by Minot the trophoderm. Wherever these modified ectodermic cells come in contact with the walls of the uterus, destructive changes go on in the uterine tissue, producing a cavity in which the ovum lodges itself. The trophoderm then undergoes a hypertrophic degeneration, producing a series of irregular spaces which persist and become the intervillous spaces of the placenta. Papillary outgrowths of the chorionic mesoderm meanwhile penetrate the trophoderm, initiating the formation of the chorionic villi.<sup>2</sup>

The earliest stage of the human ovum yet secured for observation and described is presented in the work of Peters, and is known as Peters' ovum. The accompanying diagram is based on its description.

The effect of this corrosive action is readily conceived in cases in which the implantation of the ovum is transferred from the uterus to the thin-walled Fallopian tube. While in most instances the implantation is successfully accomplished, there must be frequent instances in which the corroding process extends completely through the wall of the tube or may bring the intervillous spaces so near to the surface that the blood



Explanation of diagram: Ep, uterine epithelium; Ut, mucous membrane (decidua) of the uterus; Tro, trophoderm; Bl, spaces formed by the degeneration of the trophoderm; maternal blood enters these spaces from the decidual blood vessels; Emb., embryonic shield; Am. Cav., amniotic cavity; Yk's, yolk sac, the entodermal lining of which is indicated by a heavy black line; Mes., chorionic mesoderm; Coe, extra-embryonic celom.

pressure bursts through the peritoneum and occasions serious hemorrhage.

Such a condition first came under my observation as recorded in the following case. The history is given quite fully to illustrate the fact that this apparently simple lesion may be attended with serious or even fatal hemorrhage:

*Patient.*—Mrs. R., aged 33, a former patient of mine, called at my office Sept. 20, 1903, and gave the following history:

*History.*—She had been married 4 years and had two children, the youngest 10 months old. She is a strong, healthy woman, and had nursed both children. While nursing the first child, monthly flow came regularly every 28 days, beginning one month after parturition. With the second child an apparently regular menstruation appeared one month after parturition. It disappeared then and did not return

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-sixth Annual Session, July, 1905.

1. Trans. Amer. Gyn. Soc., 1904.

2. The Harvard Medical School is forming a collection of serial sections of human embryos which is intended always to be open to competent investigators and students. Specimens are solicited, those of first and second month being especially desired. They are best preserved by prompt insertion in a mixture of formalin, one part, to nine of water.



till two months ago, July 15, when it was normal in character. In August there was no sign of menstruation, but on September 4 (16 days previous to interview) a painless natural flow began and continued for 8 or 9 days. Following this, there was indulgence in sexual intercourse on two successive nights and an unusual exaltation of sexual desire for a week or ten days. In this connection the patient said that, while ordinarily a sufficiently passionate woman, she had experienced while carrying both her children an unusual intensity of sexual desire during the first two months of pregnancy. The recurrence of this made her suspicious, although she was still nursing her child, and she called for an opinion regarding the possibility of pregnancy. A most thorough examination failed to reveal any physical signs or suggestion of pregnancy, either normal or otherwise, although I examined for both conditions. I advised a cessation of social duties, daily hours of rest in bed and prompt notification of any unusual occurrences. Occasional stains, spotting, appeared, and six days later sharp pains in the abdomen gave the impression that the regular menstruation was about to recur. Five days later, October 1, she entertained company at dinner. At the close of the function she had a sickening pain, grew pale and nearly fainted; she went to bed. October 9, she dined with her husband down town; on going home she had a bearing down pain and found that she was flowing rather freely. She remained in bed the next day, but the following day, Sunday, she got up to dinner at 1:30 and ate a hearty meal, although she had felt weak and miserable during the morning and suffered from pain in right abdomen shooting up to the shoulder. I saw her at 3 p.m.; she was in bed and was pale and pulse was weak; she had been flowing steadily since Friday.

*Examination.*—These symptoms and history pointing so positively toward ectopic pregnancy led to a careful examination. I could discover no enlargement of the uterus, comparing it with my recollection of its former size, but I did discover a perceptible enlargement of the right tube, although not very marked. I diagnosed unruptured tubal pregnancy, or tubal abortion of the right side.

*Operation.*—Directly after examination the patient suffered a sharp attack of pain and went into collapse. As soon as she had sufficiently revived she was placed in a carriage and taken to the sanitarium. Stimulants were cautiously used and she passed a comfortable night. Operation was performed at 1:30 p.m. the following day by vaginal section. After dilatation and curettage of the uterus a laceration of the cervix was closed with three chromic sutures. The usual T incision was then made in the anterior vaginal wall; the bladder stripped off and the peritoneal cavity opened. It was noticed that both the anterior and posterior vaginal fornices bulged quite markedly, and on opening into the peritoneal cavity there came a gush of liquid blood and clots. Some of the latter were dark and firm and some soft and bright, showing old and recent hemorrhage. The uterus was promptly delivered into the vagina and the right appendages brought down. The tube seemed to be intact and the fimbriated end normal in every way. The tube was enlarged and its walls thickened; there were also marked signs of congestion. On turning the tube to get a view of its posterior aspect, a small pinhole opening, through which a minute clot protruded, came into view at its middle third. The tube was rapidly quilted off and cut away—the ovary not being interfered with. After examining the appendages of the opposite side and finding them normal, the fundus uteri was restored to the pelvis and the vaginal incision closed. An opening was then made into Douglass' pouch for drainage, through which blood and clots were removed, and a light gauze drain applied. Some difficulty was experienced in getting the bowels moved on the third day, but after that convalescence was normal.

*Examination of Removed Tissue.*—The interior of the tube gave no indication of the development of a placenta nor chorionic villi. The ovum at a very early stage must have eroded its way quite through the tube, and hemorrhages must have been quite frequent, if not almost continuous.

I cite this case as being a most interesting example of one phase of tubal pregnancy.

Paul Zweifel<sup>3</sup> cites a case in which hemorrhage occurred eight days after the first omission of the menses. The ovum at that stage could not rupture the tube and examination disclosed that the ovum had eroded clear through the tube and scrosa into the peritoneal cavity. Whether the hemorrhage is moderate or sufficiently extensive to endanger life is a mere chance. These slight openings may or may not be attended with temperature, depending on the promptness with which aid is sought and obtained.

It would seem to be a fair inference that when a woman has skipped one menstrual period and is attacked with sharp pain in the hypogastrium, collapse, and vomiting with markedly feeble pulse, if there be no rise of temperature, an erosion through the walls of a gravid tube should be suspected at once and the necessity of prompt operation seriously contemplated.

A secondary feature of interest in my case is the fact that in less than a year after the operation in which the right tube was removed, the patient became pregnant normally and has been successfully delivered of a fine boy.

## EXTRAUTERINE PREGNANCY: CASES OF UNUSUAL TYPE.\*

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Many years ago physicians recognized extrauterine pregnancy and some patients actually recovered after ordinary treatment. Sometimes even then the diagnosis was made before rupture, and physicians treated these patients by killing the fetus with electricity, or morphin was injected into the sac and thus the life of the embryo was destroyed. Physicians then found patients with vague histories in whom inflammation would take place, and in the course of time an abscess would break into the rectum, bladder, or vagina, and fetal bones would pass. The physician then knew that he had a case of extrauterine pregnancy that had become infected and produced the symptoms that he was called on to treat.

With the advancement of abdominal surgery cases of extrauterine pregnancy were found during abdominal section. With the gradual development of pelvic surgery physicians were able to diagnosticate ruptured extrauterine pregnancy and by prompt operation could save a life. In fact, the general symptoms of ruptured extrauterine pregnancy are now so well known that almost every general practitioner recognizes the trouble and sends for a surgeon. There are exceptional cases, however, in which the classic symptoms of the course of the condition are absent or different and mistakes are made by very well posted diagnosticians. Having had two cases within a few days of each other of this kind, I thought a short report of these might be interesting.

*CASE 1.*—Mrs. O. B. R., aged 30, mother of three children, youngest 3 years of age, had menstruated regularly until Nov. 20, 1904.

*History.*—During Christmas week, as she explained it, she had some pain and only slight menstruation. In January, 1905, another and slight show with considerable pain kept her in bed for several days. February 14 she was taken with severe pain and inflammation. Her family physician

3. Brit. Gynec. Jour., Nov., 1903.

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



recognized a swelling on the left side and treated it on general principles. The inflammation gradually subsided, and she was able to sit up and move around a little and then it started again. This continued for nearly ten weeks. She became very much emaciated and anemic, having temperature running up to 100 or 104.5. She was finally put on a stretcher and sent to me, a distance of 150 miles. She arrived at Harper Hospital April 26, 1905, in fairly good condition, but a typical case of long-standing sepsis. Carefully going over the history, I told my assistant it looked to me like a case of extrauterine pregnancy which had ruptured in the broad ligaments and had become septic.

*Operation.*—She was prepared for operation and was operated on April 27, 1905. I found a sac extensively adherent, containing a four months' fetus, with decomposed placenta and situated in the left broad ligament. The placenta could be easily removed, the sac was stitched to the lower angle of the abdominal wound and a rubber drainage tube inserted. The abdominal wound was closed with silk gut sutures.

*Result.*—She made a splendid uninterrupted recovery and returned home the twenty-fifth day. The power of resistance of some individuals is beyond comprehension.

*CASE 2.*—Mrs. C. R., aged 24, mother of two children, youngest two years, was brought to Harper Hospital April, 1905, with a temperature of 104.5, and with the statement that she had had a miscarriage and that there probably was retained membrane. I examined and found a large swelling on the left side, which I diagnosed as an abscess in the left broad ligament, and the only thing to do was to operate and to clean it out as soon as possible. The pulse being 140 and 160, no time was to be lost and no extensive operation could be done. She was given an enema.

*Operation.*—With a few whiffs of chloroform, an opening was quickly made with scissors into the abscess cavity, which was then increased by tearing with the fingers. Nearly a quart of pus flowed out, and decomposed tissue, which was recognized as placenta, was removed. The cavity was cleaned with sponges, not irrigated, and a rubber drainage tube inserted. She made a quick recovery, and in two weeks returned home. After she was able to talk I got the following history:

*History.*—She had menstruated regularly since her last child's birth until Feb. 5, 1905. She did not flow again until March 21, when she had severe pain with the menstruation. She considered herself pregnant and thought she was having a miscarriage. The pain, however, eased up somewhat. April 1 she was taken with severe pain, and continued to feel quite poorly and passed membrane from the uterus, which was supposed to be the placenta. She did not improve, however, but daily continued to get worse, fever and chills developed, physicians were changed, but her condition became steadily worse until she was brought to the hospital as above stated.

These cases could be amplified by similar ones, but they are sufficient to teach some lessons. One of these is that extrauterine pregnancy is more often met with than ordinarily expected. Another lesson is that a careful history of the onset of the disease will throw light on the subject. The patient often unintentionally throws the physician off his guard and only by persistent questioning will he get at the real facts. I would conclude, therefore:

First, that extrauterine pregnancy must always be in the physician's mind in cases of sudden onset of pelvic trouble.

Second, that the least irregularity of menstruation is suspicious of extrauterine gestation.

Third, that inflammation and sepsis following a supposed miscarriage often are due to ruptured ectopic pregnancy.

Fourth, that prompt operation is always indicated; the choice of the vaginal or abdominal route depending on circumstances.

#### DISCUSSION.

ON PAPERS OF DRs. GOFFE AND CARSTENS.

DR. R. T. GILLMORE, Chicago suggested that if, after euretting the uterus, the scrapings are examined microscopically

for decidual cells, an early diagnosis may be made and the case need not be allowed to become septic. Of course, decidual cells may be found in other conditions than tubal pregnancy in which the endometrium is inflamed, so that the finding of the decidual cells is merely suggestive. A careful microscopic examination of the tube should be made after the operation for chorionic villi. A blood count is of value in showing whether or not hemorrhage is due to shock or anemia, in ruptured tubal pregnancy.

DR. L. H. DUNNING, Indianapolis, declared that cases of extrauterine pregnancy at full term are very rare. Some years ago he thought he had such a case, but on careful examination he found that he was mistaken, and the final conclusions were verified afterward by microscopic examination. A full term ectopic pregnancy in a tube which has not ruptured would show no covering of peritoneum continuous above. In other words, it should be free in the abdominal cavity like an ovarian or fibroid tumor. If the sac is covered posteriorly with peritoneum, then it is not an ectopic pregnancy at full term in an unruptured tube.

DR. C. O. THIENHAUS, Milwaukee, said that the fact pointed out by Dr. Goffe of the Langerhans cells eating up and gradually destroying the walls of the tube shows that extrauterine pregnancy should be classified as a true neoplasm which demands immediate operation in every case in which the diagnosis is made, no matter whether rupture has occurred or not. The only exception would be in extrauterine pregnancy of seven or eight months. In these cases it is of great scientific importance to know whether or not the fetal sac is without or within the tube. In ruptured extrauterine pregnancy it is necessary to differentiate between cases in which Nature has formed adhesions and has encapsulated the blood and the tube; in other words, those in which a hematocele is present, and cases of free abdominal hemorrhage. In this latter class are usually cases in which the rupture of the tube takes place in the neighborhood of the uterus. These cases, though rare, are the most dangerous ones, because the hemorrhage is so profuse that Nature has no time to form adhesions; and if immediate operation be not performed the patient invariably bleeds to death. In such cases it is inadvisable to transport the patients to a hospital. They should be operated on at once wherever they happen to be at that time. The operation should be done as rapidly as possible, not in deep narcosis, but during the stage of excitement of ether anesthesia. About three years ago Dr. Thienhaus saw such a case, and had the good fortune, by prompt and quick operation, performed in a farmhouse, to save the life of the patient. Dr. Thienhaus was surprised to hear in the surgical section that so much chloroform is still used, as it is a well-established fact that ether is much less dangerous than chloroform. He has discarded chloroform entirely for the past four years and has used ether in all cases. When a tumor is found lying in the neighborhood of the uterus and it is uncertain whether it is a cyst, pus sac or a hematocele, an exploratory puncture or colectomy will often aid in diagnosis, and when blood is found one can say in 95 per cent. of the cases that it is ectopic pregnancy. In cases of infected hematocele, cleaning out and draining by the vaginal route is safer than the abdominal operation.

DR. I. B. PERKINS, Denver, said that he has noticed that several of these patients appeared to have healthy tubes, and in these instances the woman had imagined herself pregnant and took medicines intended to contract the uterus and to expel its contents. Ten days or two weeks later she would suffer from a ruptured tube. It occurred to Dr. Perkins that in all probability the pregnancy had taken place in the tube, and while the ovule was making its descent toward the uterus it was arrested at the cornu, where the tube was closed temporarily by the contractions of the uterus produced by the drugs taken, and that before relaxation occurred sufficiently to allow the impregnated ovule to pass into the uterus it had developed sufficiently and had become sufficiently adherent to the tube that it could not pass. He thinks it probable that tubal pregnancy frequently occurs in this way in a normal tube, and when the rupture occurs in these cases it is usually near the cornu, and the hemorrhage and shock are great.



DR. D. C. BROCKMAN, Ottumwa, Iowa, reported a case of synchronous extrauterine intrauterine pregnancy. A multiparous woman consulted him with a history of persistent vomiting and temperature. She was greatly emaciated, and on examination he detected a tumor in the central part of the abdomen. Blood count was negative. The woman knew herself to be pregnant, and the central tumor was taken to be a pregnant uterus at four and a half months. On the left side was a cystic tumor, in which he could get ballottement, but no evidence of abscess showing a pregnancy in the abdomen to the left of the uterus. Hoping that he could tie off the ovarian arteries and do a panhysterectomy without fatal hemorrhage, he opened the abdomen, but found the intestines so adherent to the sac that it was impossible to reach the ovarian arteries or to do anything with the sac without causing a fatal hemorrhage. He closed the abdomen and waited a few days before he delivered the fetus through the vagina. He did not attempt to remove the placenta, which was adherent to the right side of the sac, but packed the sac full of gauze and waited for the vessels to close. On the fourth day premature labor set in, and he removed the packing, hoping to stop the labor. Anodynes failed, hemorrhage occurred, with death six days after the operation from exhaustion due to hemorrhage. Dr. Brockman finds that there are about 133 cases of this kind on record in the majority of the patients. If another case like this one came to him, he thinks he would destroy the extrauterine fetus by electricity or morphin and allow it to remain, hoping the intrauterine pregnancy would continue to term.

DR. WILLIAM E. GROUND, Superior, Wis., said that ectopic pregnancy is undoubtedly a condition that exists oftener than is usually suspected. The determination of the location of the fecundated ovum is a matter of mere incident. If the ovum is arrested in the Fallopian tube, tubal pregnancy will follow; if it locates in the body or fundus of the uterus, normal pregnancy will result, and if it forms an implantation in the lower uterine zone at or near the internal os, placenta prævia will be the consequence. Rupture in cases in which the implantation is near the uterus, always occurs early. Dr. Ground had a case in which the rupture occurred at the patient's next regular menstrual period; she had never missed a period. The symptoms of internal hemorrhage were extreme. The patient was sent to the hospital and the abdomen was opened. The tube was found torn clear across near the uterine cornua and the abdominal cavity was filled with liquid and clotted blood. As Dr. Ground understands it, the decidua is a hypertrophied endometrium, and the chorionic villi is the outer fetal membrane and purely a fetal structure; therefore, in cases of extrauterine pregnancy and in the absence of intrauterine pregnancy, one would not expect to find chorionic villi in the uterine scrapings.

DR. W. O. HENRY, Omaha, said that Dr. Goffe's case reminded him of one he had, and he thinks Dr. Goffe's explanation of the cause of the hemorrhage correct. The pregnancy occurred near the fimbriated extremity of the tube, and when the abortion occurred it was not a rupture, but simply an expulsion of the contents of the tube. When the fetus is located nearer to the uterus and rupture occurs, the fetus may be extruded entirely, but the placenta remain; when it is in the outer end of the tube, however, the entire ovum with its coverings is extruded. In other cases one will find the rupture near the cornu of the uterus, and hemorrhage ensues, the fetus being retained. If there is violent hemorrhage, it is not safe to move the patient any great distance, but ordinarily it is better to operate in a hospital. Dr. Henry considers that the point made by Dr. Gillmore with reference to making a diagnosis by examining the uterine scrapings is not correct, because in extrauterine pregnancy chorionic villi are not found in the uterus; they are only found in the tube.

DR. C. L. BONIFIELD, Cincinnati, briefly reported a case which seemed to be one of unruptured tubal pregnancy. After the ovarian arteries were ligated, the whole mass was lifted up from behind the uterus, to which it was adherent. On most careful examination it appeared to be an unruptured tubal pregnancy, but he is convinced that rupture occurred, that a blood clot filled in the opening, and that after regeneration of the tissues the tube took on a normal appearance. He has seen two or three cases in consultation, in which most severe

hemorrhage had occurred and the patient was practically pulseless, and had been so for eight or ten hours, but subsequently improved a little. In such cases he advises leaving the patient alone for eight or ten days until the blood clot has been absorbed and the woman is in condition to stand an operation.

DR. J. H. CARSTENS said that microscopic examination, once in a while, may throw some light on the subject. He agreed with Dr. Henry about taking patients to the hospital. It is a question of the individual case. If he is 100 miles from home he will not take a patient to the hospital, but will do the best he can, and he thinks that some patients recover under the most adverse circumstances. Dr. Carstens does not think that one can tell where the rupture is located. The blood does not always come down into the cul-de-sac. Sometimes there are adhesions and the blood is up in the abdomen. One can not always feel the hematocele. If the hemorrhage continues with increase in pulse rate operation would better be done quickly. If there has been a hemorrhage, followed by shock, and the pulse remains about 120, then one can wait for an opportunity to operate; but so long as the pulse continues to increase in frequency, one must operate quickly, in two minutes, if necessary. He advises cutting and putting on forceps, allowing them to remain for hours if necessary; it will not hurt the patient. When the woman has had time to recover from the shock, a thorough operation may be done. Dr. Carstens operated through the abdomen in one case because the tumor did not extend down into the vagina. It bulged out in the side and looked like a big ovarian tumor, and that was the nearest point to get at it. When pelvic inflammation comes on suddenly without any apparent cause, and after investigating the case carefully one finds that there was some irregularity in menstruation and some pain, trouble is to be looked for.

## RECENT ADVANCES IN THE PHYSIOLOGY OF HUMAN NUTRITION.\*

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CHICAGO.

The question of the physiology of nutrition is a most important one. It is especially important to the physician, for without a clear idea of the subject he can not prescribe a proper dietary for the well or sick nor can he clearly understand the pathologic conditions which occur as a result of an improper amount or kind of food or the morbid conditions which result from malnutrition.

It is the belief of the layman and of many physicians, too, that the chief nutrition of food consists of the proteids, and meat is especially looked on as the food which affords strength and sustained effort. Among Europeans and Americans especially meat eating is very prevalent, chiefly for the reasons given above. Besides this, the palate is pleasantly excited by rich animal foods, and in consequence a larger amount is taken. It is too common a belief that the well-nourished body is the most healthy and best able to resist disease and that a large fat deposit in the tissue is an evidence of good general nutrition.

Our food is made up of proteids, fats and carbohydrates. The proteid or albumin, both animal and vegetable, is the tissue builder. Relatively, a larger amount of proteid is required for the growing individual, pound for pound, than for the adult. The fats and carbohydrates (sugars and starches) comprise the fuel of the body and supply the necessary heat and keep the machinery going.

### STANDARDS OF DIET.

As a result of the years of experiment by physiologists and of observation by many workers, certain general

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



conclusions have been arrived at in reference to the requisite amount of food which is necessary to maintain health and strength and at the same time afford the best degree of efficiency with the least expenditure of energy on the part of the body to utilize the food. The standards of diet which have been brought forward by different workers do not differ very materially in the amount of the different elements advised for a twenty-four-hour dietary. The standard of Carl Voit of Munich is the one best known and has been recognized chiefly because of Voit's reputation as a successful student of nutrition.

Voit considers that a normal man of an average body weight of 70 to 75 kilos (150 to 165 pounds), doing a moderate amount of work, requires daily 118 gm. of proteid, 55 gm. of fat and 500 gm. of carbohydrate. This gives a total food value of about 3,000 calories and will maintain the body in a good physical condition. The standard introduced by Atwater gives 152 gm. proteid, 125 gm. fats and 400 gm. carbohydrates, affording a fuel value of 3,315 calories.

These standards are based on the idea that from 100 to 118 gm. of proteid or albuminous food is necessary to maintain the body in nitrogenous equilibrium; that is, that the amount of nitrogen excreted through the urine and feces should equal that taken into the body and at the same time the body be maintained in a state of equilibrium as to health, strength and practically also of weight.

Right here it is best to relate the fate of the elements taken into the body. Fats and carbohydrates when oxidized in the body are ultimately burned to simple gaseous products, that is, carbonic acid and water. Consequently the waste from these food products is quickly thrown out of the body without resulting harm to any of the tissues.

If such products are taken in excess, the harm which results will be chiefly in the deposits of fats in an undesirable amount, which would render the body gross and unwieldy. A too large amount taken is very apt to clog the alimentary canal, overfatigue the digestive organs and may undergo abnormal fermentation.

The waste products of proteid foods, when assimilated, consist of crystalline nitrogenous products which ultimately pass out of the body, chiefly through the kidneys. Before their elimination from the body these crystalline elements, which are in some instances toxins, float about through the body and may exercise a deleterious influence on the organism either general or local. The literature is full of theories on the diseases due to many of these crystalline products, chiefly uric acid, urea, the purin bodies, etc. All who are acquainted with these facts have recognized the importance of restricting the formation of the deleterious crystalline waste products by limiting as far as possible the amount of proteids taken into the body.

Until recently it has been the belief that the nitrogenous equilibrium of the body could not be maintained on a less amount of proteids than that given in the standard diet of Voit and others.

Recently some far-reaching experiments have been made on the physiology of nutrition and of metabolism of the body which practically revolutionize the ideas held by most physiologists, and it is the chief purpose of this paper to call attention to these new facts.

They are chiefly contained in an experimental study by Russel H. Chittenden, director of the Sheffield Scientific School of Yale University and professor of physiologic chemistry, on the "Physiologic Economy in Nutrition, with Especial Reference to the Minimum Proteid Requirement of a Healthy Man," and two articles by

Otto Folin on studies made in the chemical laboratories of the McLean Hospital for the Insane, Waverly, Mass., on "Laws Governing the Chemical Composition of the Urine" and "A Theory of Protein Metabolism."<sup>1</sup> Bearing on the same subject to a lesser degree is the classical work of Prof. J. P. Pawlow of St. Petersburg, on "The Work of the Digestive Glands."

In the foregoing and in what follows I have made free use of the data found in the above-named books and periodicals and without further acknowledgement of my indebtedness to these eminent writers, I desire above everything else to recommend these books for a careful study by all who are interested in this subject. If this article accomplishes nothing more than to induce this audience to study the works named, I feel that it shall have accomplished a great deal.

With the object of throwing light on the subject of the physiologic economy in nutrition, Professor Chittenden made experiments on three groups of men.

The first comprised a group of five men, of varying ages, connected with the faculty of Yale University, whose work was distinctly mental rather than physical.

Second, a detail of 13 men volunteers from the Hospital Corps of the United States Army, as representatives of the moderate worker. These men were of different nationalities, ages and temperaments.

Third, a group of 8 young men, students in Yale University, all of them trained athletes, as combining the mental worker with a pronounced amount of physical work.

The individuals of these groups were experimented on by permitting them to have first the usual standard dietary, during which urinary examinations were made showing the nitrogen output together with the weight, strength, and physical and mental efficiency of the individual. Then for a long period of months each individual of each group was placed on a dietary which diminished his proteid food to one-half or less even of the Voit standard but permitting the individual freedom in his choice of fats and carbohydrates to the full satisfaction of his appetite. On this dietary the body weight diminished to a very moderate degree in some of the individuals, but soon became constant and the health, strength and efficiency, both mental and physical, was maintained at a higher level than on an ordinary standard diet. On the Voit diet or its equivalent the daily excretion of nitrogen through the urine amounted to at least 16 gm. On the diet with a much lessened amount of proteids the daily output of nitrogen amounted to about 6 to 9 gm. The nitrogenous balance was maintained on this diet, as shown by a practically constant body weight in each individual, especially after the individual had been on the diet for a few days, and by an estimation of the nitrogen output in the urine and feces. The diminution in the nitrogenous waste materials was chiefly in the urea nitrogen. The total output of uric acid in the urine was also diminished. Professor Chittenden did not take an account of the excretion of the kreatinin or of the sulphur compounds, but Folin made such observations, which will be quoted later. Chittenden showed undeniably that the men experimented on, who represented all classes of individuals in reference to mental and physical work, could meet all ordinary requirements of mental and physical labor with a high efficiency on an intake of proteid food far below that of the standard diets. It was found, too, that in the reduction of the proteid it was not necessary for these individuals to increase very

1. Amer. Jour. of Physiology, vol. xiii, Nos. 1 and 2.



much, if at all, the amount of fats and carbohydrates to maintain themselves in good condition.

Professor Chittenden comments favorably on the practice of a more thorough mastication, as brought out by Mr. Horace Fletcher "In the A B Z of Our Nutrition" and of the existence of a reflex of deglutition evoked by thorough chewing, which, if properly carried out, produced a very striking effect on the appetite, which was made more discriminating and led to a choice of a very simple dietary and in part reduced the craving for flesh food.

Those who have found it necessary to lavage the stomach of patients have noticed the very common want of a thorough division of the food by mastication, as shown in the large particles of food of all kinds which are found in the stomach of the average individual. This entails an enormously increased work on the digestive organs and one of the salutary lessons of the stomach tube to the patient is to show him the evils of insufficient mastication. That mastication should be carried out to the degree and for the purpose advised by Mr. Fletcher and Dr. van Someren is a question which time must solve. We are too apt to be faddists in many ways, but if the gentlemen named shall influence the observance of the physiologic law of thorough mastication of the food they will have accomplished much good.

Otto Folin, in the analysis of the urine from many individuals on a standard diet, found that the total nitrogen excreted in twenty-four hours averaged, in round numbers, about  $14\frac{1}{2}$  to 18 gm. This amount of nitrogen was represented by urea in from 86 to 90 per cent.; ammonia in from 3.3 to 4.5 per cent.; kreatinin in from 3.2 to 4.5 per cent.; uric acid in from 0.6 to 1 per cent. and undetermined nitrogen in from 2.5 to 5 per cent. On a dietary with a minimum amount of proteid, far below that of the standard diets, but still sufficient to maintain nitrogenous equilibrium and practically a constant body weight, the average nitrogen output in the urine diminished to 4 to 8 gm. in twenty-four hours. The percentage of urea nitrogen was now diminished to about 60 per cent.; the ammonia nitrogen was totally diminished, but the percentage was relatively slightly increased. Kreatinin remained the same in absolute quantity excreted. Uric acid was diminished in total amount, but not nearly in proportion to the diminution of the total nitrogen, and the per cent. of uric acid was therefore relatively increased.

In normal individuals, on a standard diet, the total sulphur output was 3 to 3.75 gm. in twenty-four hours. This was made up of inorganic  $\text{SO}_3$ —ethereal  $\text{SO}_3$  and neutral  $\text{SO}_3$ . Of these, the inorganic  $\text{SO}_3$  made up an average of 87 to 89 per cent., the ethereal 5.5 to 8 per cent., and the neutral 4 to 6 per cent. On a low protein diet the total sulphur excreted ranged from 0.77 to 1.50 gm. in twenty-four hours. This was represented by inorganic  $\text{SO}_3$ , reduced to about 60 per cent. The ethereal increased to about 14 per cent., representing a form of sulphur metabolism more prominent with than without the protein. The neutral sulphur was relatively increased, but the total excretion was the same—that is, unaltered in amount by the reduction in the proteids.

That the above statements may be made more graphic, I copy from Folin's article<sup>2</sup> the following, showing the analysis of the urine from the same individual, taking a standard diet in the first, and when

taking the diet, with a much reduced protein in the second column.

	I.	II.
Volume of urine . . . .	1170 c.c.	385 c.c.
Total nitrogen . . . . .	16.8 gm.	3.60 gm.
Urea nitrogen . . . . .	14.70 gm. = 87.5 p. c.	2.20 gm. = 61.7 p. c.
Ammonia nitrogen . . . .	0.49 gm. = 39 p. c.	.42 gm. = 11.3 p. c.
Uric acid nitrogen . . . .	0.18 gm. = 1.1 p. c.	0.09 gm. = 2.5 p. c.
Kreatinin nitrogen . . . .	0.58 gm. = 3.6 p. c.	0.60 gm. = 17.2 p. c.
Undetermined nitrogen . .	0.85 gm. = 4.9 p. c.	0.27 gm. = 7.3 p. c.
Total $\text{SO}_3$ . . . . .	3.54 gm.	0.76 gm.
Inorganic $\text{SO}_3$ . . . . .	3.27 gm. = 90.0 p. c.	0.46 gm. = 60.5 p. c.
Ethereal $\text{SO}_3$ . . . . .	0.19 gm. = 5.2 p. c.	-0.10 gm. = 13.2 p. c.
Neutral $\text{SO}_3$ . . . . .	0.18 gm. = 4.8 p. c.	0.20 gm. = 26.3 p. c.

A glance at the table shows clearly the relation of the different forms of N and  $\text{SO}_3$  excreted by the same individual on the two diets.

It is shown that the total N excreted is diminished from 16.8 to 3.60 gm.; that urea N is greatly diminished from 14.7 to 2.2 gm.; that ammonia N is but moderately diminished from 0.49 to 0.42 gm.; that uric acid N is diminished one-half, from 0.18 to 0.09 gm., and that kreatinin N is practically unchanged in the total amount excreted. It follows that the percentage relation of the different N bodies is relatively altered—with the marked diminution alone of the urea N.

With the  $\text{SO}_3$  output, inorganic  $\text{SO}_3$  corresponds in fluctuation in the two diets with urea, ethereal  $\text{SO}_3$  with uric acid, and neutral  $\text{SO}_3$  with kreatinin.

If one will compare the table of analyses of urine in the reports of Chittenden and Folin they will be found to correspond in the main in reference to the N output. Chittenden's observations were made on individuals over a sufficiently long period of time to show that the result is definite, and Folin's more complete estimation of the different forms in which N is excreted and the relation of one to another affords us data on which a fundamental theory of metabolism may be considered.

There are at present two theories of protein metabolism. According to Voit, protein of the food circulates in the blood and plasma of the tissues, and is there katabolized without becoming an integral part of the cells. Essentially this constitutes chemical decomposition of the protein in solution. The small part of the living cells which dies is dissolved in the circulating medium and becomes a part of the protein derived from the food.

Pflüger's theory is that the circulating protein of the food is first transformed into bioplasm, becomes a part of the living cell and as such is oxidized. Pflüger admits that a part of the protein may be katabolized in solution according to the theory of Voit.

The theory of Pflüger involves an enormous building up of bioplasm, coincident with an equal destruction of tissue. Both theories involve the katabolism of all of the protein of the food, in the tissues where they are utilized.

As Folin says, no fundamental theory concerning protein metabolism can be accepted unless it can be made to harmonize with the laws governing the composition of the urine.

The theories of Voit and Pflüger are based on the assumption that quantitative changes in the total protein metabolism produce no appreciable effect on the percentage composition of urines, representing such metabolism. As announced by Folin, changes in the total amount of N and S eliminated in the urine show a pronounced change in the percentage composition of the N and S.

This seems to prove that katabolism of protein food must be of at least two kinds. The nature of the changes in the distribution of the urinary constituents seems to warrant the statement that the two forms of katabolism

2. Amer. Jour. of Physiol., vol. viii, No. 2, p. 118.



are independent. The one is variable in quantity, as represented by urea and inorganic sulphur, the other is constant and yields kreatinin, neutral sulphur and to some degree uric acid and ethereal sulphates.

As is shown in the urine analyses, the more the protein of food is diminished, and therefore katabolism reduced, the more prominent relatively become kreatinin and neutral sulphur the representatives of the constant katabolism.

It has been proved that kreatinin elimination is not diminished, and that some other constituents are but slightly reduced when practically no protein food is given. This shows that there is a constant tissue waste, varying possibly in degree with the wear and tear incident to work, and shows that a certain amount of protein must be furnished with the food to maintain nitrogenous equilibrium.

In other words, katabolic processes which yield the end products that are a constant quantity under varying amounts of proteid food, represent the metabolic processes that constitute an essential part of the activity which distinguishes living from dead cells.

Folin distinguishes the constant protein metabolism, a tissue or endogenous, and the variable protein as an exogenous or intermediate metabolism. The constant metabolism fixes a limit to the lowest attainable level of nitrogenous equilibrium. Just what this level is will depend on how much, if any, urea is derived from the same katabolism which produces kreatinin. When this shall have been determined we shall possess a formula, expressing the point of lowest attainable protein katabolism, because at this point the percentage composition of the nitrogen and sulphur of the urine will be constant. It is plain that a sufficient amount of protein food to maintain the constant protein metabolism will be absolutely necessary.

The existing theories assume that protein metabolism is essentially an oxidation, and that the greatest amount of katabolism takes place in the muscles where the greatest amount of oxidation exists, i. e., the same chemical processes as those which katabolize the fats and carbohydrates.

Folin makes it clear that the splitting of the protein molecule may be more easily accomplished by hydrolysis than by oxidation.

Urea is not found in the muscles except in very small traces. Its absence in the muscles where the greatest katabolism takes place has heretofore not been explained. On the other hand, kreatin is found in the muscles, and its derivative kreatinin is a constant quantity in the urine.

If the katabolism of proteids represented by urea does not take place in the muscles, then it must be that the nitrogen katabolism which yields urea must take place elsewhere by special chemical processes. Furthermore, we are forced to the conclusion that this katabolism is not of such fundamental importance as that which yields kreatinin. It is known that in the digestion of protein, ammonia is directly formed by proteolytic ferments, and that the liver is capable of converting ammonia into urea. It is known, too, that the blood passing from the intestines to the liver contains two or three times as much ammonia as the blood in the hepatic veins.

Furthermore, there is evidence that hydrolytic decomposition of protein occurs in the digestive tract. The first step in the process is the decomposition into proteoses, amido acids, ammonia and possibly urea. Hydrolysis is carried further in the mucous membrane of the intestines, and is completed in the liver, each splitting being such as to further the formation of urea.

By this means the unnecessary nitrogen is removed, and it explains the fact that the animal organism tends to maintain a nitrogenous equilibrium within the wide limits of forced feeding, on the one hand, and of low protein food experiments on the other.

An excess of protein in the food is not stored up in the body as such, for the actual need of nitrogen is very small, as it is limited to the actual building up of the cell bioplasm. It is not necessary to store it in the body, because an excess of nitrogen is always furnished with the food. A larger nitrogen intake than is necessary to meet the needs of endogenous metabolism will lead only to an increase in the elimination of urea. It can not increase the tissue metabolism and the resulting formation of kreatinin.

The katabolism of fats and carbohydrates is accomplished chiefly by oxidation. The process sets free a large amount of heat, which may be converted into mechanical energy. In the removal of nitrogen from protein by hydrolysis but little energy is expended. The non-nitrogenous rest of proteid decomposition by hydrolysis affords a substance which may be further partly converted into fats or carbohydrates. It then becomes subject to the same laws governing the katabolism of fats and carbohydrates. The organism may at any time be made to store up fats and carbohydrates, if an excess over the requirements is taken. It has already been stated that this excess may be taken without fear of poisoning the body, because the waste from them consists of non-crystallizable products. An excess may overburden the digestive organs and cause abnormal fermentation or tire out the glycolytic function. Too large a deposit of fat may render the body unwieldy and may infiltrate and physiologically embarrass the muscles and viscera.

#### NITROGENOUS EQUILIBRIUM.

The above theory of metabolism of Folin explains the persistent tendency of the normal body to maintain nitrogenous equilibrium when a large amount of proteid is consumed, even when this involves the formation of an excessive amount of urea.

If one will examine the tables of the feeding experiments made by Folin and compare the nitrogenous output on the low protein diet with the nitrogen excreted in the urine on a resumption of a free amount of protein in the food, it will be seen that the elimination of nitrogen was more than doubled on the first, and on the second day there was more than three times as much excreted as on the last day of the low protein diet.

Folin offers the following explanation:

All the living protoplasm in the animal organism is suspended in a fluid, very rich in protein, and on account of the habitual use of more nitrogenous food than the tissues can use as a protein, the organism is in possession of approximately the maximum amount of reserved protein in solution that it can advantageously retain. When the supply of food protein is stopped, the excess of reserve protein inside the organism is still sufficient to cause a rather large destruction of protein during the first day or two of protein starvation, and after that the protein katabolism is very small, provided sufficient non-nitrogenous food is available. But even then, and for many days thereafter, the protoplasm of the tissues has still an abundant supply of dissolved protein, and the normal activity of the muscles is not impaired. When 30 or 40 gm. of nitrogen have been lost by an average-sized man during a week or more of abstinence from nitrogenous food the living muscle tissues are still well supplied with all the protein they can use. This is proved by the unchanged kreatinin elimination and by the fact that the individual feels no unusual fatigue or inability to do the customary work.



The organism at the end of a low protein diet experiment still has an abundance of available protein in the nutritive fluids, and this is why it only gradually and only under the pressure of an excessive supply of food protein again acquires the original maximum store of this reserve material.

Based on the above interpretation of metabolism and nitrogenous equilibrium, the so-called standard diets are unnecessarily rich in proteids. It is necessary to supply protein in the food in sufficient amount to provide liberally for the endogenous or tissue metabolism and to maintain a reserve protein in solution. If the blood is in need of tissue builders, the organism can rapidly assimilate large amounts of nitrogenous food. This is clearly shown in emaciated conditions following fevers, surgical operations, etc., for during convalescence there is often a ravenous appetite and a rapid increase in weight and strength with a corresponding retention of nitrogen.

The main contention of Voit and others is that it is necessary to consume 118 gm. of proteid daily in order to maintain a nitrogenous equilibrium and at the same time preserve a condition of health and mental and physical efficiency.

The experiments of Chittenden are so decisive that a proteid rich diet is proved not to be necessary. He is unquestionably right in the conclusion that the standard diet may be divided by two, as far at least, as the proteids are concerned.

The practical results of the experiments of Chittenden are made more rational and clear by the researches and deductions of Folin.

#### THE DAILY DIET.

Chittenden maintains that the daily requirement is not only much less of protein than that recognized in the standard diets, but that the fats and carbohydrates also may be considerably diminished.

We recognize the fact that the diet must differ for individuals, dependent on the occupation, the season of the year, the climate, etc. However, the modification in the diet will consist chiefly in the variation of the amount of fats and carbohydrates rather than a change in the quantity of the proteid. Folin has shown that physical activity does not cause a material tissue waste of muscle, for kreatinin is not appreciably increased in the urine by physical labor. The growing individual and the emaciated convalescent only can utilize a large nitrogen intake and retain it. The difference in the dietary of grown normal individuals will consist mainly in the fuel foods—the fats and carbohydrates.

The achievements of the Japanese on a diet chiefly carbohydrate is sufficient proof that a high efficiency, both mental and physical, may be maintained on a low proteid and full fuel diet.

If a large proteid diet is unnecessary, is it also detrimental? In the light of the theory of exogenous metabolism of Folin, an excess of proteid furnished with the food is normally rapidly converted into harmless urea and is quickly eliminated by the kidneys.

The excessive production of uric-acid, xanthin bases, kreatin and other so-called extractives is looked on as the cause of gouty and other so-called autointoxication diseases. The excessive production of these substances is usually ascribed to an excess of proteid consumed. These substances are the result chiefly of the endogenous metabolism, and, scientifically speaking, have no relation to an excess of protein, for that substance is converted into harmless urica. However, the meats contain considerable extractives or substances out of which

they may be formed, and therefore an excess of concentrated protein food in the form of meat may result in such an autointoxication. The continued excessive use of protein may lead in time to the accumulation of a larger amount of reserve protein than the organism can retain in the fluid media. The continuous presence of such a large unnecessary supply of unorganized reserve material may weaken one or all of the living tissues.

We are the creatures of habit. With palates craving for new sensations and the prevalent belief that hearty eating promotes health and strength, it is no wonder that we eat too much. It is proper, too, that the pleasures of the palate should be gratified. The pleasure which eating affords promotes digestion. Bolting does not permit proper enjoyment of food. Thorough mastication undoubtedly makes the palate more discriminating and serves as a check to overindulgence.

Chittenden says: "Physiologic economy in nutrition means temperance and not prohibition. It means full freedom of choice in the selection of food. It is not a cereal diet nor vegetarianism."

Practical application of the newer ideas of metabolism and nutrition to diets in disease could be readily made, but are outside of the limits of this paper.

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#### METHODS, VALUE AND LIMITATIONS OF THE KNOWLEDGE OF THE GASTRIC CONTENTS.\*

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I think it will be admitted that instrumental and laboratory examinations with reference to the stomach are unduly neglected in practice. The reasons for this are similar to those that cause the neglect of other diagnostic manipulations—technical difficulties, real and imaginary, and erroneous views as to clinical value. Many fail to make examinations of stomach contents solely because they think the passage of the stomach tube is difficult and often objected to by the patient. Contrary to this view, I find very few people who require any persuasion and still fewer who offer serious verbal or physical difficulty. Out of many thousands examined, I have encountered only two people in whom I could not successfully use the stomach tube at the first trial. I am not considering, of course, the very important contraindications to the use of the tube (necessary to remember in every case), or real obstructions to the passage.

A belief in the excessive technical difficulties of the examination of the stomach contents depends chiefly on lack of training and of practical experience in the necessary manipulations, which are not essentially as difficult as some of the methods proposed may indicate. An important cause of neglect comes from disappointment at the results. Those who expect to make complete and satisfactory diagnoses from single features, as Bright's disease from albuminuria, diabetes from glycosuria, or pneumonia from crepitant râles, discard gastric diagnostic methods when they find out that absence of free HCl does not positively mean cancer. We still find evidences of a belief in the existence of diagnostic signs, in the advocacy of tryptophan reaction, and others, but

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



the probabilities are that in stomach diagnosis, as in other lines, the greatest assistance will come from patient efforts to appreciate the alterations of function and structure primarily, and by allowing our diagnosis to grow out of these findings, assisted by the other clinical features of the case. An appreciation of gastric physiology confirms this *a priori* view. The important rôle of HCl in the stomach contents suggests in the very beginning the usefulness of an examination into the presence, amount and condition of this, whether partly free or only combined or absent. Clinical experience, I think, confirms this, but there are many who fail to realize it. Thus it happened that at an early period, the absence of HCl in cancer of the stomach was noted, and many people grasped at this as a diagnostic feature, and even yet use it as such, although its limitations have long been abundantly demonstrated. On the other hand, some have gone to the opposite extreme, and, discovering the limitations, reject all stomach examinations as useless. Both are wrong. The absence of HCl in cancer is so frequent, and when it does exist, so constant from day to day, as to form a valuable aid, but there may be cancer present with HCl secretion preserved for a long time, even in excess of the normal amount. But such exceptions and contradictions occur in all branches of diagnosis, and should teach us to discover other details, rather than lead us to a condition of despair. I do not think it necessary at this time to give any statistics as to the relative frequency of the presence or absence of HCl in cancer; for, while interesting and valuable, they do not apply to an individual case. In the examination of a patient we can not give up a diagnosis because of a negative result in one sign. We have still to work out all the signs and only then to attempt the final diagnosis.

In gastric ulcer the excessive secretion of HCl has so often been noted that it is rightly considered one of the signs of the disease, and yet I could cite a number of cases, confirmed by operation, in which there was no excess in repeated examinations. That single or few examinations may be misleading can be shown by some cases in which variations occur, as from 26 to 88 in the course of seven tests extending over ten days. In diseases like cancer and simple ulcer there are such urgent reasons for early diagnosis that all the other diagnostic features should be used as quickly as possible whenever these diseases are suspected, and in these the complete routine examination of the stomach contents will almost always prevent error from exceptional behavior of the HCl.

The value of estimations of HCl, in my opinion, is greatest in functional diseases of the stomach, or perhaps it would be more exact to say cases in which the stomach functions are altered, without gross organic disease primarily in that organ, though there may be functional or organic disease in other organs that may have a part in the production of the gastric anomaly. These conditions are very common, much more so than is often supposed. Excessive secretion of HCl, for example, is a very common condition. While it may be associated with organic changes in the stomach, such as ulcer, spasm of the pylorus, retention, stagnation and dilatation, yet there may be no gastric symptoms, or only trifling ones, for it also occurs with distant symptoms, such as headache (often simulating ocular headache), severe neurasthenia sometimes, in the male, associated with functional impotence, and hence the cause of ill-directed and not rarely harmful treatment. Thorough examinations of the stomach, made as a routine

measure, sometimes lead quickly to improvement of all the subjective symptoms. Even when the gastric symptoms are marked, test meals with complete examinations are indicated. While the picture of marked gastric hypersecretion is often very typical, I have seen cases that had not been differentiated before by other physicians, and that I could not differentiate without test meals, in which the primary conditions were just the opposite—absence of HCl with excessive production of organic acids.

There are also very troublesome cases of functional gastric disease in which the chemical conditions vary. Hypersecretion and hyposecretion or even achylia may alternate in a way only to be followed up by repeated examinations. In the case of organic diseases of the stomach, the further steps are comparatively independent of HCl determinations, but even in these occasional tests are useful. In functional diseases the greatest results often follow frequent estimations of HCl, under various kinds of dietetic and other treatment, and with various test meals. The treatment should be begun as early as possible, sometimes before the first test meal, and used as a factor in the examinations.

There is still room for further investigation in the methods of gastric chemical examinations, and those who have the proper training and facilities can with great advantage pursue such investigation. The general practitioner, however, need not be discouraged because of the possibilities of future discovery, nor prevented from carrying out the methods now available, for these are sufficiently accurate for clinical purposes and not too intricate for any one, and the application of all I shall mention does not require as much time as it does to speak of them. For the primary reaction, litmus paper should be used, and for the presence or absence of free HCl, Congo paper or solution may follow, though this can be dispensed with. Those working with it can learn much from this test. The more accurate and delicate Guenzburg's reagent should always be used. It is so delicate and exact that I can not understand its frequent neglect. This may be due to erroneous results from using a decomposed solution. The tendency to decompose is a drawback, I admit, but it is so easy to test the solution with a drop of dilute HCl that the fault is a trifling one.

Given free HCl, it is next necessary to determine its amount, and for this the dimethyl-amidoazo-benzol is most satisfactory, though it requires the usual care in practicing with test solutions to get the proper end reaction. For the total acidity the phenolphthalein reaction is used. Tests for the combined HCl are not necessary if there is free HCl, hence all of the steps of Toepfer's method are not required in ordinary clinical work. If there is no free HCl, the qualitative Sjoquist test should be applied. Quantitative estimations for combined HCl are not, in my opinion, of clinical necessity, and in order to be accurate, and hence of value, require more chemical experience than the general practitioner need be expected to have. With proper apparatus and reagents, any one can easily acquire sufficient experience in the estimation of HCl to utilize that substance in diagnosis, and with such experience the quantitative tests can often be omitted. Of abnormal or pathologic acids, lactic is the only one requiring chemical tests, for though acetic acid or butyric acid often occur in large quantities they can be detected by the odor. Lactic acid tests to be most useful should be made on a lactic-free test meal, such as shredded wheat or the Boas gruel. Quantitative meth-



ods are not necessary, as the relative intensity of the reaction with Uffelmann's or Kelling's test give sufficient indices, though Strauss' burette may be used. The determination of pepsin is not necessary in ordinary work, since pepsin is rarely absent when HCl is present in sufficient quantities, but the method of Mett is often a useful addition to other tests in obscure functional diseases. It is fairly easy to work, and, with the valuable details regarding time-limit worked out by my colleague, Dr. Cowie, requires very little time. The existence of the digestive functions and their relative completeness can easily be shown by the biuret and starch tests, and by the changes in the cells of the gastric contents as observed in the microscopic examination. At the same time the experimenter may have his attention called to the advantage of further work with the functional tests proposed by Salili, some of which promise useful additions to our diagnostic methods.

If I have spoken of chemical tests first it is not because I look on these as all-sufficient, but rather because they are simple and the results are easily expressed in figures or symbols; but without other observations they are of little or no value. The other tests require practical knowledge and experience. Nevertheless they will repay one the time spent in becoming familiar with them either in a clinical laboratory under the supervision of an expert or worked out with the aid of textbooks and clinical material without such supervision. One quickly learns the normal limits regarding the amount, color, consistency and odor of the gastric contents. From these the need of further examinations becomes quickly known. An excess of mucus can also be recognized, and along with this, the fact that it is not always easy to draw a positive conclusion from such an excess. In the first place, it is always important to exclude an origin from the nose, pharynx or bronchi; in the next place it is necessary to be sure that the excess has not been caused by awkward manipulation of the tube, even if unavoidable. But even if we can exclude such factors, it is important to remember that the presence of even considerable mucus does not warrant a diagnosis of chronic gastritis. Blood is easy to recognize when present in large amounts. Small quantities of blood, due to scratching with the end of the tube, are usually easy to recognize. The tests for occult blood developed in the last few years are of considerable clinical value, though it is, of course, necessary to exclude traumatism. The presence of pus is always important, but here, too, we must be able to exclude an origin from the respiratory tract. The appearance of the other cells mixed with the pus, dust pigment and also a greater variety of bacterial forms than occurs in stomach contents, serve to differentiate. The examination of bits of mucosa is not of very great clinical value. In about one-third of the cases in which such specimens have been examined in my clinic, the microscopic examination of the bits coincided with the other findings. But, on the whole, such examinations do not repay the time spent on them, for purposes of practical diagnosis. The examination of the bacteria in the stomach contents is of only limited value. Staining is rarely necessary, though the Wright stain is easy to apply, and stained preparations will be preferred by those who have not had considerable experience with fresh material. Large numbers of bacteria in the stomach contents, however, throw an important light on the question of stagnation, and there are certain variations in the flora in different cases that are of a good deal of aid in diagnosis. So the Oppler-Boas bacillus, and, on the

other hand, yeasts and sarcines, often occur in such large numbers as indicate pretty accurately the chemical and anatomic alterations present. Protozoa also have only a limited diagnostic value, but their occurrence in the stomach is interesting, and the study of cases in which they occur may throw a good deal of light on hitherto obscure processes in that organ. The testing of the freezing point of stomach contents or of its surface tension may furnish a useful possibility of work for those who have time, but at present these possibilities are not necessary for clinical work.

In conclusion, my opinion is that examinations of the gastric contents give information that can not be obtained in any other way, and, though often negative, can not be excluded without risk of serious error. Such examinations are indicated in all stomach syndromes, in all diseases seriously affecting metabolism and nutrition, and in all diseases that affect the function of the stomach, notably diseases of the lungs, heart, liver, kidneys and blood.

### CERTAIN NON-GASTRIC DISEASES WITH GASTRIC SYMPTOMS.\*

J. H. MUSSER, M.D.

PHILADELPHIA.

The subject is so vast that a certain amount of abruptness is necessary in the presentation. Some of the minor non-gastric diseases with gastric symptoms may be omitted. The question is a study in etiology. In one sense it may be said the account is to include gastric disorders which are secondary to other diseases. It is not to gastric disorders, but to diseases, remote from the stomach, which have gastric symptoms, that we call attention. Strictly speaking, the gastric symptoms are not due to any organic disease of the stomach; but such division is largely arbitrary. No pronounced gastric symptoms are liable to prevail without either irritation, congestion or inflammation, whether the symptoms are temporary or permanent.

It is understood, then, that the ailments considered are those which have for their chief, and for the time dominant, expression, gastric symptoms; it is the class to which, in loose terms, we say it is not your stomach, but your eyes, or your lungs, or your kidneys that are at fault. The patient's sensations direct him to the stomach alone. We must clearly understand that, although we decide that the gastric symptoms are the minor factors, from the standpoint of therapeutics, we must direct treatment as boldly to their alleviation as to the primary disorder. The eyes may be corrected, but the gastric symptoms only mitigated.

#### NON-GASTRIC ORGANIC DISEASES PRESENTING GASTRIC SYMPTOMS.

*The Eyes.*—The subject is familiar to all. Who has not seen correction of errors of refraction relieve so-called "bilious attacks," periodical vomiting, anorexia, indigestion and other gastric symptoms? The cure of grave organic ocular defects relieves similar gastric conditions.

*The Ear.*—The vomiting of middle-ear disease, of disease of the attic and of auditory-nerve affections is well known.

*The Nose and Throat.*—Morning nausea, loss of appetite and chronic dyspepsia secondary to the pharyngi-

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



tis of smokers, occurs to all. The gastric disorders of adenoid disease must also be emphasized.

*Nervous System.*—I can refer only to the gastric crises of locomotor ataxia; the gastric symptoms of bulbar palsy; the occurrence of vomiting, often for six hours before an attack of apoplexy;<sup>1</sup> the vomiting of meningitis, tubercular and cerebrospinal; the gastric symptoms of brain tumor, and those which precede a fully-developed epilepsy. The call can not be too loud to this latter ailment. Such incidents as periodical attacks of indigestion or of vomiting may precede or attend obscure forms of epilepsy. Patients with the peculiar chewing and rumination in that form of epilepsy to which Spiller has recently called attention are usually treated for stomach disorder. The nocturnal and intermittent character of the attacks, the clinical course and the occasional occurrence of a true attack, with other suggestive symptoms, such as the aura, somnolence and forgetfulness of the event, suggest the true nature of the affection. In children, the occurrence of gastric symptoms, admittedly not of local origin, must demand an examination of the nervous system.

*The Cardiovascular System.*—The acute affections may have epigastric pain and vomiting as sole expressions of the disorder.<sup>2</sup> More pronounced and continuous are the gastric symptoms, often dominating the picture, in failure of compensation. It is not infrequent that dyspnea, palpitation, cardiac pain or dropsy are absent, and yet dilatation of the heart and secondary portal congestion are present and cause gastric symptoms, as pain, vomiting, hemorrhage, loss of appetite, and symptoms of catarrhal gastritis, as the only symptoms of the heart disease. Many patients with dyspepsia and gastritis may be cured with digitalis.

*The Lungs.*—Apex pneumonia (pneumococcus infection) and tuberculosis are examples; and, in children with severe vomiting, the possibility of the former infection should be borne in mind.

*The Liver.*—Organic disease and cholelithiasis have their gastric symptoms.

*The Intestines and Appendix.*—The recent literature is replete with information and common experience leads to an investigation of these structures in acute and chronic gastric disorders.

*The Genitourinary Tract.*—The gastric manifestations are well known. A renal calculus, an acute or chronic nephritis, may have vomiting, nausea, anorexia or the gastric neuroses as most marked symptoms. Is not uremia often attended by gastric symptoms only?

*The Blood.*—Iron cures many, many patients with gastric disorders. The perverted appetite and the nausea and vomiting of chlorosis are familiar.

*The Infections.*—I shall only call attention to the importance of the possible occurrence of gastric symptoms alone in the early periods of the eruptive fevers. Time compels exclusion of uncinariasis, malaria and other infections, and admits of only a word regarding tuberculosis, gonorrhea and syphilis. Tuberculosis must never be excluded as a possible factor in the production of gastric symptoms. Who has not seen advanced phthisis treated in the early periods of disease for gastric symptoms alone? In young adults, the temperature alone may guide us to a conclusion.<sup>3</sup> The causeless anorexia, the dyspepsia, the morning nausea,

and the vomiting may attend early tuberculosis and precede pulmonary symptoms and physical signs. Syphilis is often marked by gastric symptoms, independently of the medication which often causes them. Gonorrhea requires more than a passing notice. In late adult and in early middle age, toxic gastric symptoms occur and continue unrelieved until, if possible, the deep urethral infection or prostatic infection is cured. The history and the urine may disclose the cause.

*The Intoxications.*—To the toxemia of the infections we must add those due to tobacco and to lead, as in the achylia of plumbic gastritis, as pointed out by Sailer. The objective signs of lead poisoning may be most obscure. Exophthalmic goiter gives rise to pronounced symptoms of gastric character alone, the other phenomena being in abeyance. Protracted vomiting may be of such origin and require careful examination to disclose the source. The presence of pus somewhere will give rise to gastric symptoms, and I have long taught that anorexia is often due to internal suppuration.<sup>4</sup> Addison's disease may cause toxic gastric symptoms while uremia is a classical cause.

#### NON-GASTRIC CONDITIONS ATTENDED BY GASTRIC SYMPTOMS.

To this division belong that very large class of cases to which the term gastric neurosis is applied. Gastric symptoms may be the only manifestation of hysteria and of neurasthenia. The gastric neuroses are the most difficult to understand. Unfortunately time forbids any complete discussion.

#### ACUTE GASTRIC MANIFESTATIONS SIMULATING PRIMARY ORGANIC GASTRIC DISEASES OR ACUTE PHASES THEREOF.

In these days of surgical alertness it must be borne in mind that acute surgical affections of the stomach may be simulated by a symptom-complex caused by disease elsewhere.

*Cirrhosis of the Liver.*—Gastric incidents in its course, as pain, vomiting and hemorrhage, acute in onset, may simulate gastric ulcer, with or without perforation.

*Uremia.*—Epigastric pain, vomiting, hemorrhage and collapse may occur, simulating gastric ulcer and perforation.

*Locomotor Ataxia.*—The gastric crises simulate acute gastric lesions and may appear like ulcer.

*Gastric Neuroses.*—The gastric neuroses of hysteria, neurasthenia and epilepsy simulate ulcer at times.

#### DIAGNOSIS.

Non-gastric diseases with gastric symptoms can only be recognized after an examination of all the organs of the body and a study of all excretions and secretions. The clinical course and the historical features are essential. The symptoms bear more or less relation to physiologic or pathologic fluctuations of the primary source of the disease, as of the eye, heart, kidneys, etc., and are not of the constancy of organic disease of the stomach. The gastric neuroses are inconstant as to character, irregular as to manifestation, both subjective and objective, and have a relation to emotional or psychic influences which require all the skill, genius and patience of the practitioner accurately to disclose.

1. "Some Clinical Aspects of Vomiting," Univ. Medical Magazine, Nov. 1889. Read before Amer. Med. Assoc., Newport, 1889.

2. "Abdominal Pain," Amer. Med., March, 26, 1904. Read before N. Y. State Med. Assoc., Albany, Jan. 26-28, 1904.

3. "Gastric Symptoms of Tuberculosis." J. H. Musser.

4. "The Gastric Disorders of Pulmonary Tuberculosis," University Medical Magazine, July, 1891.



## FOOD STAGNATION FROM ALL CAUSES.\*

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When the stomach fails to empty itself within a reasonable time after the taking of food, this condition is termed food stagnation. It differs in degree, depending, in part, on the character of the food taken, still more on the morbid state giving rise to the condition. Semi-liquid or pultaceous food should leave the stomach in four or five hours, and if it is retained longer there is a certain degree of stagnation. An ordinary meal composed of a variety of foods is the proper test for food stagnation. With this meal the stomach should be emptied, according to Riegel, within seven hours, and the presence of contents beyond that time is evidence of food stagnation. There are conditions, however, in which the liquid food is retained for a much longer period than five hours, and solid foods are retained for twenty-four hours or longer. Under such circumstances, we have to deal with more serious cases.

## ETIOLOGY.

Food stagnation is one of the most important of the gastric disturbances. It invariably gives rise to symptoms both local and general. Locally, the patient experiences distress and a sense of weight, sometimes pain, together with eructations of gas, regurgitation of the stomach contents, and often vomiting. In certain cases the stomach behaves in a lifeless, inactive manner; in other cases it takes on violent movements which the patient may feel and which the observer may perceive through the abdominal parietes. Constitutionally, there are usually found evidences of autointoxication and starvation. These symptoms vary widely in different cases, depending on the degree of stagnation and on the character of the fermentation that may be present. The nature of food stagnation differs, as does its cause, and many conditions may lead to it. Cases may be roughly divided into two classes: First, those in which stagnation results from depression of the motor function of the stomach, without the presence of any actual obstruction. The stomach walls are simply too feeble to overcome the slight retention, or holding back, exercised normally by the pylorus. Second, those in which there is actual obstruction to the outflow of stomach contents, regardless of the kinetic energy of the gastric walls. There are certain cases in which we have to deal both with atony of the gastric walls and with obstruction at the pylorus. More often these cases begin with obstruction and the atony appears as a secondary matter.

Food stagnation is often associated with dilatation of the stomach, but on the other hand, there may be a large stomach without stagnation, and there may be very marked stagnation without gastrectasis. It is for this reason that Einhorn prefers to use the term ischochymia in the description of many cases formerly classified as ectasy, and it is this view which has led to the discussion of food stagnation as an entity; whereas, it was in former times almost invariably spoken of as an attribute of dilatation of the stomach.

Of the cases of the first class, anything which leads to the weakening of the muscular layer of the stomach may act as a cause. It, therefore, follows some cases of gastritis when the inflammation has invaded the muscle layers. It results from degeneration of the gastric mus-

cle from any cause, and, therefore, occurs in grave anemias, inanition, severe intoxications and infections. It occurs in cases of great depression, more often when this is prolonged, sometimes when it is brief, but acute, as in surgical shock, even though the stomach itself is not involved in trauma, or operation. I have known it to occur in acute illnesses without previous history of stomach trouble. Occasionally it appears to be congenital, and there are instances which seem to be hereditary and in which it occurs in a number of individuals of the same family. It may follow from adhesions to the stomach, thus making expulsive efforts ineffectual. It may result from imperfect innervation, and this may occur in consequence of general or local nervous depression. It most often results from overtaxation of the stomach; for instance, from eating or drinking excessively, especially the former, or from eating very coarse foods. This cause is naturally most operative when the functions of the stomach are depressed and systemic energy is on a low plane. The condition is, therefore, not infrequently induced by feeding abundantly too coarse food to convalescents. I have known it, for instance, to occur from overfeeding during or after typhoid fever. I knew a fatal case which followed the taking of a Christmas dinner by a convalescent from pneumonia. In every-day practice we most often find this type of food stagnation developing in people of lowered energy, such as is produced by overwork, mental or physical, excessive venery, etc., who at the same time are indiscreet in the quantity and quality of food taken.

As to the second class of causes of food stagnation, the most common is cicatricial pyloric stenosis, secondary to gastric ulcer. This sometimes arises from healed and sometimes from active ulcer, and chronic irritation or inflammation at the pylorus occasionally leads to the same result without the intervention of ulcer. There are a few instances in which we have to deal with benign hypertrophy of the pylorus with exaggerated action of the pyloric sphincter, giving rise to a palpable tumor and to disharmony between the detrusor and the sphincter apparatus of the stomach, the nature of which hypertrophy is not well understood. In some there is a congenital hypertrophy of the pylorus which may lead to fatal vomiting in the new-born, or later in life may develop into incoercible vomiting. A frequent form of obstruction is found in pyloric spasm, the result of oversensibility of the pylorus, either from erosions of the mucosa or simply from nervous hyperesthesia, more often associated with hypersecretion and hyperacidity of the gastric juice. In other words, the condition is found in gastrosuccorhea and in hyperchlorhydria. The trouble may result from perigastritis with contracting adhesions, from band-like adhesions constricting the pylorus or duodenum, or from pressure exercised by tumors, or other processes, on these parts. The obstruction may occur some distance below the pylorus, thus giving rise to stagnation of the duodenal contents, as well as the contents of the stomach. Cancer of the stomach is a common cause of the conditions. Before a palpable tumor appears, there may occur spasm of the pylorus arising from its irritability. This may at first be transient in character, thus misleading the clinician. Gastropsis, with the sharp bend in the pylorus or duodenum, is sometimes a cause, but its actual occurrence must be very rare.

## MORBID ANATOMY.

The morbid anatomy of motor insufficiency of the stomach varies according to the nature of the case. In

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the early stages of gastric atony no change will be found in the structure. In advanced cases the stomach is likely to be found dilated, with more or less thinning of and, perhaps, fatty or fibroid degeneration of the muscle walls. The mucous membrane frequently shows the evidence of chronic gastric catarrh, with fatty or fibroid changes. When the stomach dilates, it is not always in the same direction, but is in the line of least resistance. More often the enlargement occurs around the greater curvature and fundus, although it may be at the antrum pylori or even upward toward the diaphragm.

#### DIAGNOSIS.

The diagnosis of stagnation is not difficult; it may be suspected when patients complain of eructations of food taken a long time previously. It can be demonstrated only by the use of the stomach tube. If the greater part of an Ewald test breakfast is found present three hours after eating, a moderate insufficiency is present, or if the stomach is not emptied seven hours after a hearty mixed meal the same conclusion is reached. The degree of food stagnation may be inferred from the amount of food found present; that is to say, if the stomach is found nearly empty, the insufficiency is small in degree; if, however, the greater part of the meal remains, the extent of the disability should be measured accordingly.

It is a good plan to examine the stomach in the morning, fasting. If the usual evening meal has been taken, and the stomach is found empty in the morning, the stagnation is not great. In most cases, in addition to the estimation of the motor insufficiency of the stomach, one passes to an examination to determine the size and position of the organ and to ascertain the state of the gastric chemistry. These features, while having an important bearing on the individual case, are not necessarily related to the food stagnation. Nevertheless, every case in which food stagnation occurs should have the most complete examination, not only in reference to the stomach, but to the organism as a whole. There is a very close relation between the systemic and gastric conditions.

#### TREATMENT.

The treatment of food stagnation or motor insufficiency is a broad subject and can not be fully discussed at this time. There are some principles which are so important that they should receive attention to the exclusion of details. In the first place it must be remembered that gastric atony may be but a part of a general atony, and gastric weakness but a part of general weakness. On the other hand, there are cases in which the organism seems strong, but in which the motor power of the stomach is insufficient, and this without any unusual obstruction. Whether the atony is limited to the stomach or but an expression of the general debility, it is always of the utmost importance to manage the organism as a whole so as to increase energy and prevent its dissipation. In those cases where the stomach seems alone involved in the muscular weakness, local attention is, of course, especially demanded. The motor power may be assisted by certain mechanical measures, especially by really skillful massage over the region of the stomach, by trunk rotation and flexion, and by the alternate hot and cold douche over the epigastrium, and by external and internal faradization. The alternate hot and cold douching through the stomach tube has seemed sometimes to do good. As for drugs, undoubtedly benefit follows the use of the simple carminatives, bitter infusions, and temporarily the diffusible stimulants. These measures must be modified according to whatever other

condition may be associated with the motor insufficiency; as, for instance, catarrhal gastritis, carcinoma, ulcer, ptosis, etc. It should here be reiterated that failure or success depends more on general management of the patient, on proper rest, exercise, recreation, diet, mental state, etc., than on the mere local treatment of the stomach. Of course, both must receive consideration.

Surgery has little place in this form of motor insufficiency. As for those cases depending on obstruction, surgical intervention is often of the utmost value; yet I can not agree with the dictum that all such cases are suitable to surgical relief. Where it depends on spasm of the pylorus from overirritability of tissue, whether from hyperchlorhydria, hyperesthesia, or simple erosion of the pyloric mucosa, surgery ought not to be considered; yet I have known these cases sent to the surgeon. There is no artificial drainage of the stomach which compares in efficiency with the normal. The proper treatment consists in lowering the acidity of the gastric secretions, soothing the gastric mucosa and the selection of an unstimulating liquid or very soft diet which is free from all irritating particles. Lavage followed by soothing lavements of the mucous membrane is of great assistance. I have seen cases, which at first suggested serious organic disease of the pylorus, improve promptly under this treatment and know that the patients have continued without disturbance for years afterward. When there is ulcer at the pylorus, the question is more difficult. The present tendency, of course, is to operate at once, and ulcer of the pylorus is an ugly affair; yet in some cases in which the ulcer is small and yields readily to treatment it is probably wise to follow the conservative method, keeping the case for a while under observation before resorting to a gastroenterostomy. We are beginning to find out that a stomach on which a gastroenterostomy has been performed is by no manner of means as good as a normal stomach. If, however, the ulcer continues to give trouble, if pain and spasm frequently recur, I would recommend pyloroplasty (if the ulcer can be safely excised), otherwise gastroenterostomy. In benign hypertrophy of the pylorus without ulcer, I advise operation, preferably pyloroplasty. When there is cancer of the pylorus, excision followed by gastroenterostomy is probably, on the whole, the wiser course. If there is extensive involvement, gastroenterostomy alone often allows a year or more of comparative comfort to the patient. I have seen some brilliant results, but more depressing failures. Of the latter, it is only fair to say that by the operation there is little to be lost and possibly a year to be gained. In atonic cases, especially when associated with ptosis, some benefit follows from change of posture; and at times Rovsing's or other operations that raise the distended fundus, thus enabling the organ to drain, are of use.

Something should be said as to vomiting in this condition. It is often a most conspicuous symptom, but varies much in its characteristics in different cases which appear to be of the same kind. Occasionally vomiting occurs only when the stomach is overdistended; at other times there are periods of great gastric irritability, with retching, even when the stomach is empty. In obstructive cases the nausea and vomiting often depend on yeast fermentation, and, with the exception of lavage, nothing gives so much relief as salicylic acid, which overcomes the yeast fermentation. Even when lavage is indicated, the relief afforded is greatly enhanced by the addition of this drug.

In closing this question of treatment, may I reiterate



the feeling, which grows stronger the wider the experience, that it is impossible to expect the best results in dealing with this, as well as other stomach diseases, from purely special methods of treatment. The debt which we owe to those who have specialized in gastric diseases is immense, but the long-continued study of cases shows that, while we should avail ourselves of the art of the specialist, we can not dispense with the wide knowledge of general pathology and therapeutics which is the possession of the high-class general practitioner.

#### DISCUSSION.

ON PAPERS OF DRS. BILLINGS, DOCK, MUSSER AND STOCKTON.

DR. RICHARD C. CABOT, Boston, asked Dr. Stockton on what grounds he would be willing to state, in any case, that there is an abnormal amount of mucus in the stomach contents. He also asked Dr. Musser if he could give any figures showing what proportion of all cases coming to him with stomach symptoms really have stomach disease.

DR. G. W. McCASKEY, Fort Wayne, Ind., declared that to say that in a certain sense the disorders of the stomach are fundamentally more important than those of other organs of the body is to utter the merest platitude. Gastric disease frequently stands in causal relationship to a large group of diseases, renal disease being among them. It is true that perhaps in the majority of such cases the intestines are the organs directly at fault; but if one traces the causes further back the ultimate cause will frequently be found to arise in gastric disease. Dr. McCaskey believes this to be true in a very large proportion of the cases. Abnormal gastric conditions may lead to imperfect intestinal function. He emphasized in particular the necessity of a thorough comprehension of the physiology of the stomach before attempting to understand its diseases. This is not peculiar to the stomach, but in no other organ is it more fittingly illustrated. If, for instance, certain well-known facts regarding the physiology of the stomach had been taken into consideration, the dictum that the presence of hydrochloric acid excluded cancer would never have been made. There can be advanced cases of cancer of the pylorus (in which there are no acid-forming cells) without any diminution of the secretion of hydrochloric acid; in fact, it is liable to be increased at first as a result of the stimulation of the organ by the neoplasm. Many such cases have been reported, and Dr. McCaskey added one to the list within the last few months.\* It seems to him that exaggerated conclusions have been drawn during the past few years in papers which have appeared on the subject of food stagnation. In one, for instance, an attempt was made to set the limit of twelve hours beyond which limit if food was found it indicated organic disease, in which operative interference was to be considered. In Dr. McCaskey's opinion much severer grades of gastric myasthenia are amenable to medical treatment. He is in accord with the conservative position taken by Dr. Stockton. Dr. McCaskey has found in a large proportion of the cases that intragastric cold douches do not agree with the patients. He does not know precisely why, but possibly it is because of the close proximity of the stomach to the solar plexus, or perhaps some peculiar susceptibility of the nervous organization of the stomach to the depressing action of cold. The importance of stomach analyses appears to him to be very great, and he endorsed and emphasized practically all that Dr. Dock has said. The recent attempts to belittle gastric chemistry are not well founded and are greatly to be deplored. He differed with Dr. Dock in the use of the Gunsberg reagent as a qualitative test for free HCl. He considers a 1 per cent. solution of resorcin much preferable because of its greater stability. Its delicacy is precisely the same, but no greater than that of the Guenzburg reagent. The questions of general nutrition discussed by Dr. Billings are of vital importance from the practical quite as much as the theoretical point of view. The problems of proteid metabolism are exceedingly difficult, and as yet are impossible of full solution. It seems quite probable that the existing dietetic standard with relation to proteid intake is somewhat too high, but just how

much does not seem to Dr. McCaskey to be established. There is no doubt, however, that the nitrogen balance can be maintained and the organism kept in good working condition on much less than that indicated by the Voit standard, but it seems that we are not at present justified in accepting a standard less than 80 grams of proteid per diem for the average individual of about 150 pounds weight. The investigations of Richardson and Folin are suggestive in the highest degree, even if their conclusions are not final, as it seems to Dr. McCaskey that the time over which the experiments ranged, even though of several months' duration, is not long enough to give final results. Even though body weight is maintained at a slightly lower level than before, and the working capacity of the individual remains up to the average, there are still other questions unanswered: the resistive power, for instance, of the individual to morbid influences; and the problem may even go further and be racial in its character. One fact should be clearly emphasized, and that is that the proteid intake should not vary with muscular exercise to the same extent as the carbohydrates. The latter are the force-producing, dynamic portion of the diet, and the quantity should rise and fall with the amount of muscular work done. The laboring man needs more starch and sugar and fat, but not necessarily a great increase in meat or other proteid foods.

DR. MORRIS MENGES, New York, said that the average general practitioners do not make extensive use of the valuable means of diagnosis at their disposal. Again, when such attempts are made, often the method is at fault, and especially is this true when an attempt is made to pass the stomach tube. Very often failure results because of the nature of the tube; the majority of these tubes are soft, and really can not be used by any one, and are often provided with a bulbous funnel at the ends. Another point is the awkwardness of the manipulator, possibly from lack of practice. As a result of all this, the general practitioner believes that these various methods of diagnosis and analyses of stomach contents, are too complex, though they are even simpler than the methods employed for urinary analyses. One need not bother with percentages; one only requires average figures. We must know relatively the presence or absence of free hydrochloric acid, etc. Another point Dr. Menges believes to be of importance is that what little of the stomach contents is found on the end of the tube can be utilized for diagnosis; no matter how small, strips of testing paper can be used by applying them to the end of this tube, and a complete analysis can be made. The futility of making one analysis should be emphasized. If we are dealing with organic disease the variations presented can only be appreciated by those who have worked with these tests; the use of one test breakfast will not do. It is positively absurd, he said, to depend on the results of one examination. By gross examinations of specimens one can determine a great deal in the vast majority of clinical cases.

DR. S. P. BLACK, Pasadena, called attention to an important point brought out by Dr. Billings, i. e., the question of proper mastication. We all know that mastication is improperly performed by all of us; if more time were devoted to proper mastication there would be far less bolting of food. When exercise is taken a meat diet is needed. It is necessary that mastication should be so complete that the gastric and intestinal juices may gain ready access to all particles of the food. If mastication is properly and thoroughly done, the appetite can be satisfied with a less amount of food. More that is taken in can be utilized and less will be excreted. The amount of food taken depends on so many conditions that it is difficult to state exactly the amount necessary for each. This varies with the period of life and many other factors. For instance, an old man can not take the same amount of food that a younger man can. It should be borne in mind that the majority of cases of chronic rheumatism are due to a toxemia from the decomposition of proteids. The excess of proteid material appears not only in the form of urea and other products, but also as ptomaines which when absorbed give rise to chronic joint affections. The relation, therefore, between proteid intake and mastication can readily be seen and its importance recognized. Dr. Black quoted Dr. Stengel as saying that there exists a feeling among the profession that the examination of the secre-

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tion of the stomach is becoming of less and less importance and that an examination to determine the motor function of this organ is of prime importance. The papers read in this symposium place more reliance on the physiology of the stomach and a study of the stomach secretion. The laboratory is essential for a proper understanding of abnormal gastric diseases.

DR. JOSEPH L. MILLER, Chicago, asked what results Dr. Dock has had with Weber's test for blood in the stomach contents and what value he places on it. While it is true, Dr. Miller said, that in cases in which hydrochloric acid is present it is not absolutely necessary to test for pepsin, still in those cases in which there is an absence of hydrochloric acid it is necessary to determine whether pepsin is absent as well. He asked Dr. Dock if he resorts to this test. Dr. Miller believes this test should be in more general use. He believes that we should simplify exact qualitative determination more than we at present do. On the other hand, he also believes that a quantitative determination gives very valuable information. With Ewald's aspirator it is very easy to obtain all the contents of the stomach, and the use of this instrument simplifies the methods very much. When sarcinae are associated with a marked increase in the hydrochloric acid, it is important as indicating a benign stenosis of the pylorus.

DR. J. M. ANDERS, Philadelphia, said that it is a well established fact that physiology has a direct bearing on practice of medicine and is a most valuable aid in recognizing and treating diseased conditions. The only defect in this symposium is that the physiology of digestion has not been included. The distribution of copies of papers such as presented by Dr. Billings would have a decided effect on medical progress in America. What Dr. Billings has given us is beyond dispute, and these things are most useful to the practicing physician. Dr. Anders was glad to hear him mention and emphasize the fact that the average amount of food ingested is at least twice as much as required to maintain complete physiologic efficiency. The minimum amount of alimentation necessary under the many varying conditions of life, including the ages of patients, is as yet imperfectly understood. The physician should be able, instead of as at present estimating empirically how much food is necessary, to determine this scientifically. The medical profession certainly owes much to the observations of Chittenden, Voit, Atwater and others. The determination of the amount of creatinin excreted daily is sufficient for the determination of the nitrogen balance of the body. Dr. Anders believes that up to the present time, and in the future as well, the most important advances will be those made as the result of analyses of food ingested and the urine, the feces, etc., excreted. In addition, it is necessary to take into consideration other factors, such as the influence of exercise, sleep and baths. These problems of nutrition seem somewhat complex, more than certain observers would have us believe. Dr. Musser has presented a long list of factors in which gastric symptoms are present, but Dr. Anders would be glad to hear more regarding acute symptoms that occur in chronic affections and which are apt to mislead us. Recently Dr. Anders saw a patient suffering from acute articular rheumatism, in whom the joint condition was held in abeyance with the distension of the stomach. It was thought that gastric trouble had developed, but the physical examination revealed the presence of a pericarditis. He has seen several similar instances with pain in the epigastrium. He was very glad to hear Dr. Dock emphasize the variability which resulted from an examination of the gastric contents. It should be borne in mind, however, that no organic affection of the stomach exists, but that it presents certain variabilities, although such changes are by no means pronounced in all instances.

DR. F. C. SHATTUCK, Boston, declared that there is too much theory regarding this matter. He believes that medical men are in danger of running after false gods. There are, he believes, but two conditions in connection with ulcer which call for surgery. The first is perforation; the other, obstinate cicatricial contraction of the pylorus.

DR. JAMES J. WALSH, New York, said that in stomach medication the nostrums have even a larger field than in any other disease. Judging from the number of varying remedies for

stomach symptoms of all kinds that are fairly pushed on the doctor by the advertising agents and the large amount of printed matter with regard to them that comes to his table, there must be an immense amount of medicine for stomach symptoms prescribed in this country. All sorts of ferments have been introduced and all the vegetable kingdom has been rilled of precious treasures in order to provide new stomachics. The more distant the country and the more unusual the plant from which they come the more grandiloquent the advertising and the greater the promise of efficiency. Josh Billings once said that it is not so much the ignorance of mankind that makes them ridiculous as the knowing so many things that ain't so, and there is no doubt that with regard to our knowledge of the stomach this is truer than with regard to almost any other department of medicine. Each individual is absolutely a law unto himself as regards his tastes and his capacity for digesting various articles. The distinguished Russian physiologist, Pawlow, has demonstrated that in animals at least a special kind of gastric juice is secreted for each kind of food that the animal takes. If to this be added the individual tastes in human beings and the psychic influence on the stomach, then the problem of stomach digestion becomes the most complex we know. Fortunately physicians do not have to bother much about the variations in the chemism of the stomach. So long as the stomach will pass on the food that is furnished it digestion will go on and will maintain nutrition. In cases of gastric cancer, for which the whole organ is removed, it is a common experience that the patients gain as much as 30 or 40 pounds in weight within a few months after the operation, in spite of the complete removal of their stomachs. This, however, is only a confirmation of what was known otherwise as the result of stomach investigation. Not a few persons suffer from achylia gastrica, that is, a condition in which there is no secretion of gastric juice in the stomach and no process of digestion carried on there, yet suffer very little from digestive symptoms and do not lose in weight. In more recent times the practice of jejunostomy has demonstrated the same thing. When there is a cancer of the pylorus and the patient has lost seriously in weight, digestion proceeds very happily and nutrition begins at once to improve when an opening is made by which food is allowed to pass on immediately to the intestines. Gastric motility, then, is more important than gastric chemism. If physicians can only switch the food past the stomach, the digestive system will continue its work. As a matter of fact, most of the tonics that do good in digestive disturbances influence the motility of the stomach rather than its secretory activity. That is why strychnin is so useful. The most serious difficulty that hampers stomach motility is the lack of proper mastication. Meats must be chewed, but still more must vegetables be chewed. It is the vegetable-eating animals that ruminate. It is in this line and not in trying to help gastric chemism and the ferments that therapeutics are effective.

DR. JOHN A. LICHTY, Pittsburg, believes that gastric atony due to organic obstruction is the crucial point in this symposium and that it will assume the same position in the next few years in the deliberations of this section that appendicitis did some years ago. After a rather extensive experience in the treatment of these conditions, he has found that in many cases he might have easily dispensed with mechanical devices, such as intragastric electricity, massage and lavage. Simply advising the patient to masticate his food more thoroughly and to refrain from drinking at meals and for an hour or two after seemed to be all that is necessary in many cases. Food not properly masticated must be ground up in the pyloric end of the stomach, and such extra work is likely to produce atony, erosion, ulceration or other gastric disturbances. Dr. Lichty did not mean to say that we should not use these agents in selected cases, for they are often absolutely essential to bring about a cure. In the treatment of gastric atony due to organic obstruction, the internist and surgeon must come together and understand each other. The earlier this is done the better for the patient's welfare. With the present methods of diagnosis physicians are not yet able to make a definite diagnosis in the earlier stages of some of the most important gastric lesions. The effect of rational treatment and the



course of disease must be observed at times before a diagnosis can be made. Now and then it may be necessary to do an exploratory operation before a diagnosis can be made. Such an operation is not always a serious undertaking and may frequently reveal important conditions. Dr. Lichty recently saw a case in which he was positive that there was a gastric ulcer; the patient suddenly had an attack of jaundice and then he was positive that he had to deal with a case of obstruction of the gall ducts. There was found at operation a band of adhesion which interfered with the pyloric entrance and also with the gall duct. No amount of treatment would have relieved this patient, though she had received treatment from different physicians for a year or more for gastric ulcer and for gallstones. The tendency of the internist too often is to be satisfied to have patients in a chronic condition come to the office day after day until they are entirely dissatisfied and discouraged and ready to desert to the quack. There is still too wide a space between the internist and the surgeon, and in this space the quack and unscrupulous doctor find a rich harvest. The internist and surgeon must co-operate.

DR. C. M. COOPER, San Francisco, said that Dr. Billings' paper should have been read before a conjoined section, inasmuch as the subject matter is unwisely neglected and its importance to all branches is equally great. It is not necessary to tell the patient to limit the intake, as the muscular movements associated with thorough chewing plus the better digestion of the food chewed induce a feeling of satisfaction which in itself tends to diminish the amount eaten. Further, it must be remembered that a thorough clinical examination should come before a chemical analysis of the stomach contents. On the Pacific slope aneurism is so common—abdominal aneurism as well as thoracic—that such an inverted order of examination might lead to serious trouble. Moreover, frequent chemical examinations are just as important as frequent stomach-content analyses. If prior to the passing of the stomach tube the patient suck a strong English peppermint the throat is partially anesthetized and the proceeding is rendered less difficult in sensitive patients. Though, of course, periodic gastric crises may occur in locomotor ataxia and be due to that alone, sometimes there is a local trouble underlying or complicating the nerve storms, as in two cases which Dr. Cooper recently saw. In one there was stenosis of the pylorus; in the other, a band binding down the first part of the duodenum was demonstrated by operation. The great majority of physicians refer their gastric patients too late to the surgeons and terminal infections occur. Patients should be referred back to the physician; otherwise the primary constitutional tendencies which have led to secondary lesions necessitating surgical interference will often remain uncorrected.

DR. NORMAN BRIDGE, Los Angeles, Cal., said that one important point in the physiology of the stomach has been omitted in this discussion, and that if physicians could keep this point in mind it would simplify the subject very much. The stomach is not useful in absorption. The important thing regarding this organ is its motility, and the purpose of the stomach seemed to be to act as a reservoir to receive and to retain food for a variable period of time and to deliver it slowly to the intestine. The stomach could be left out of consideration for the business of digestion. If we could get the food out of the esophagus, through the pylorus, it then would be possible sufficiently to nourish patients. The absorption of water even does not take place to any extent from the stomach. It is a convenience to mankind to take food into the stomach at certain intervals and to go on about the business of life. If one takes too much food and absorbs too much, it is the intestines that do it and not the stomach at all. Dr. Bridge thinks that it can be shown that the stomach may directly cause such systemic diseases as Dr. McCaskey has referred to.

DR. FRANK BILLINGS, Chicago, stated that carbohydrates and fats furnish the animal body fuel. The proteid food furnishes the defect due to waste of the muscular system and other organs which perform the work for the body. The amount of carbohydrates and fats necessary for fuel for an adult will depend on the character of the work. A laboring man will require more than a man who leads a sedentary life. The amount of proteid necessary to repair the waste from muscular exertion,

etc., has been found to be only about one-half that which has been advocated for years in the standard dietaries. With this one-half the amount of proteids a nitrogenous balance may be maintained. There are fanatics on all subjects, and in this particular one those who advocate a very low proteid intake and over-mastication, as compared with ordinary chewing of food, may do things which appear ridiculous. Nevertheless, the action of these men and what has been written on the extreme side of the question by them has brought the attention of the public to the subject and in this way has been of great benefit. The lay public and many of the medical profession believe that all strength, nutrition and force comes from the proteids and especially from the albumin of meat. The fact is that the proteid is simply a tissue builder, and growing individuals, therefore, may require a considerable amount of albumin, but when the growth is once attained only that amount of proteid will be necessary to maintain good health and strength which will furnish food to take the place of the waste produced by muscular and other bodily activities. The amount of proteid necessary for each individual may differ, but only that amount will be required which will maintain a nitrogenous balance, as evinced by the nitrogenous output in the urine, feces, etc. Dr. Billings mentioned an error which may occur from the use of bread in a test meal. Sponge bread so used, even after twenty-four or more hours old, will show yeast cells in the stomach contents and may, therefore, be misinterpreted as indicating stasis of the stomach contents.

DR. GEORGE DOCK, Ann Arbor, said that he considers visible masses of mucus in the stomach contents as abnormal, but one must be sure this mucus does not come from the respiratory tract or from the mouth or be the result of awkward manipulation of the tube. On the other hand, a small amount of mucus which is visible may be present, and yet one can not say from this alone that the patient has chronic gastritis. Though the physician can not draw the line anywhere, Dr. Dock would say that in general more than from 3 to 5 c.c. is abnormal. He agreed that resorcin is an excellent test, but he likes Günsburg's better. He also agreed that not too much time should be spent in working with the decinormal solutions, etc.; but, on the other hand, a physician should have had practice with these before doing more rapid work. The examination of the vomitus he believes to be very important, but he sounded a note of warning against the use of this method as a substitute for the tube; it is a dangerous one. A patient can vomit a large quantity and yet the stomach contain still more important material. Dr. Dock has been using tests for occult blood in the laboratory, and with satisfaction. He has also looked for occult blood in the stools after excluding any bleeding points in the rectal mucosa. Delicate reactions for blood in stomach contents are easy, but one may meet with many instances in which there is no distinct lesion of the mucous membrane. He agreed with Dr. Miller regarding the test for pepsin and also for rennin. They are useful, but one can very often get along without either of them. The presence of sarcinæ gives valuable information in many ways. Sarcinæ are rarely found in malignant disease of the stomach. If found in large quantities it is sufficient to say that the patient has not malignant stomach disease. On the other hand, yeast is often found in gastric cancer when hydrochloric acid is still present. He is not so enthusiastic with regard to the surgery of the stomach as Dr. Walsh. He agreed that cancer should be operated on if possible. In cases of ulcer, also, he has had patients operated on and with good results. But doing a gastroenterostomy in case of ulcer does not make the patient normal. In a large number of patients, 16 or 17, who have been reported as being operated on for gastric ulcer, peptic jejunal ulcers have developed which were even more dangerous than the original gastric ulcer. This ulcer tendency can not be cured by operation, and so it is with functional disease and stagnation of food; it has not been demonstrated in cases of gastroenterostomy or pyloroplasty that the stomach is as good as before. Therefore, he thinks, physicians should take the middle ground between what Dr. Walsh has given us and those who take the gloomy aspect or conservative aspect in regard to this subject.

DR. CHARLES G. STOCKTON, Buffalo, thinks that lack of success is often due to the way in which cold is employed. If too



cold, or if too much force is employed, depression is likely to follow. Sometimes benefit is to be obtained by alternating the cold with the hot douche. He also emphasized what Dr. Manges said regarding the importance of selecting a proper stomach tube. This is a point that is often overlooked. He also agreed with Dr. Lichty that in the treatment of stagnation, which depends on atony rather than on obstruction, much can be accomplished in attention to mastication and the withholding of liquids at meals. In any case of atony of the stomach reaching to stagnation, without obstruction, one should not forget what can be accomplished through the general management of the case and general measures. He advised physicians not to overlook general innervation. On the other hand, he said one often fails to obtain success because of overlooking local treatment. He disagreed with Dr. Bridge that the stomach is practically unnecessary. Physicians are too prone to say that certain organs are unnecessary to-day. He does not believe that one can get along without the stomach, even if anastomosis is practicable. In some cases of achylia gastrica the stomach will empty itself quickly, within ten minutes after a meal is taken, thus showing an enormous motor activity. This state may be compared to that of the patient without a stomach. Yet these cases of achylia gastrica have general and local symptoms and the victims are not well people.

## A CASE OF HEART GUMMATA, WITH SUDDEN DEATH.\*

F. GOLDFRANK, M.D.

NEW YORK.

On Jan. 10, 1905, Professor Dittrich, head of the Department of Legal Medicine in the German University in Prague, performed an autopsy on a woman aged 25, who had died suddenly during the night of January 8. The report from the police department stated merely that the woman had "heart disease" for some time. The heart revealed such an interesting condition that Professor Dittrich at once sent it to the pathologic institute for further study.

### AUTOPSY REPORT.

The findings at the autopsy, according to the data kindly furnished by Professor Dittrich, were, briefly, as follows:

*General Appearance.*—The body was of medium height, stout but well built and well nourished. The brain was normal, somewhat anemic. The lungs were perfectly normal, no sign of tuberculosis being found; some of the bronchial lymph glands, however, showed the presence of calcified nodules. The liver and spleen were hyperemic, otherwise normal. The gastrointestinal tract, pancreas, adrenals, and the bones were normal.

*Kidneys.*—The right kidney likewise showed no pathologic changes. The left kidney, which was received with the heart, presented two deep cicatricial depressions. One of these embraced the posterior surface and outer border near the lower pole, and measured 4 cm. by 2 cm. On section, a mass of firm gray scar-like tissue was seen extending deep into the substance of the kidney. This mass appeared to consist of numerous distinct nodules of varying size, the largest 6 mm. in diameter. These tended to form a conglomerate and, on the other hand, were not very sharply separated from the kidney substance. Near the conglomerate, but separated from it by renal tissue, were several small nodules. The second depression was situated on the posterior surface of the kidney near the upper pole. It was much larger, measuring 6 cm. in each direction; but it did not extend deeply into the kidney, and showed no nodules.

*Pelvis.*—The urinary bladder was normal. The vagina and the somewhat enlarged uterus contained a small amount of white tenacious mucus. The uterine adnexa were firmly adherent to the surrounding tissues, and both tubes were dilated

with a watery fluid to the size of a little finger. The ovaries contained a number of cysts, some of them filled with a bloody fluid.

*Heart.*—The pericardial cavity contained a small amount of clear serum. Over an area of 6 sq. cm. on the anterior surface of the lower third of the left ventricle the two pericardial layers were adherent. Otherwise, the pericardium was normal with the exception of a thickened and reddened area over the left auricular appendix. The heart was markedly enlarged, especially the left ventricle. The cause of this latter was discovered on opening the heart, for practically the entire wall of the left ventricle was infiltrated or substituted by a huge mass of firm gray white tissue similar to that seen in the kidney. This mass, projecting far into the lumen of the ventricle, presented an irregularly and coarsely nodular surface.

In the opposite direction it extended in some places as far as the pericardium, in others it was separated from the latter by the hypertrophied muscle, which averaged 14 mm. in thickness. Only one area of the left ventricle was free from this tumor mass, a space measuring irregularly 6 by 2.5 cm. embracing the lower part of the septum and the adjoining portion of the anterior surface. The entire ventricle was over 10 cm. in length and 7 cm. in lateral diameter. The thickest part of the wall along the left border measured 4 cm., of which 2.5 cm. was composed of tumor. The growth had completely infiltrated the papillary muscles as well as the lateral half of the auriculoventricular ring, where a nodule of 4 cm. in diameter projected into the left auricle. In the left auricular appendix were several smooth, grayish white patches. Furthermore, the tumor extended from the upper part of the ventricular septum into the lumen of the right ventricle. The latter had in addition several small nodules in the myocardium of its right border. The right auricle was not affected, and all four of the valves were normal in appearance. The foramen ovale was closed. In the heart cavities only fluid blood was found. The aorta was in general normal; only just above the aortic valve and in the arch were minute grayish yellow thickenings of the intima.

### HISTORY OF CASE.

These findings appeared to justify a tentative diagnosis of a gummatous affection of the heart and kidney. Consequently, investigations were promptly begun as to the history of the case, and for the success of these researches I am indebted not only to Professor Chiari, who gave me most valuable assistance and advice throughout, but also to the painstaking investigation of privatdocent Dr. Ferdinand Pecirka, *Polizeichefarzt* in Prague. Further information was kindly furnished by Prof. Filip Josef Pick of the German dermatologic clinic, and Professor Janovsky of the Bohemian dermatologic clinic.

The history of the case is as follows:

*Patient.*—K. Z. was born in 1880. Her father is still living at the age of 62. He was formerly a soldier, has always been healthy though not robust, and has had numerous children from two marriages. The mother was an illegitimate child, had five children, and died at the age of 36. Further details about her are not known. The patient had none of the important diseases of childhood. On March 26, 1896, she applied for a license as prostitute. As, however, she had not at that time had any venereal trouble and further had not practiced prostitution regularly, her application was refused. On May 5, she again applied with the statement that she had been treated for gonorrhea and a soft chancre. The license was then granted. Her statement was accurate, since she had actually been in Prof. Janovsky's clinic from April 4 till May 5. The diagnosis was *Ulcus molle commissuræ. Blennorrhœa chronica urethræ et cervicis*. Gonococci were present. There were no general symptoms.

*Clinical History.*—On Oct. 9, 1896, she entered Professor Pick's clinic with the clinical diagnosis "*Lucæ condylomatosa*." At that time she presented a general maculopapular skin eruption; squamous eruption on the palms; ulcerated mucous patches in the mouth, on the palate, and tonsils; syphilitic

\* From Professor Chiari's Pathologic Institute in Prague.



leucoderma; erosions on the carunculæ, on the posterior wall of the vagina, and on the vaginal portion of the cervix; and finally a urethritis. During her stay in the clinic she had an attack of catarrhal icterus. On November 25 she was discharged "free from symptoms." In March, 1897, she was again in Prof. Janovsky's clinic for three weeks, where she was treated with three injections of salicylate of mercury. The diagnosis read: *Lues condylomatosa. Leucoderma Neisser. Blennorrhœa cervicalis.* (Gonococci positive.) Finally, in September, 1897, she remained sixteen days in Prof. Janovsky's clinic, receiving two potassium iodid injections. At this time, in addition to a venereal ulcer, cervical gonorrhea, and leucoderma, she had a general glandular enlargement. There were no local symptoms of syphilis.

*Subsequent History.*—In 1899, she applied for a revocation of her license on the ground that she was entering domestic service. She continued her former profession however, in combination with that of waitress. In September, 1903, she married a student who readily admitted that his wife had had an "intimate friendship" with numerous other students. Soon after their marriage, she was examined by the physician of a life insurance company and rejected on the ground that she had a heart lesion. Neither before that time nor afterward, however, had she had the slightest symptoms of a disease of the heart, being always in the best of health. She was likewise rejected by a second insurance company for the same reason. Of the presence of heart symptoms immediately preceding the sudden death no information could be obtained.

The foregoing facts establish beyond question that the woman had become infected with syphilis eight and a half years before her death, and almost as certainly that she had some heart lesion for one year. Further, that the latter caused no symptoms sufficiently marked to be noted by her or by those immediately about her.

#### VERIFICATION OF DIAGNOSIS.

Parallel with the investigations into the antecedents of the patient, the microscopic examination of the heart and kidney was undertaken in order to verify the gross diagnosis. From the heart, pieces were taken from the wall of the left ventricle, the papillary muscles, the septum, and the left auricle. Both areas in the kidney were also examined. The pieces were fixed in Orth's fluid, and stained with hematoxylin-eosin, Van Gieson's solution, Weigert's resorcin-fuchsin, for tubercle bacilli, and for fibrin. I may say here that a careful search for tubercle bacilli was negative throughout. The gross specimens were preserved in alcohol for the pathologic museum of the institute.

*Microscopic Examination.*—As typical of the various places examined, a section extending through the wall of the left ventricle from the pericardium to the trabiculæ and endocardium may be considered. At this place the heart wall was 3.5 cm. thick, and of this about 1 cm. nearest the pericardium showed the regular arrangement of heart muscle. The rest of the section contained only one muscular bundle of considerable size. With this exception, there were no traces of muscular fibers till the outer half was reached, where a few fibers appeared here and there, and then rapidly increased in number as the muscular zone was approached. In other words, there was no sharp line of demarcation between myocardium and tumor; the latter extended in an infiltrating manner between the muscle fibers. Of the tumor, a portion consisted of a poorly stained, partly homogeneous, partly reticulated ground substance, which was either free from cellular elements or contained scattered fragments of nuclei. These necrotic areas were not sharply circumscribed, but passed over gradually into places where the reticular substance was interspersed with numerous cells, and then into other parts where the latter predominated to the almost complete exclusion of intercellular substance. In the less cellular places there were occasional collections of cells which appeared fairly circumscribed with the lower power, although they were irregular, not rounded in outline.

The character of the cells was varied. The greater number were small, with a round, deeply staining nucleus and very little protoplasm, corresponding to the small lymphocytes of the blood. Most of the remaining cells were small spindle cells of the type found in young connective tissue. Also where these predominated there was a certain amount of intercellular connective tissue consisting of fine fibers and a somewhat coarser network, which, however, was nowhere very dense. Cells with a small round eccentric nucleus and a fairly large amount of slightly eosinophile protoplasm (plasma cells) were numerous in almost every field. "Epithelioid" cells were much less widely distributed; polymorphonuclear leucocytes were virtually absent.

A study of the arrangement of the cells revealed nothing that was at all constant. Certainly there was no distinct zone of epithelioid cells around the central necrotic areas; here and there a few such cells were grouped together near the latter. In general, the lymphocytes, plasma cells, and fibroblasts were interspersed without special arrangement. Only in the circumscribed cellular foci referred to above was there a definite structure. Here there were usually a number of fibroblasts in the center or immediately about a small necrotic center, and around these a dense zone of lymphocytes, which then gradually lessened in number toward the periphery. These areas, however, contained another type of cell, and that in no infrequent number. In the very center there was often a large giant cell of the Langhans type, and near this usually several smaller ones. In one field (Zeiss, oc. 2, obj. C.) there could be noted as many as seven unquestionable giant cells. It was only in these patches, however, that they were found.

The heart muscle cells, even at the very boundary of the tumor where individual cells were frequently isolated, showed a protoplasm of normal staining power and perfectly distinct striations. The nuclei also stained well and presented few signs of degeneration. At the boundary zone, however, there was a much larger amount of connective tissue than elsewhere, which surrounded the muscle bundles or even individual cells, and was much coarser than in the tumor proper. Between the muscle fibers there was a considerable infiltration with lymphocytes and fibroblasts.

The section was not very vascular, and yet there were many more capillaries than are usually seen in tubercles of that size. Especially noteworthy was the fact that well preserved capillaries were frequently found in the very center of the larger necrotic areas. The larger arteries of the myocardium and pericardium had somewhat thickened walls, but little endarteritis. The smaller arteries, especially near the tumor, were more markedly changed; the media was hyperplased to double or three times the normal thickness, and presented marked signs of degeneration; the lumen was frequently almost obliterated by the arterial thickening, though there was no thrombosis.

The picture presented by other sections did not differ materially from the one described. In some places the giant cells were much more numerous and more widely distributed, however, so that they appeared in numbers in nearly every field; also the vascular changes were in general more pronounced. There were more dilated capillaries in the tumor parts, and even the large arteries presented the highest grade of mesarterial thickening, and marked endarteritis as well. The "grayish-white patches" in the left auricular appendix were merely a fibrous thickening of the endocardium; but the pericardium in the same part of the heart showed lesions similar to those in the heart muscle, consisting of a general infiltration and localized nodules of lymphocytes, connective tissue cells, and Langhans' giant cells.

The condition in the kidney was quite analogous to that in the heart. The sections taken through the deeper of the two depressed areas showed numerous isolated foci of cellular infiltration, and one large mass which contained scattered areas of necrosis alternating with collections of cells and with frequent remains of kidney substance—individual cells and fragments of cells, bits of tubules, glomeruli, and larger masses of renal tissue. The cells were almost entirely small lymphocytes. There were practically no epithelioid cells and very



few plasma cells. Giant cells on the other hand were remarkably numerous, being scattered over the field almost as they would be in a giant cell sarcoma. The majority of them were clearly of the Langhans' type; but some were irregular in form with an irregular arrangement of the nuclei, and these assumed especially large proportions. Connective tissue cells appeared in comparatively small numbers, and interstitial fibers were present only in the most delicate of strands, which, however, were almost uniformly distributed.

The kidney substance had suffered a marked parenchymatous degeneration in which all parts of the kidney were affected. But the process had advanced further than that. Not only were the convoluted tubules swollen and degenerated, but between them was a large amount of young connective tissue. Similarly, the glomeruli were often overspread with a perfect network of fine connective tissue fibers. All parts of the kidney were exceedingly vascular, including even the necrotic areas. The arterial changes were still more advanced than in the heart. All three of the arterial coats were affected, and the lumen was contracted even to complete obliteration.

The more superficial area near the upper pole of the kidney presented mainly arteriosclerotic changes—substitution of the glomeruli by connective tissue—dense connective tissue bands between the tubules, and marked lymphocytic infiltration. The arteries here were thrombosed in addition to the arteriosclerotic changes, and the capillaries presented the same congestion as elsewhere.

The microscopic changes just described could be caused by only two diseases, tuberculosis or syphilis. To accept the former etiology it would be necessary to assume that the lesions were extremely atypical, whereas the picture corresponds excellently with typical gummata as they have been described elsewhere in the body. The irregular nodular appearance of the lesions macroscopically, the general distribution of epithelioid cells and fibroblasts, the large number of the latter, the presence of capillaries even in necrotic parts, the absence of tubercle bacilli, all speak for gummata. A large number of Langhans' giant cells has been considered a point against syphilis. Baumgarten<sup>1</sup> goes especially far in that direction, but in the very article in which he almost denies the possibility of lesions with Langhans' giant cells being pure gummata he gives the various other differential points between tuberculosis and syphilis, and for all of them the present case might easily represent the type of syphilis.

In this connection it is interesting to note that Van Huellen<sup>2</sup> has recently published a case of sudden death due to heart gumma, in which he lays great stress on the presence in the lesions of enormous numbers of giant cells, some of them of the Langhans type; and Stockmann,<sup>3</sup> after reviewing the entire literature of heart gummata in adults, declares that the presence of giant cells in unquestionable gummata is by no means rare. The heart lesions may be accepted from internal evidence alone as syphilitic; that evidence is strengthened by the absence of any sign of recent tuberculosis elsewhere in the body, and by the unquestionable history of syphilis obtained.

The case, considered as a whole, is perfectly clear. The history gave conclusive evidence of an acquired syphilis and of heart lesion of at least one year's duration. The examination of the heart showed no disease other than syphilis and that in a recent not obsolete form of gummata, which had invaded three of the four heart cavities, reaching their greatest dimensions

in the left ventricle, where they formed one huge conglomerate. There is no doubt that this disease of the heart was the cause of the sudden death. Interesting, apart from the wide extent of the gummata, are the large number of Langhans' giant cells and the lesions of the kidney.

#### COMPARISON WITH OTHER SPECIMENS OF HEART SYPHILIS.

Professor Chiari kindly placed at my disposal three specimens of heart syphilis from the pathologic museum, and of these two appear worthy of a short description. Unfortunately, the catalogue of the museum failed to give the data necessary for a complete report of the autopsies, to say nothing of the clinical aspects of the cases.

The first case (museum No. 811) was a heart markedly enlarged, even for a very heavy person; and this enlargement was due to hypertrophy and dilatation of both left and right ventricles. In the former the dilatation predominated, the wall not exceeding 2 cm. in thickness, whereas the cavity was dilated to approximately 80 cu. cm.

The right ventricle, on the other hand, had less dilatation, but the wall was fully as thick as that of the left side. Unlike the latter, this increase in size was not due to muscular hypertrophy but to the growth of exceedingly numerous small nodules, which had infiltrated every part of the myocardium, including the septum. These did not project into the ventricle like huge knobs, as in the case previously described, but merely gave the endocardium an uneven appearance, like that of a hobnailed liver in advanced cirrhosis. The pulmonary and tricuspid valves, as also the right auricle, were normal. The left ventricle was free from the new growth in the greater part of its extent, only just below the attachment of the aortic valve there was one small nodule. The valve itself was slightly thickened, but the intima of the small piece of aorta attached looked perfectly smooth. The right auricle, including the auriculoventricular ring, was the seat of large masses of tissue, which here did not form distinct nodules, but had infiltrated the muscle in a more uniform manner.

Various parts of the heart were examined microscopically by the same methods as mentioned above.<sup>4</sup> The museum diagnosis of "syphilis cordis" was amply corroborated. Large areas of the tumor masses consisted of old connective tissue, but scattered here and there were numerous foci of cellular infiltration.

Of recent necrosis there was little to be seen, though there were places where the connective tissue seemed to be organizing at the site of former necrosis. There was also a small amount of calcification. The cellular foci were irregular in outline, and presented no definite arrangement of the cells, which were almost all small lymphocytes. There were no epithelioid or giant cells. These foci were usually grouped around a small artery. In addition to the circumscribed, there were many diffuse infiltrations of lymphocytes among the connective tissue and muscle fibers. Unlike the former case, there were bits of muscle tissue scattered throughout the new growth. The blood vessels presented advanced changes, both hyperplastic and degenerative, in which all three coats took part.

1. Baumgarten, P.: "Ueber die histologische Differentialdiagnose zwischen tuberculöser u. gummöser Orchitis." *Wiener med. Wochft.* 1900, No. 47.

2. Van Huellen, A.: Ein Fall von Myocarditis gummosa mit zahlreichen Riesenzellen. *Zelts. f. Hellkunde*, 1905, No. 4.

3. Stockmann, W.: "Ueber Gummiknoten im Herzfleisch bei Erwachsenen." Wiesbaden, 1904.

4. All three of the museum specimens were preserved in alcohol; and although two of them had been in that fluid over thirty-five years, they yet possessed staining powers almost as good as those of fresh objects; such differential stains as the Van Gieson or Weigert's elastic stain giving perfect results.



The second heart (museum No. 2,817, a case from the Invalidenspital in Prague) was still larger, measuring 15 by 12 by 10 cm. The greater part of the heart was taken up by the enormously dilated and somewhat hypertrophied left ventricle. The right ventricle was only moderately enlarged; the auricles were of normal size, and presented no abnormalities other than an open foramen ovale. In the upper half of the left ventricle the myocardium was infiltrated by a more or less uniformly distributed, firm, smooth, new growth. The surface of the endocardium was even, not nodular as in the other cases. The greater part of the right ventricle was of a similar appearance. Furthermore, the upper part of the septum ventriculorum presented a deep, circumscribed depression in the right ventricle—an *aneurysma parziale chronicum*. The ascending aorta was the seat of advanced chronic aortitis of the type of syphilitic aortitis.

Microscopically, the tumor masses consisted entirely of dense, round-celled infiltration, interspersed with a considerable amount of connective tissue, mainly in fine fibers with comparatively few cells. There was almost no necrosis present. In addition to the general infiltration, there were very many circumscribed areas of still denser lymphocytes without any connective tissue. These foci occasionally contained one or more Langhans giant cells and a few epithelioid cells, but the latter never had any special arrangement. The foci were usually grouped near one of the very numerous small arteries. The giant cells also occurred in the areas of general infiltration. The heart muscle was somewhat degenerated, and the arteries all presented an advanced panarteritis.

In both of these cases the search for tubercle bacilli proved fruitless. The third case of syphilis of the heart which was examined (museum No. 3,289) contained no circumscribed gummata, merely a fibrous myocarditis, so that any further description of it may be omitted.

Syphilis of the heart with gumma formation is not exceedingly rare. Stockmann,<sup>5</sup> working in Professor Benda's pathologic laboratory in Berlin, was able in 1904 to collect 84 reported cases of circumscribed gummata, of which, however, he rejected several entirely and accepted as surely gummata 56. Since then at least 5 more cases have been published (Würth,<sup>5</sup> Handford,<sup>6</sup> Romanow,<sup>7</sup> Takeya,<sup>8</sup> Van Huellen.<sup>2</sup>)

It may not be out of place to summarize briefly some of Stockmann's facts and conclusions. He found that in the majority of cases several or numerous gummata were present, only rarely a single gumma and that generally a conglomerate. All parts of the heart have been affected; the left ventricle by far the oftenest, the auricles seldom. The blood vessels regularly are diseased. From the clinical point of view he had to draw his conclusions cautiously because the clinical picture was seldom complete. Thus, only in 15 cases was the time of infection given, and this occurred from 3 to 30 years before death, and averaged 11 years. As corollary to that, the most deaths occurred between the ages of 30 and 40. The important question of how soon after infection the gummata appear, was, of course, exceedingly difficult to decide, since very few authors stated

when the first symptoms appeared. This was doubtless due a great deal to the fact "that the patients felt perfectly well up to the time of their sudden death." A characteristic clinical course can not be set up. The commonest symptoms are tachycardia, arrhythmia and dyspnea. Other symptoms that appear frequently are pain over the heart region, a feeling of anxiety as in angina, palpitation, asthma, headache, vertigo and fainting spells. The physical examination usually reveals an enlarged heart, accentuated second pulmonic sound, the signs of a valvular lesion, and a small, irregular, rapid pulse, or sometimes a slow pulse.

Of the 49 cases in which the cause of death was reported, 15 died suddenly without any previous symptoms, and in 10 more the death was unexpected, although the patients had had signs of heart trouble. In 15 cases, the disease progressed slowly, and in 9 the death was attributable to another cause. Of 16 cases in which the left ventricle and septum were affected, 12 patients died suddenly; in 3 when the right ventricle alone was the seat of the disease, death came slowly.

The inability to obtain any history in so many of the published cases seemed to justify reporting the present one, aside from its interest as a widespread disease of the heart without clinical manifestations.

## GONORRHEA IN THE FEMALE.

ITS DIAGNOSIS, FREQUENCY AND INFLUENCE IN THE PRODUCTION OF STERILITY AND OF GRAVE LESIONS OF THE PELVIC ORGANS.\*

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It is my purpose to consider the question of gonorrhea in the adult woman and as it affects her reproductive organs only. My attention was especially directed to the subject in reading the series of papers read before the Section of Hygiene and Sanitary Science at the last session of this Association and by reading other contributions to the literature of the subject, notably the book by Morrow on "Social Diseases and Marriage," and the report of the committee of this Association, on "Prophylaxis of Venereal Diseases."

In these writings, the authors speak with such assurance regarding the frequency of gonorrhea and its disastrous effects, that one inexperienced in the matter would be led to the conclusion that the diagnosis of the disease is easily accomplished and that the disastrous effects are inevitable. This is in a measure true regarding the diagnosis in acute cases in which an opportunity is given for adequate examination. It is quite different in the chronic and subacute cases. After the disease has been in progress a considerable time the gonococci of Neisser has disappeared or has become sequestered so that frequently any examination known at the present time will be inadequate to detect its presence, and without the finding of the gonococcus in the secretions or tissues of the patient, the diagnosis of the disease must be uncertain. For practical purposes, it is sufficient as a rule to accept the statement of the husband or lover that he was affected by gonorrhea at the time of cohabitation, if such act is followed by inflammatory lesions of the urethra, vulva, vagina or cervix uteri and in a woman heretofore healthy.

The history of the case, too, will afford some corrob-

5. Würth, F.: "Ueber infectiöse Granulome des Herzens," etc. Inaugural Dissertation, Würzburg, 1904.

6. Handford, H.: "Remarks on a Case of Gummata of the Heart." British Med. Jour., 1904.

7. Romanow, Th.: "Heart Syphilis." Russ. Vratsch, No. 45. Ref. in Deut. med. Wochft., 1904, p. 1898.

8. Takeya, H.: "Demonstration of Two Cases of Heart Syphilis Before the Medical Association of Tokio," Jan. 20, 1904. Ref. in Deutsche med. Wochft., 1904, p. 1599.

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



oratory evidence in cases, for instance, of young married women, previously healthy, who immediately after marriage develop a purulent urethritis, vulvitis or vaginitis.

The difficulties then in making a diagnosis in the chronic and subacute cases are the infrequency in which we are able to demonstrate the presence of the gonococcus, the inability to obtain a satisfactory history of the cases and the fact that gonorrheal inflammation presents no pathognomonic signs, symptoms or course. The specific and nonspecific inflammatory lesions of these organs present exactly similar clinical pictures. Knowing these facts I was startled by some of the statements contained in the articles above referred to, especially the following, which I quote from the "Report of the Committee on Prophylaxis of Venereal Diseases," viz: "In women through most serious involvement of the pelvic genital organs and their adnexa destroying fecundity and giving rise to mutilating operations, 80 per cent. of all deaths from diseases of women are due to gonorrhea. Fifty per cent. of all involuntarily childless marriages are caused by gonorrhea of the female organs of generation, of which 45 per cent. are due to marital infection by men."

These statements were greatly at variance with my opinions formed by many years' practice as a family physician, and later as a gynecologist to a large charity hospital and two free dispensaries and in private practice as a gynecologist. I felt that I was greatly in error in my conclusions or else that the authors of this report had made statements concerning a subject of which they had not full knowledge.

It was for the purpose of setting myself right that I began the study which has resulted in the writing of this paper, and now after a considerable time spent in hard labor, I find myself in the position of every man who has undertaken the study of the subject of gonorrhea in the female, viz., that I have accomplished but little because of the difficulties in the way of positive diagnosis in many cases, and because of the lack of collective investigation.

Morrow in writing on one phase of this subject very truly says: "No one knows better than the writer of this paper, that the proportion of sterile marriages due to gonorrhea is an unknown and unknowable quantity, that it is impossible to present figures that aim at even approximate accuracy."

During the year beginning, June 1, 1904, and ending May 31, 1905, I examined in my office 358 new cases of women seen by me for the first time, and having disease of the genital organs. In each case, a careful record was made of the history, present condition and findings. In this number I found but three cases of acute gonorrhea. Of these, two were married women, and one was an unmarried woman. My assistant made numerous examinations of cover-glass smears of secretions taken from the vagina and cervix and from the urethra, also in all cases of discharge, and in not a single instance except those mentioned above were they able to find the gonococcus of Neisser. The Gram method of staining was employed. The culture method was not used. There were several cases in which I strongly suspected gonorrhea and took every precaution to prevent a spread of the disease to other patients. Who can tell how many cases of gonorrhea there were in the number? I confess I can not. Possibly, too, it is as Veit says, "The vast majority of first cases of gonorrheal infection in the female disappears spontaneously, leaving behind but few traces of the disease."

Certain it is that it is will nigh impossible to obtain the bacteriologic proof of the presence of gonorrhea in the female and no other evidence is accepted as conclusive. Even in some of the severe cases, the patients recover completely so far as the physical examination can determine. The following case is cited as an illustration of this fact:

*Patient.*—Mrs. A. consulted me Oct. 3, 1902, for the purpose of ascertaining why she did not become pregnant. She was a fine looking, well-nourished woman, 34 years of age. She had enjoyed almost perfect health for several years. Her only suffering was at the menstrual period, which recurred regularly every thirty-four days. The flow was moderate, lasting four days, and was very painful at the commencement.

*Examination.*—A physical examination failed to show any evident signs of disease of the reproductive organs. There was no endometritis and no displacement of the organs. They were of normal size and not unduly sensitive to pressure; in short, the uterus and adnexa, so far as I could determine, were perfectly healthy. She stated that her health was all she could desire, and that she came to me only because she thought I might be able to advise her in such a way that she might bear a child.

*Remarks.*—Nine years previous to this examination and soon after her marriage, I treated her for gonorrhea contracted from her husband. Her case was a severe one, and I thought was attended by the development of a pus tube. After a few months' treatment the inflammation of the bladder, uterus and adnexa disappeared, so that at the end of a year all traces of the infective lesion had disappeared. Now she is sterile and wants children. I informed her I was unable to give a reason for her sterility. Her husband may have been in fault or there may have been in her case a closure of the lumen of the Fallopian tubes. Which it was I am unable to say.

How many cases similar to this one there are in the practice of each one of us no one can tell. The early history of this case, however, if drawn from her might have enabled her physician to suspect that she had been the victim of gonorrhea. In order that light may be thrown on this subject, the recorded history of each case should give a more or less detailed account of a very serious illness since puberty and an especial account of any illness the patient may have had during the first few months of married life, the point especially noted being any deviation from normal in respect to urethral or bladder inflammation, vulvitis, vaginitis, leucorrheal discharges, and illness ascribed to disease of the adnexa.

I have made a careful study of my records of office patients to ascertain, if possible, what light, if any, they might furnish relative to the influence of gonorrhea on primary sterility. These records show that of 548 consecutive cases of women who had been married five years or more, there were 59, or 10 per cent., who had never been pregnant.

Of this number there were 12, or 21 per cent., who according to their own statements, used active means to prevent pregnancy. There were 6, or 10 per cent., of cases of gonorrhea discovered either by means of bacteriologic examination or on admission of the husband. Of lesions inducing sterility there were 6 cases of pronounced anteversion of the uterus; 11 of fibroid tumor of the uterus; 5 of undeveloped uterus; 4 of retroversion and retroflexion, thus making 27, or 45 per cent., of diseases producing sterility that could not in any way be attributed to gonorrhea. Adding to the 45 per cent., 21 per cent. in which active preventive means were employed to prevent conception, and we find 66 per cent. of cases of primary sterility, according to my figures, due to diseases and conditions other than gonorrhea; but 10 per cent. could positively be ascribed to



gonorrhea. The lesions found in the remaining cases were as follows: Three cases of ovarian cysts; two of cancer of the breast; two of tuberculous peritonitis; one of prolapsus of the uterus and adnexa; three of carcinoma of the cervix uteri; one of endometritis alone; one of chronic ovaritis, and two in which no lesion was discovered. It is true that in but few of these cases was a bacteriologic examination made to determine the presence or absence of the gonococcus, nor indeed, was it needed, for no one would think of attributing sterility in a case of marked anteversion to gonorrhea, or in one of fibroid tumor of the uterus to gonorrhea, or in one of an undeveloped uterus to that infectious disease.

Again my records show that in 321 consecutive cases of women who had been married 5 years or more there were 61, or 19 per cent., who had been pregnant but once. To determine the cause of sterility is a difficult task. My belief is that it is most frequently due to a successful effort on the part of the woman, with the sanction of the husband, to prevent impregnation. This is a harsh statement and possibly should not be made without submitting as proof the facts on which it is founded. This I can not do, but I will say that I have listened so often to the statement: "I do not want any more children and will not have them," in answer to my question, does the patient know of any reason she has not borne children since the last one, now 5 or 10 years of age, that I have ceased to put such a question, except in rare instances, and have taken it for granted that the patient has employed means she deems harmless to prevent pregnancy. What must we think of the slogan of Dr. Anna Shaw, "No ballot, no babies." Our excellent President Roosevelt seems to think he knows perfectly well that race suicide is most largely due to the voluntary efforts of the possible patients to avoid large families.

The second great cause of primary sterility as I see it, is found in the errors of development of the reproductive organs of women.

Tait<sup>1</sup> in speaking on infantile uterus and after relating the history of an extreme case, says, "Such an example as this is not common, while on the other hand a slight degree of the want of development of the uterus sufficient to give rise to troublesome menstruation and to be a bar to pregnancy is quite a common condition, so common that I almost think I might say it constitutes almost one-half my private practice in chambers, and a large proportion of my out patient hospital practice consists of cases of such arrest of development. I have a strong and growing belief that the exanthematous lesions of childhood are largely to be charged with this as a result."

In my list it will be noted that of the 59 cases of primary sterility there appeared 16 cases, or 27 per cent. of errors of development of the uterus, viz., 6 cases of anteversion of the uterus; 5 of infantile uterus, and 4 of retroversion and retroflexion. Cases of marked anteversion and retroflexion of the uterus in the young must be classed as errors of development. The exact influence of gonorrhea in producing sterility, while it is no doubt great, has not yet been determined.

How great an etiologic factor is gonorrheal infection in the grave pelvic lesions of women?

The result of my study disproves the statements quoted from the report of the association committee at the beginning of this paper, viz., that 80 per cent. of all deaths from pelvic diseases of women are due to gon-

orrhea. It shows at least that in my private practice and in the only charity hospital in Indianapolis, no such preponderance of grave pelvic lesions are due to gonorrheal infection. Before giving a résumé of my findings it is but proper to state that one of the difficulties entering into a solution of the question under discussion is the marked difference that prevails in different communities and countries relative to the prevalence of any disease. This well-known fact needs no discussion. I think all will concede it. Only collective investigation can bring satisfactory and final conclusions. I present my facts for what they may be found to be worth, not claiming for them conclusiveness.

During the year of 1904, I invaded the peritoneal cavity by operative procedure 167 times. In the patients operated on, 111 operations were done for the relief of diseases of the pelvic organs. These operations are classified as follows: Supravaginal hysterectomy, for fibroid tumors of the uterus and cancer of the uterus, 23 cases; vaginal hysterectomy for cancer of the uterus, procidentia and senile endometritis, 15 cases; salpingo-oophorectomy for inflammatory lesions (mostly suppurative) of the tubes and ovaries, 30 cases; ventrosuspension, 6 cases; ovariectomy for ovarian cysts, 32 cases; vaginal section for broad ligament phlegmon, 1 case; shortening the round ligaments, Goldspohn's method, 1 case; sarcoma of the uterus, 1 case; herniotomy, 1 case; tubercular peritonitis with involvement of the Fallopian tubes, 3 cases; intra-abdominal shortening round ligaments, 6 cases. Only 30 cases, or 27 per cent., could possibly be attributed to gonorrhea. I attributed but 15, or 13.5 per cent., to gonorrheal infection, for all my experience is in accord with Ashton's,<sup>2</sup> who says, in speaking of salpingitis: "The vast majority of cases that are septic are puerperal in origin and they even exceed in number those due to gonorrhea."

Gonorrheal salpingitis is a serious lesion frequently leading to sterility and chronic invalidism, but not so frequently producing death of the patient as the infections following abortions or confinement. In my 30 cases of salpingo-oophorectomy a bacteriologic examination was made in suspected cases, viz., in those in which the infection could not clearly be attributed to other causes or in those cases giving a clear history of exposure to gonorrhea; in but 3 of the cases was it possible to demonstrate the presence of the gonococcus. The inability frequently to find the diplococcus in chronic cases of suspected gonorrhea is so common that one soon tires of the hunt. Recently my assistant, Dr. Thurston, examined the secretions from 13 new patients, i. e., patients at first examination in whom there were cervical erosions and endometritis and in 2 of them purulent discharges from the urethra, yet he failed to find the gonococcus in a single instance; and still the histories were such in 3 of the cases as to lead me strongly to suspect the disease. It would be manifestly unjust to classify these as specific cases. There are no pathognomonic signs or symptoms of the disease. Every lesion of the female genitalia found in gonorrhea is also found in the same intensity and running a similar course in perfectly non-specific causes. If, then, we fail to demonstrate the gonococcus of Neisser in the secretions or tissues of the patient and make a diagnosis of gonorrhea we must do it on suspicion, a most unscientific method.

Clark<sup>3</sup> has cogently stated the present status of our knowledge of the inflammatory lesions of the Fallopian

1. "Diseases of Women and Abdominal Surgery," p. 154.

2. "Practice of Gynecology," p. 489.

3. Reed: "Text-Book of Gynecology," p. 488.



tubes, and what he says of this applies with equal force to all other inflammatory lesions of the female pelvic organs. He says: "Without question, the classification of diseases according to their etiology would be preferable on account of their greater scientific accuracy, but so far neither a careful bacteriologic examination nor microscopic sections are sufficient to reveal the primary infecting or exciting agent in a majority of cases."

As an aid in determining the frequency of gonorrhea in the female in our city, Dr. Paul Martin, superintendent of the Indianapolis City Hospital, at my request, made a brief tabulated report of all cases of women admitted to the hospital during the year of 1904. This hospital is a charity hospital and is the only one in the city into which venereal cases are admitted for treatment.

Dr. Martin tells me that all suspected cases of gonorrhea in both male and female are examined bacteriologically unless the history of the case of infection is clear or confession of the patient is made. The system of records introduced by Dr. Martin and kept on file is very elaborate and for the most part satisfactory, and from these records he compiled the report I have alluded to. The points brought out were the hospital number of the patient, the fact of the existence of acute or chronic gonorrhea, the manner of diagnosis, the results of bacteriologic examinations, and the lesion present.

There were treated in that institution during the year of 1904, 651 female patients.

There were diagnosed, either by bacteriologic examination or by confession of the patient: Acute gonorrheal cases, positive, 25; acute gonorrheal cases, doubtful, 4; chronic gonorrheal cases, positive, 49; chronic gonorrheal cases, doubtful, 9.

Of this number there were those who confessed to having or to having had gonorrhea, positive, 50 cases; doubtful, 3 cases.

Bacteriologic examinations were made with positive results in 29 cases; with negative results in 16 cases; with doubtful results in 3 cases.

It will be seen by this report that there were in all 74 cases in which a positive diagnosis of gonorrhea was made; in other words, 11 per cent. of the women admitted to the hospital at the time of admission had, or had previously had gonorrhea. This is the only hospital in our city, of 200,000 inhabitants, that admits gonorrheal patients, and admission of patients with venereal diseases is denied to none. It will be remembered that there were 49 patients classified as chronic cases, in the majority of which the diagnosis was made by confession and in which at the time there were no positive evidences of the disease. The diagnosis in these cases was based on the confession of the patients, every one of whom was asked on admission if she had ever had gonorrhea and her statement recorded. Of 49 cases recorded as chronic gonorrhea, 37 patients came to be treated for other disease, and of this 37, 4 were pregnant. Some further details of the report are of interest.

There were brought into the hospital either during or immediately after abortion 21 patients, of whom 18 were free from gonorrhea and 3 confessed to having had that disease.

The records show that 24 patients were treated for salpingitis, of which 12 were gonorrheal infections and 12 non-gonorrheal; there were 3 cases of ovaritis, 1 gonorrheal and 2 non-gonorrheal; there were 5 cases of pelvic abscess, 1 gonorrheal and 4 non-gonorrheal; there was 1 case of pelvic septicemia, non-gonorrheal; 3 cases

of pelvic peritonitis, 1 gonorrheal, 2 non-gonorrheal and 3 cases of vulvar abscess, 1 gonorrheal, 2 non-gonorrheal. There were, therefore, 16 gonorrheal and 24 non-gonorrheal cases.

To make the list of serious lesions complete, we should include 21 cases of abortion, 18 non-gonorrheal, 3 gonorrheal; 12 cases of fibroid tumors of the uterus, 5 of carcinoma of the reproductive organs and 1 of ovarian cyst. Thus making 79 cases of serious pelvic lesions, of which 19 patients had at the time or had had at some previous time gonorrhea, or 24 per cent. of the patients with grave lesions had gonorrhea.

There were at the hospital during the year 6 deaths from pelvic lesions, distributed as follows: Carcinoma of the uterus (only operative cases were admitted), 3; pyosalpinx, non-gonorrheal, 1; double oöphoritis, non-gonorrheal, 1; puerperal septicemia, 1; total 6.

#### REPORT OF BOBB'S FREE DISPENSARY.

It should be stated regarding this dispensary that it is a dispensary under the direction of the Medical College of Indiana and each department is presided over by a professor in that department. This dispensary is maintained for teaching purposes and is abundantly supplied with experts and appliances. It maintains a chemical and microscopic clinical laboratory to which are sent by the clinicians specimens of urine, morbid secretions and tissues for examination.

The gynecologic department is presided over by Professors O. G. Pfaff and Chas. E. Ferguson, both of whom are accomplished gynecologists. They report that, while no prostitutes are denied treatment in their clinics, yet few of this class apply, and that they think 10 per cent. is a conservative estimate of the number of prostitutes seen in their departments. Every patient suspected of having gonorrhea, especially if there is a purulent discharge from the uterus, Skene's or Bartholin's glands, is carefully scrutinized and specimens of the genital secretions sent to the laboratory for bacteriologic examination. A fairly good record of all the work done in the dispensary is kept. The card system being used for this purpose.

At my request, Dr. Helen Knabe, a paid assistant in the laboratory, made a careful study of the records and compiled from them the report herewith submitted:

BOBB'S FREE DISPENSARY, JUNE 1, 1904, TO MAY 31, 1905.

Eight hundred and forty-four female patients were treated during the year. They were distributed in the different departments as follows:

(a) General medicine (including nervous diseases) ..	283
(b) Diseases of the eye .....	171
(c) Gynecology .....	108
(d) Diseases of children .....	86
(e) Diseases of ear, nose and throat .....	84
(f) Dermatology .....	43
(g) Surgery .....	36
(h) Gastrointestinal diseases .....	24
(i) Genito-urinary diseases .....	9

Total .....

Number of cases of gonorrhea in all departments .....

(a) Gynecology .....	5
(b) Diseases of children (vaginal) .....	2
(c) Diseases of the eye .....	2
(d) Genitourinary disease (vaginal) .....	1

Total of cases .....

Classification of gonorrheal cases

(a) Acute cases .....	2
(b) Chronic cases .....	3

Total .....

Method of diagnosis in gynecologic department:

(a) By bacteriologic examination .....	3
(b) By confession of patient (one rape) .....	2
(c) By clinical symptoms alone .....	none.

Location of lesion:

(a) External organs .....	2	{ one acute. one chronic.
(b) Uterus and adnexa .....	3	{ uterus—1 chronic. ovaries—1 chronic. Pyosalpinx—1 acute.



## Occupation of patients having gonorrhea:

(a) Merchant (married) .....	1
(b) Housekeeping (married) .....	1
(c) Works in family (single) .....	1
(d) No occupation (single, probably prostitute) .....	1
(e) No occupation (widow, probably prostitute) .....	1

Total ..... 5

## History of patients in respect to sterility and fecundity:

(a) Sterile, 2; one of them married, the other widow at the present time.	
(b) Children, 1; married, had one child fifteen years ago.	
(c) Unmarried, no children, 2.	

Pregnant since having gonorrhea..... 0

## Grave lesions of pelvic organs in gynecologic cases:

(a) Carcinoma .....	0
(b) Uterine tumors (fibroid) .....	2
(c) Salpingitis, chronic .....	1
(d) Pyosalpinx, acute (gonorrheal) .....	1
(e) Suppuration of ovary and tube .....	1
(f) Ovarian tumors .....	0
(g) Ovaritis, non-suppurating .....	3
(h) Pelvic inflammation .....	1

## Slight pelvic lesions of gynecologic cases:

(a) Prolapse of ovary .....	4
(b) Prolapse of uterus .....	1
(c) Subinvolution .....	1
(d) Superinvolution .....	1
(e) Lacerated cervix .....	14
(f) Erosion of cervix .....	8
(g) Retroversion .....	12
(h) Retroflexion .....	1
(i) Endometritis (1 gonorrheal) .....	10
(k) Acute vaginitis, nonspecific .....	2
Acute vaginitis, microscopic ex. ....	2
(l) Lacerated perineum .....	12
(m) Vaginal chancreoid .....	1
(n) Pinhole os. ....	1
(o) Urethral caruncle .....	1
(p) Cystitis (pronounced) .....	1
(q) Cystocele and rectocele .....	2

## Organs removed before coming to dispensary:

(a) One ovary removed (6 years ago) .....	1
(b) Both ovaries removed (1 and 2 years ago) .....	2

(In one case of prolapse of the uterus there was also an amputation of the cervix and perineorrhaphy some two years ago.)

Cases in which no diagnosis was recorded, 21. In most of these there was insufficient history to draw any conclusion as to nature of trouble.

The percentage of prostitutes in gynecologic departments was probably less than 10 per cent.

## REMARKS ON REPORT.

It will be seen on study of this report that but 87 gynecologic cases are available for study. This shows 5.7 per cent. of patients of this department were subjects of gonorrhea. While, in the whole dispensary, it appears that in 1.2 per cent. of cases was gonorrhea detected.

The records regarding sterility are of no value. Of the grave pelvic lesions, there were 9 cases, of which 1 was due to gonorrheal infection.

## CONCLUSIONS.

1. Acute gonorrhea in the female is easily diagnosed if seen early, when both the smear and culture methods may be employed. In the chronic and subacute cases a positive diagnosis is often impossible. All secondary aids to diagnosis, if necessary, must be considered, such as confession of the patient, sudden onset of inflammatory lesions without other causes.

2. Many cases of gonorrhea in women recover quickly, leaving behind no traces of the disease.

3. Different communities differ in respect to the prevalence of the disease. I submit the following summary of cases which I have collected:

	Number of women treated.	Having gonorrhea.	Percentage.
City Hospital .....	651	74	11
Bobb's Free Dispensary ....	844	10	1
Private practice .....	360	4	1
	1855		

These figures can not be taken as an accurate statement; they are only approximately true.

Probably the City Hospital figures are most nearly accurate, but in considering these figures it must be remembered that probably more than 66.6 per cent. of all cases of gonorrhea at that institution occurred in prostitutes, while the number of this class admitted to

the hospital is a much smaller percentage of the whole; how much smaller it is impossible to determine, because few women will voluntarily admit to hospital authorities that they are prostitutes.

In the City Hospital report the number of cases of grave lesions of the pelvic organs was 79, of which 19 were gonorrheal and 60 non-gonorrheal cases, 24 per cent.

In Bobb's Free Dispensary there were 9 cases of grave lesions of the pelvic organs, of which 1 was gonorrheal and 8 non-gonorrheal, 11 per cent.

In private cases there were 111 cases demanding grave operative procedures; 15 were gonorrheal and 96 non-gonorrheal; 13 per cent. of operative cases were gonorrheal.

I did not succeed in finding many important facts bearing on the influence of gonorrhea in producing sterility. In my list of 59 cases of primary sterility, 66 per cent. could fairly be attributed to other causes than gonorrhea and but 10 per cent. attributed to gonorrhea; this seems to indicate that gonorrhea as a causative factor in sterility has been overestimated.

## DISCUSSION.

DR. D. H. CRAIG, Boston, said that he has given some attention to the question of differentiation between the inflammatory lesions, acute and chronic, of the pelvic organs of women classified as puerperal lesions and those classified as gonorrheal. That distinction is often made, as though they represented two absolutely distinct classes, but he thinks they do not. A series of cases he has been tabulating brings that out clearly, and he related one case to illustrate his meaning. A woman presented herself at his clinic with a subacute pelvic lesion, accompanied by moderate pain and a leucorrheal discharge, in no sense characteristic, and attributed her trouble to getting up too early after her confinement, on about the eighth day. All her trouble dated definitely from within 48 hours after getting up. Having this distinction in view, careful investigation was made by smears and cultures, and Dr. Craig found that her trouble was due entirely to a not far remote gonorrheal infection. Very strict questioning of the woman demonstrated the fact that her getting up after confinement was preceded by 24 hours by sexual relation with her husband, who admitted that he had contracted gonorrhea during his wife's pregnancy. Without careful investigation, this case would have been termed one of postpuerperal inflammatory lesion in the pelvis, and would have been laid to some other infection having nothing at all to do with gonorrhea. Dr. Craig thinks these cases are common. Morrow speaks particularly of one child sterility. If any one can tell Dr. Craig how a husband having had gonorrhea previous to marriage could be responsible for one-child sterility, he will be glad to learn, but he can understand how the husband contracts gonorrhea during his wife's pregnancy and infects her during the puerperium. The question of figuring out the statistics of the influence of gonorrhea in causing sterility is an impossible one to answer. In the first place, as Dr. Dunning said, 12 per cent. of women admit preventing conception, but what percentage of that number are taking this step unnecessarily? Many women prevent conception for years, and when they want children they can not have them. What percentage of these women were sterile originally and what percentage made themselves sterile? The prevalence of gonorrhea in all classes has been overestimated. No one man will ever give us reliable statistics on that point. In order to get statistics worth having we must take the statistics of every man whose word we can believe and of every man whose investigations are correct and from that make composite statistics of the whole subject. One man taking the cases in a certain locality among a certain class of people can not give correct statistics as to the prevalence of gonorrhea.

DR. A. GOLDSPOHN, Chicago, said that if such statistics as Dr. Dunning mentions have been published they are certainly wrong. Dr. Goldspohn has always had the impression that



gonorrhea was not so prevalent as has been frequently stated. He was not in a position to declare the statement untrue, however, because he supposed that he did not get the class of patients in whom gonorrhea is more prevalent, although he has a considerable practice from a dispensary in connection with a postgraduate school where a large proportion of the patients are colored, and among these gonorrhea is very frequent. As has been stated, it will not be possible to determine the exact number of gonorrheal infections. A little assistance can be obtained, however, by considering what class of pathologic lesions are caused by gonorrheal infections and what class of lesions by puerperal infections. The puerperal uterus is a very different structure having been emptied of a child, say, within a week or two, than is the ordinary gonorrheal uterus. The former has a succulent, thin, very soft, friable cervical wall; whereas the gonorrheal uterus almost never occurs in the puerperal state, and has a cervix that is almost like leather in comparison. In the former the blood vessels and lymphatics are wide open during the first few days after labor. Infection does not have to travel to the endometrium and out in a round-about way to get to the peritoneal cavity. It passes directly through the lymphatics in the wall of the cervix, into the cellular tissue at the side of the cervix, between the layers of the broad ligament, and there is cellulitis (parametritis). Peritonitis and salpingitis, if they occur at all, are secondary to this. The resulting abscess, if it forms, sometimes ruptures, but more frequently it is drained into the vagina. These cases run their course with or without our help, and the patient may not have a salpingitis at all. Gonorrheal infection, on the other hand, usually does not occur in the recent puerperal state, but later, when the ordinary condition of the uterus and cervical canal has been attained. Therefore, the gonorrheal infection, if it passes into the peritoneum at all, as a rule, travels through the endometrium and the tube and then to the peritoneum. There is always an endometritis and salpingitis, with more or less peritonitis. In this connection, it is easy to see that the cases of localized pelvic peritonitis which result in adhesion of the tube or ovary are very much more frequent than are the cases which result in adhesion of the uterus itself. This difference in the gross pathology of the two conditions is a guide in determining the probable nature of the infection in the beginning in either case.

DR. W. O. HENRY, Omaha, declared that, while these statistics are not large enough to be conclusive, yet they are a beginning, and it is to be hoped that other gynecologists will follow Dr. Dunning's example and tabulate their cases. Dr. Henry believes that not over 30 per cent. of these cases are gonorrheal, but in the future he will tabulate all cases after having examined them carefully.

DR. L. H. DUNNING stated that his object in presenting this paper was to call the attention of the profession to the fact that lesions due to other causes are too frequently ascribed to gonorrheal infection. If physicians will investigate this matter carefully, he thinks they will arrive at results different from those previously reported. He wrote the paper partly as a protest against statements which are being quoted continually as scientific facts and which are not facts.

## Special Article

### IMMUNITY.

#### CHAPTER XXX.

#### GLANDERS (FARCY).

Under natural conditions the horse is the chief sufferer from glanders or farcy, the former name being applied to the disease as it occurs in the nose, the latter when it occurs in the skin. These names are relics of the time when the two forms of the disease were not recognized as identical processes with a common etiology. In either locality the disease may be acute or chronic, and in the horse about 90 per cent. of the cases are chronic. The ass is occasionally infected, and in this animal as well as in man, an acute general infection (bacteremia)

frequently develops, in addition to the cutaneous and nasal lesions which characterize the disease. Fortunately, glanders in man is rare. Cows and rats are immune, or nearly so; the sheep, goat and dog have fairly high resistance, although they may be infected artificially; the dog and rabbit are moderately susceptible, and for the guinea-pig and members of the cat family (tiger, lion and leopard), the bacillus is very virulent. Infection of the last named animals has been noted in menageries as the result of feeding them with the meat of a horse which had died of glanders. The acute infection usually is fatal, and complete recovery from the chronic form of the disease is infrequent. Something less than 50 per cent. of the chronic infections in man terminate in recovery.

The specific microbe, *Bacillus mallei*, discovered in 1882 by Loeffler and Schütz, is an anaërobic organism which has approximately the morphology and size of the tubercle bacillus, but lacks the acid-fast property of the latter. It stains with anilin dyes, especially carbol fuchsin, but not with Gram's method. With weak staining it shows a granular structure. It grows well on ordinary culture media, showing a characteristic appearance on potato. In favorable media it may produce threads, while under more favorable conditions coccus-like forms are seen. The optimum temperature for growth is from 30 to 40 C.

The bacillus is only moderately susceptible to sunlight, by which it is killed in about twenty-four hours. It withstands freezing, lives for two to three weeks in a dried condition at room temperature, and is killed by a temperature of from 56 to 60 C. in from ten minutes to one and one-half hours, depending on the amount and character of the medium in which it lies. Its resistance to the ordinary disinfectants (corrosive sublimate, carbolic acid, etc.), is not high. Milk of lime and solutions of calcium chlorid are suitable for the disinfection of stalls. In culture media the organism secretes no soluble toxin, but it contains an endotoxin which probably is one of the constituents in the various preparations of mallein.

The method by which the mallein of Roux and Nocard is prepared is identical with that used in the preparation of the old tuberculin. A virulent strain of the glanders bacillus is allowed to grow for some time (from two weeks to two or three months) in bouillon which contains from 4 to 5 per cent. of glycerin, the culture is then sterilized by heat and the bacteria removed by filtration. The toxin is not destroyed by high temperatures. Other preparations, also called mallein, are made by extracting ground up bacilli with a solution of glycerin and water (Helman, Kalning), or with water alone (Kalning and others); by killing a liquid culture of the bacillus (Bromberg); or by precipitating bouillon filtrates with absolute alcohol (de Schweinitz and Kilbourne), or with ammonium sulphate or magnesium sulphate. The dry powders "morvin" and "dried mallein" are prepared by one or another of these precipitation methods.

Glanders bacilli are found only in the tissues and secretions of diseased animals, and the nasal discharges of the latter are the chief means of contaminating feed, water and stables through which the disease usually is carried to other animals. The glanders bacillus does not readily penetrate the intact skin and mucous membranes, although occasionally it may gain entrance through the hair follicles or sweat ducts. In the presence of even slight defects in these surfaces, as those caused in the mouth or nostrils of horses by hay or other food, infection readily occurs. According to Nocard, invasion takes place commonly through the gastrointestinal tract following the ingestion of infected feed or water. Although involvement of the intestines and adjacent tissues frequently results, the organisms may become generalized, causing the disease in the nose, skin or other organs, without the establishment of foci in the intestines.

In man infection occurs chiefly through abrasions in the skin, and perhaps also through the nose, to which the bacilli have been carried by soiled fingers or other means. Several cases of acute glanders, ending fatally, have occurred in lab-



oratory workers as the result of accidental inoculation. There appears to be little danger to man in eating the meat of horses in which the disease was localized, provided the meat has been well cooked. Such meat was fed to soldiers in one instance with no ill results.

Variations in the course of the disease and in the intensity of the pathologic changes in different cases probably depend on variations in the resistance of the host

**Tissue Reactions.** and in the virulence of the parasite. In acute general infections in man, following an incubation period of from two to five days.

during which the point of inoculation becomes violently inflamed, a severe febrile condition develops, which is accompanied by general pains, swollen joints and a macular eruption. In a short time nodules and indurated cords, made up of a leucocytic exudate, edematous fluid and proliferating connective tissue cells, form in the subcutaneous lymphatic channels, and mark the progress of the infection toward the lymph glands. The nodules, and also the cords, commonly undergo softening, and abscesses form and rupture through the skin. Nodules similar to those in the skin develop in various organs of the body; in the nose they break down and constitute ulcers. In chronic infections the lesions are of the same nature, although they evolve more slowly and tend to remain limited to particular regions. Nasal, pharyngeal, tracheal or pulmonary glanders are forms of the disease which are encountered in the horse. Connective tissue development is more marked in chronic than in acute glanders, although the peculiar liquefaction, suppuration and ulceration of the lesions occurs in the former as well as in the latter. Moderate leucocytosis is found in the blood.

The nature of the pathologic changes found in glanders, the frequent chronic and the progressive course of the disease, and the fact that infection does not confer distinct immunity, are conditions which ally

**Protective Processes.** glanders very closely to tuberculosis, pseudo-tuberculosis and leprosy. The essential lesion

is the "infectious granuloma," and it is probable that the new connective tissue which is formed is to no small extent a factor in limiting the extension of the infection. Nodules of glanders frequently are isolated by the surrounding reaction, the centers caseate and the contents eventually are discharged through the skin; cicatrization and healing in many lesions follow evacuation. Phagocytosis of the bacilli by the epithelioid cells and leucocytes in the nodules is said to be rather extensive. According to Nocard, there is no such thing as an acquired immunity to glanders; chronic glanders may at any time become acute. The cause of the natural immunity of cattle and some other animals seems not to have been determined.

Treatment of glanders with immune serums has not been successful. Such treatment has been attempted with serum

**Serum Therapy and Use of Mallein.** prepared by immunization with mallein (Semmer), and with the serum of diseased animals (Hell and Toeper). The value of mallein in the diagnosis of glanders or farcy

is similar to that of tuberculin in tuberculosis. Although it causes a rise in the temperature of normal animals when given in considerable doses, the reaction produced in infected animals is so much more intense, and occurs with so much smaller doses, that it is generally considered as specific in nature. Some doubt, however, has been thrown on the specificity of the reaction from the facts reported by various observers that toxic substances from other organisms, as tuberculin and other preparations from the pneumobacillus of Friedlander, *Bacillus pyocyaneus*, etc., cause similar phenomena in animals suffering from glanders. Wladimiroff asserts, however, that the reactions caused by these substances differ from that of mallein.

For diagnosis a dose must be used which causes no reaction in a normal animal, and this varies with different preparations. The typical reaction has two essential components: 1, A rise in temperature which begins in from six to twelve hours after the injection, reaches its maximum (from 40 to 42 C.) in from six to eight hours later, where it remains for a few hours, then gradually sinks, only to recur on the second

day; 2, an edematous and inflammatory tumor at the point of injection, which begins in from six to eight hours, and runs its course in from three to eight days, ending in resorption (Wladimiroff). Veterinarians generally agree that mallein is a valuable diagnostic agent. Mallein also has been used in the treatment of glanders, but with rather doubtful results.

Bacteriologic diagnosis is accomplished by cultivating the bacilli from the abscess or secretions and testing the virulence of the culture by animal experiments (guinea-pig).

Normal horse serum agglutinates the glanders bacillus in dilutions of from 1/200 to 1/700, that of the diseased animal in a strength of from 1/1600 to 1/2000. In

**Agglutination.** some instances, however, infection causes no increase in the agglutinating power of the serum. Agglutinins are said to be formed more readily in man than in animals.

## Clinical Reports

### A CASE OF ACROMEGALY.

D'ORSAY HECHT, M.D.

Instructor in Neurology and Chief of the Neurologic Clinic, Northwestern University Medical School; Associate-Attending Neurologist to the Cook County Institutions, Dunning, Ill.  
CHICAGO.

**Patient.**—The young woman whose case is herewith reported has been under the care of my colleague, Dr. Ludwig Simon, for several weeks, and I acknowledge my indebtedness to him for the privilege of citation.

**Family History.**—The patient is of Scotch-English descent, was born in Cambridge, England, is 24 years old, single, and at the present time a governess by occupation.

It is interesting to note that Prof. Clifford Albutt diagnosed a carcinoma of the bowel in the paternal grandfather of the patient; a carcinoma of the larynx in an aunt on the maternal side, and an uncle on the maternal side is now afflicted with carcinoma of the bladder. This familial tendency to malignant neoplasms made the patient feel that, perhaps, her headaches and general enlargement were due to a similar growth. Her father, mother, one brother and two sisters are all living and well, though none of them could be called robust. She is certain that no relatives were ever afflicted with a disease answering the description of acromegaly.

**Previous History.**—The patient seems to have had a full complement of illnesses in the past. She recounts attacks of measles, chickenpox, bronchitis, scarlet fever, quinsy, sore throat, rheumatic fever, brain fever, and, lastly, typhoid fever four years ago. Her menses were established at 11 years of age, and the periods have been uniformly painful. Since her typhoid they have been more profuse, except for an interval of four months, from September, 1903, to January, 1904, when the flow remained away altogether.

Chief interest attaches to her headaches, from which she has been suffering since early childhood. To her knowledge they have never been absent, and when a child at play she had to be very careful of herself for fear of precipitating them. She experienced them always in the form of a right hemiparesis, coming on at almost any time of the day, but oftenest late in the afternoon and lasting from one to three days, sometimes attended with nosebleed, but more often with severe vomiting. They came on at regular intervals of two weeks and were called "bilious attacks," because of associated vomiting, which gave her prompt relief. So severe have they been at times that bed rest became imperative. The wearing of glasses has in no way improved these headaches. Since her attack of typhoid and coincident with the progress of her present trouble the cephalalgia is almost of daily occurrence, vespereal in type, of increasing severity, boring and pulling in character, attended with considerable nausea, but no vomiting, and associated at times with a notable puffiness of the fingers and hands, which recedes with the termination of the ache. A younger sister is the only one of her remote or immediate relatives somewhat similarly afflicted.

A little more than four years ago the patient passed through



a prolonged mental storm as the result of opposition to an issue which greatly concerned her future happiness. In the wake of this infelicity there followed nervous prostration and a series of hysterical attacks, one of which eventuated in a "stupor" that lasted several days. Closely following came an illness of typhoid fever, from which, she thinks, she never fully recovered. Physically she always regarded herself as small boned and small featured. It is a family trait, she states, to be dainty and petite. There is no history of trauma. Personal habits are good. The appetite is fair. Of late there has been much drowsiness, but no refreshing sleep.

*Present History.*—(Subjective Complaints.) During the convalescence from typhoid, the patient noticed that she could not get into the clothes that had formerly fit her well. She was



Acromegaly. Photograph taken in June, 1905.

enough larger in the trunk not to be able to wear them. In answer to an inquiry as to the mode of onset and succession of the various enlargements, she states, "I think the features of my face altered first, but then I seemed to get big gradually all over. My growth must have been rapid, for a cousin who had not seen me for a year, on her return, failed to recognize me even in the surroundings of my own home and family." The voice has undergone a notable change of pitch since her attack of typhoid. In her church choir she always sang from soprano scores, but for the past three years the range has been lowered to alto and the voice become harsh. There has been much general malaise, headache and easy fatigue. Added to debility, there is excessive perspiration, and the skin has taken on a somewhat darker and more sallow complexion. She is suffering from violent headaches.

*Status Præsens.*—Physical examination reveals the follow-

ing: A woman of good stature, erect, appearing fairly well nourished, but presenting a very flabby musculature.

*The trunk:* The face is oval, elongated from the nose to the chin and disproportionately wide across the brow. The nose, not quite straight, is conspicuously long and the soft parts are unusually fleshy. The lips are larger and thicker than normal. The tongue, on protrusion, is broad and beefy, with its upper surface irregular and deeply furrowed. The lower jaw is considerably longer than normal, but the teeth are set closely together; there are no abnormal dental interspaces. The cranial bones may be somewhat enlarged, but the head does not impress one as being extraordinarily affected. The neck is short and measures  $14\frac{1}{4}$  inches in circumference. Before the attack of typhoid she could wear a number 13 linen collar, and now she requires a large number fourteen. At the juncture of the sternum with the first two or three ribs there is an undue anterior bulging of the broadened thickened bony structure, and I believe that the area of pyramidal dullness noted over this region by Erb in some of his cases can be elicited here. The ribs feel thick.

*The limbs:* The hands are markedly enlarged in the broad diameter, measuring  $8\frac{1}{4}$  inches; the fingers appear short, thick and stubby, but not clubbed; the normal "tapering" is altogether absent. The thenar and hypothenar eminences are prominent, but soft and flabby. The wrists measure 7 inches in circumference. Before her illness she wore a  $5\frac{1}{4}$  glove and now requires a  $6\frac{3}{4}$ , which is a snug fit.

The legs show marked outward bowing and thickening of the shaft of the tibia. The foot is wide, broad and flat and its greatest length from ankle to tip of great toe measures about 10 inches. The great toe is relatively much larger and broader than the others. The ankle is also larger. Formerly she wore a No. 4 shoe; now she requires a No. 6.

*The Integument:* The skin is of a somewhat dirty yellowish sallow hue, oily and sweaty. The hands feel soft, somewhat pudgy and cool. In the region of the left breast there is a small hairy mole. The breasts are soft, flabby and not very large, but the nipples are broad-tipped and coarse. The hair, besides having become some shades darker, has grown coarse in quality and excessive in quantity. The suprapubic and labial growth is thick, coarse and shaggy, and there is an unusual amount distributed over the limbs, abdomen, back and forearms, which according to the patient's statement has appeared only since the inception of the present trouble.

*The Eyes:* For the special eye findings I am greatly indebted to Dr. Albert Hale, whose report I insert in full: "The condition of the eyes as I found them in your acromegaly case is as follows: Has worn lenses for ten years. Always been myopic. Her last lenses (from England) were of  $-4.0$  Ds., with an astigmatism of  $1.50$  Ds. in each eye. I find that her myopia has probably increased about two diopters, for vision of  $6/6$  is obtained by the following:

R. O.D.  $-5.75$  Ds.  $-2.0$  Dc. 155 ax.  
O.S.  $-5.75$  Ds.  $-2.0$  Dc. 10 ax.

"In examining the eyes themselves, there is found this unusual condition: The pupils are small and unaffected by light or accommodation—symmetrically—but this can not be dependent on a central nervous lesion, because even by using the strongest mydriatic no decided effect on the iris can be produced, the dilation amounting at most to only a millimeter. There is no history of iritis given, and, even if there were, an iritis involving each iris so symmetrically would be extraordinarily rare. I can not find a cause in any other local area to account for it. The fundus shows no peculiarity unconnected with a myopia of this degree. But the smallness of the pupils does not admit of such a careful examination as this report should require."

*Internal Organs:* The nervous system reveals nothing abnormal except the headache already referred to. There is no vertigo. There is no cranial or peripheral nerve involvement. The knee jerks are very brisk. The heart is normal; pulse, 80, full, and of good tension. The urine is negative. A vaginal examination was not made.

*Treatment.*—The therapy has consisted chiefly in the administration of pituitary extract in tablet form. She has been



taking three-grain tablets three times a day, alternating with palliatives for her headaches and general tonics for the malaise. It has seemed to me that the taking of pituitary extract intensified the headaches and a discontinuance of the drug has marked several periods of improvement.

Since this is merely a case report, the pathogenesis, differential diagnosis and therapy are not discussed.

4304 Grand Boulevard.

## A UNILATERAL PARADOXICAL PULSE.

ALBION WALTER HEWLETT, B.S., M.D.

Instructor in Clinical Medicine at the Cooper Medical College.  
SAN FRANCISCO.

*Patient.*—L. A., aged 17. Family and past history were negative.

*History.*—Beginning in March, 1903, the patient was confined to bed for three months owing to a fever that was supposed to be typhoid, with relapse. During this illness he had very little cough or headache, but toward its termination he experienced severe pain in the left side, which lasted about a week and was made worse by cough and by deep inspiration. A week later he noticed, for the first time, that the left side of his chest was smaller than the right. He believes that this change in his chest took place overnight, and he is very certain that it had not existed before his illness. Since this fever he has been troubled more or less with weakness and with dyspnea on exertion. He has at present no edema, cough, or pain in the side.

*Examination.*—This shows a fairly well-developed boy; his color is good, and he is inclined to dyspnea and cyanosis on exertion. Examination of abdominal organs, urine, reflexes, etc., was negative.



Fig. 1.—Sphygmographic tracing from right radial artery showing effect of respiration. A. Deep inspiration. B. Inspiration.



Fig. 2.—Sphygmographic tracing from left radial artery showing effects of respiration. A. Deep inspiration.

*Lungs:* On inspecting the chest the left side is seen to be much smaller than the right in all its diameters. The left shoulder hangs low, and the left scapula is prominent. The circumference of the right side at the nipple level is 44 cm. on expiration and 46 cm. on inspiration. That of the left side is 36.5 cm. and does not change on respiration. There is a scoliosis to the right in the dorsal region and to the left in the lumbar region. The upper left chest is tympanitically resonant in front as far down as the second intercostal space. It begins here to become dull, and this dullness gradually changes into absolute flatness at the fourth intercostal space. Below this in front and over the whole back the percussion note is flat. The tactile fremitus is increased over the area of resonance, but is diminished over the dullness and flatness. The breath sounds over the upper left front are of the bronchial type; over the upper left back they are distant bronchial. Going down the chest, they become fainter and fainter and are completely absent over the base behind. No râles are heard. The signs in the right chest are such as one might expect over a lung that is doing the work of two.

*Heart:* The point of maximum cardiac impulse is situated in the fourth intercostal space 7.5 cm. from the median line. The area of cardiac dullness is enlarged somewhat to the right and upward. There is a slight systolic heaving over the whole of the precordium. There is no retraction at the apex

and no Broadbent sign. In the second intercostal space just to the left of the sternum a distinct late systolic pulsation is visible which is caused apparently by the movements of the pulmonary artery that has been uncovered by the retraction of the edge of the left lung. The pulmonary second sound is very much accentuated also owing, in great measure, to this retraction of the lung. No murmurs are heard.

*Pulses:* Under ordinary circumstances the two pulses are of nearly the same size and character. The systolic pressure in each brachial is 116 mm. of mercury (Riva-Rocci, 5-inch cuff). If the patient stands and takes a somewhat deeper inspiration than usual, the right radial pulse becomes small, and if a still deeper breath be taken it disappears entirely (Fig. 1), remaining absent as long as the deep breath is held. Under these circumstances, the brachial and axillary pulses also disappear, but the subclavian can be felt above the clavicle. If the right shoulder be passively elevated during the deep inspiration, the radial pulse may become somewhat smaller, but it does not entirely disappear. The effect of the position of the shoulder is illustrated in another way. If the patient maintains a position of deep inspiration, the radial pulse can be made alternately to appear and to disappear merely by raising and lowering the shoulder. The venous blood flow is not noticeably affected by these maneuvers. Deep respiration does not affect the left radial pulse to any greater degree than is normal (Fig. 2).

*Remarks.*—The retraction and immobility of this patient's left chest apparently depends on extensively thickened pleuritic adhesions, which have obliterated the greater part of the pleural cavity and have led to retraction of the left lung. The disappearance of the right radial pulse on deep inspiration is evidently due to a mechanical cause lying somewhere between the second portion of the subclavian and the upper axillary artery. This cause is active only when the shoulder is hanging low. Two possible explanations of this unilateral paradoxical pulse have suggested themselves to me. First, there may be a compression of the subclavian artery between the clavicle and some underlying structure such as the first rib. The extreme movements of the right chest caused by lack of function in the left would lift the artery unusually high during inspiration so that it could be more easily compressed by a low clavicle. The other possibility is that the artery may be so bound down by adhesions within the chest cavity that it is kinked over the first rib when this is raised during deep inspiration. Elevating the shoulder might prevent such a kinking by lifting the artery off the rib.

This is not the place to discuss the various forms of the paradoxical pulse nor to go into the various causes that may give rise to this symptom. I have been able to find but very few instances of a unilateral pulsus paradoxus recorded in the literature. In Gerhardt's two cases<sup>1</sup> the unilateral disappearance of certain of the pulsations appeared to be due to a localized arteriosclerotic narrowing of the lumen of the corresponding artery, as was demonstrated in one of his cases by an examination after death. Harris<sup>2</sup> has also reported a unilateral pulsus paradoxus in a patient who had a mediastinopericarditis. He believes that the adhesions affected the left subclavian to a greater extent than they did the innominate, but he was unable definitely to prove this at autopsy.

1. C. Gerhardt: Berl. klin. Wochts., 1897, pp. 4 and 283.

2. Thomas Harris: Lancet, 1899, I, p. 1072.

*Causes of Failure.*—Some men fail through their overweening confidence or insufferable conceit. The very first thing a student should do is to gauge properly his abilities. He should never excuse his own mistakes. He can not hope to succeed without a thorough mastery of the technic of his profession. He should never place confidence in unadulterated luck. He should recognize early the advantages of a cool head and a clear eye, and learn to practice the old-fashioned virtues of sustained effort and steady industry, otherwise known as patience and grit. Spasmodic study and investigation are worse than nothing, as they cultivate an unscientific mental attitude. Failure through "dry rot" is of itself compensatory and but simple justice.—*Kansas City Med. Index-Lancet.*



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SATURDAY, NOVEMBER 4, 1905.

## THE ESSENTIALS IN STATE SUPERVISION OF INSANE HOSPITALS.

At the recent meeting in Portland of the National Conference of Charities and Correction, the report<sup>1</sup> of the committee on state supervision and administration gave a cheering instance of the more enlightened and scientific view of the treatment of the insane which the public is slowly acquiring. The report reminds us that, at a conservative estimate, the actual yearly increase in the number of insane persons in public institutions in the United States is now at least 5,000, and that the total number cared for by the states has already reached 150,000. Such figures may well cause popular alarm. Whether insanity is relatively increasing or not is still a moot question, but the facts as to the actual increase of the number of insane patients maintained by the states can not be overlooked. In view of these facts the report very properly points out that the neglect of preventive effort in this field is no less than foolhardy. "It is as if a city were to abandon vaccination and content itself with an admirable isolation hospital in which to treat all discovered cases of smallpox."

The report urges as the primary essential of preventive measures, better facilities for the training in psychiatry of medical students, a point which we have emphasized so often in these columns that it is unnecessary to dwell on it here. It describes at length the university hospitals for the insane in Germany, dwelling especially on the admirable care thus secured for the acute patient, as well as on the opportunity for clinical study afforded to the student, and emphasizing a fact not always realized by the public, namely, that nowhere are patients so sure of good medical care as in institutions where teaching is done in the wards. "The university clinic in psychiatry, at its best, is a small, suitably equipped hospital for the insane, serving also for the purpose of a hospital for acute cases in the city in which it is situated. It is maintained by the university, is directed by the head of the department of mental diseases, and is used for instruction of medical students. It has about three times as many nurses as the average asylum, and the patients enjoy the most advanced medical care. In all the German hospitals, and in those of Switzerland and Italy as well, a six months' course in the study of insanity is required, and a student can not obtain his degree

without undergoing a special examination which includes the clinical examination of patients. The most distinguished alienists are in charge of these hospitals. Krapelin at Heidelberg needs only to be mentioned to indicate that the greatest specialists in Germany are not too great to be enlisted in the service of the state. Candidates for government physicians must serve as internes in the public asylums, and no physician is allowed to have charge of a private asylum, who has not served two years as interne in a public asylum, while a dozen years of apprenticeship are usually necessary before a man can attain a superintendency of a public hospital. His superintendency attained, his position is permanent during good service. Thus the state obtains its servants by training them and keeps them by the reward, not of great salaries, but of permanent positions and opportunities for scientific work."

The report quotes extensively from that remarkable document published by the French Republic, to which we have already referred in these columns, "The Report on the Care of the Insane," edited by Dr. P. Sericux, and points out the evident freedom from political domination which characterizes the work of Dr. Serieux. "The point of interest in studying the French attitude toward public care of the insane is not the actual situation of the insane in France. That is strangely like our own in the lack of adequate nursing service, and in the demand for 'business administration' by those who are unconscious of the lines of true economy in humanitarian affairs. It is the fearlessness of the French self-criticism, the candor of her recognition of a superior service, even if it be in the land of her dearest foe, her humble willingness to study wherever there is anything to be learned—this state of the official mind it is which must interest and inspire us."

The fact that in America institutions for the insane are carried on by the separate states and that any criticism of their management in any state is likely to be considered as an attack on the dominant political party in that state, renders a candid discussion or comparison extremely difficult, almost sure to offend the politicians in power, and therefore to result in no good to the institutions. Possibly if this important matter could be the subject of federal inquiry we could attain the independent spirit of the French government. Indeed, we look forward with interest to the appearance of the government statistics on the extent of recognized insanity, which, we are informed, are nearly ready for publication. It may be that they will prove a basis for further governmental inquiry.

The report emphasizes the need of popular education and popular respect for medical standards, and refers to the present status of the Cook County Hospital for the Insane (Chicago) as an excellent illustration of the improvement which can be readily secured when good officials have public backing. "The Cook County Insane Asylum offers an instance of an institution recently lifted from neglect and inefficiency to the highest stand-

1. Report of the Committee on State Supervision and Administration, made by J. C. Lathrop, Hull House, Chicago, at the National Conference of Charities, Portland, Ore., 1905.



ard by the power of public opinion. The case is especially apposite to our argument, because the public interest was not directed toward changes in business management—no charges of fraud or dishonesty were brought—no effort was made to change the financial methods which are well organized and carried on by the paid Board of County Commissioners. It was to create a spirit of humanity and of science and to apply it to the daily lives of the patients that effort was directed. This asylum has become one of the best-conducted in the world, on the medical and nursing side. The moving force in securing this fundamental improvement was an aroused public attention, which insisted suddenly on knowing about the institution, and next demanded, and at once obtained, a better service. It should be added that a controlling majority of the managing board heartily co-operated in the changes which revolutionized the asylum and demonstrated afresh that official boards in this country must have the backing and stimulus of the intelligent public opinion.”

The report closes by stating three essentials for an adequate system of state supervision and administration of public institutions as follows: 1. On the one hand, absolute independence of that exploitation which we know as a “political influence,” and, on the other hand, strict accountability to the proper state authorities. 2. The enlistment of the finest trained ability in the public service. 3. A sustained intelligent public interest.

#### TUBERCULOUS RHEUMATISM.

It must be apparent to all who have followed medical literature for the last few years that the subject of rheumatism has received a good deal of attention. It was surely time that the heterogeneous group of cases which were classed under this name should receive a thorough overhauling. As a result of the restudy of this important subject we have received light on many obscure points, but fresh aspects of the subject have cropped up and need investigation. Among these is the relation which exists between tuberculosis and certain forms of joint disease which do not conform to the classical type of tuberculous arthritis, clinically or pathologically.

Attention was first drawn to these forms of rheumatism several years ago by Poncet, and a great many of the publications on the subject have emanated from this author and his pupils, or from other representatives of the French school. In Germany the matter has received but little attention, while in this country little has been contributed. Only one important contribution on the subject comes to mind, the article of Edsall and Laven-son.<sup>1</sup> The assumption of Poncet and his adherents is that certain forms of joint lesion now classed as chronic rheumatism or arthritis deformans are in reality tuberculous in nature, and due to the action on the joints of the tubercle bacillus or its toxins. Not only chronic forms of rheumatism have been ascribed to this cause,

but also certain atypical acute forms. Laub,<sup>2</sup> for example, has recently described as tuberculous rheumatism an attack of acute joint disease, polyarticular in character, in a tuberculous patient with an acute tuberculous pleurisy. The acute form of tuberculous rheumatism is said to differ from ordinary acute articular rheumatism in its atypical course, the moderate swelling and pain in the affected joints, the slight impairment of movement, and the lack of effect of salicylates. This form of the disease is not, however, the most common one, and more frequently we see what Poncet describes as “*rhumatisme tuberculeux ankylosant*,”<sup>3</sup> which is more chronic and results in a dry fibroarthritis with formation of new bone in the neighborhood of the joint. This form generally begins in one joint and gradually involves others. Poncet has also suggested that certain types of what is clinically classed as arthritis deformans should be grouped with tuberculous rheumatism, as they also are due to the tuberculous poison.

The questions brought up by this work of Poncet are important ones, and worthy of careful consideration. If any objection can be made to Poncet's deductions it is that they are founded too much on pure clinical observation, and not enough on bacteriologic and pathologic research. It is, of course, true that many things suggest the possibility of a relation between tuberculosis and rheumatism. The well-known effects of tuberculous infection on the bones, as seen in the classical Hippocratic fingers, the curious and frequently observed family association of tuberculosis and arthritis, and other suggestive but less striking facts are all important. But the mere association of two diseases does not necessarily mean that they bear any causative relationship to one another unless this association is strikingly frequent. There are doubtless many cases of rheumatism corresponding clinically to Poncet's tuberculous rheumatism in which no signs of tuberculosis are present. In one or two instances tubercle bacilli have been demonstrated in fluid from joints which did not at all present the characteristics of ordinary tubercular arthritis, and in still more instances the administration of tuberculin has resulted in general and local reactions in individuals suffering from what seemed to be chronic rheumatism or arthritis deformans.

Such facts are certainly very suggestive, notwithstanding the fallacies connected with the tuberculin reaction. It is probably fair to assume that there are joint lesions due to the tubercle bacillus or its toxins which are clinically those of chronic rheumatism or arthritis deformans. Whether such lesions are as frequent as Poncet would have us believe is another matter. In view of the small number of cases in which careful bacteriologic tests have been made, and considering the accessibility of the joints to investigation, the wonder is that the subject has not been more thoroughly thrashed out before this.

1. Amer. Jour. Med. Sci., December, 1903.

2. Zeitschrift für Tuberculose, vol. vii, No. 5.

3. See THE JOURNAL, xxxvii, page 1008 and xlii, page 832.



## KNOWLEDGE AND WISDOM IN MEDICINE.

It has become the custom to select some motto which seems particularly to represent a basic principle in one's life work, and to have it framed and hung so as often to come under one's eye. We know of no words of wisdom that could be more precious in this respect for the physician to see frequently than certain lines of Cowper, on knowledge and wisdom. It is not an unusual impression among members of the profession that the more practice a man does and the more hospital appointments he holds, the more likely is he to gain that larger wisdom which enables him to diagnose readily and with assurance and so to be of special service in consultation. There is many a "pluralist" among us holding hospital appointments, the duties of which he is scarcely able to fulfill and yet who is not ready to resign because he feels that the apparent experience which they enable him to gain must somehow prove of use to him in adding to his store of medical wisdom. But alas! the "pluralist" in medicine does quite as much harm as the holder of several ecclesiastical appointments to whom therefore the name was first applied. Like his religious prototype, he harms himself and others. For him surely Cowper's words will show the vanity of over-occupation:

Knowledge and wisdom, far from being one,  
Have oftentimes no connection. Knowledge dwells  
In heads replete with thoughts of other men;  
Wisdom in minds attentive to their own.  
Knowledge is proud that he has learned so much;  
Wisdom is humble that he knows no more.

The quotation was recently published in Osler's farewell address to Canadian and American medical students, and he added some precious words of his own:<sup>1</sup> "What we call sense or wisdom is knowledge, ready for use, made effective, and bears the same relation to knowledge itself that bread does to wheat. The full knowledge of the parts of a steam engine and the theory of its action may be possessed by a man who could not be trusted to pull the throttle. It is only by collecting data and using them that you can get sense. One of the most delightful sayings of antiquity is the remark of Heraclitus on his predecessors—that they had much knowledge, but no sense, which indicates that the noble old Ephesian had a keen appreciation of their difference; and the distinction, too, is well drawn by Tennyson: 'Knowledge comes, but Wisdom lingers.'"

As we read we are reminded of some of the most salient facts in the history of modern medicine: Auenbrugger, plodded along patiently in his small, obscure hospital in Vienna cultivating wisdom rather than gathering information, while the presumedly great medical geniuses who were supposed to be adding to medical knowledge were at work in the general hospital with all its clinical facilities, yet the younger, unknown worker solved one of the most important of diagnostic problems and gave us the first foundation stone of thoracic diagnostics. Young Jenner, as a country practi-

tioner, worked out the problem of vaccination, with all that it was to be of benefit to the race. Corrigan studied hard at his little hospital in Jarvis street, Dublin, which had only six beds altogether, and yet in three years he laid the foundation, practically, of all the assured knowledge that we have with regard to aortic diseases. Surely in medicine it is *multum, non multa* that counts; much wisdom, not the knowledge of many things, and least of all superficial information about many things. The first modern physician, whom we are glad to recognize as a great professional brother, as well as distinguished writer, Rabelais, began the railing at useless information and the volumes of it that so many people consume, and it would be worth our while to take his lessons to heart even in the twentieth century.

CAUSES OF THE DESTRUCTION OF THE BACTERIA  
IN THE SMALL INTESTINE.

Rolly and Liebermeister,<sup>1</sup> two German investigators, have undertaken to discover experimentally the causes of the destruction of bacteria in the small intestine. Rabbits were employed by these investigators. Their first effort was to find out if the contents of the small intestine were sterile or not. They showed by the number of colonies on agar plates that there were only a small number of bacteria present, there being more in the lower ileum. They next wished to discover if bacteria introduced into the small intestine were killed or their growth hindered. Various kinds of bacteria were introduced into the intestine, the stomach having been previously cut off to prevent the entrance of its contents. The results were the same with all the bacteria employed. It was found that the bacteria, if not too many, were destroyed in part by the intestine, some of them being removed by peristalsis, so that after a certain time the small intestine was almost sterile.

Having shown that the small intestine had a definite bactericidal power, they next endeavored to determine the mechanism of this action. Six possibilities were to be considered—peristalsis, intestinal juices, living intestinal wall, bile, acidity of chyme and alteration of the reaction in different parts of the intestine. By rotation of reagent glasses, containing sterile bouillon and various kinds of bacteria, it was observed that motion had no effect on the growth of bacteria, and the authors concluded, therefore, that peristalsis in itself has no bactericidal power. The fact that bacteria flourish when peristalsis is diminished, causing an abnormal stagnation, is due to other causes. The intestinal juice, pancreatic juice and bile, alone or combined, were found to have no bactericidal action, but on the contrary, to furnish good culture media for the growth of microorganisms. The bactericidal action of the living intestinal wall was next tested. By tying off loops of intestine under otherwise normal conditions, they found

1. Medical News and St. Louis Medical Review, Sept. 30, 1905.

1. Deut. Archiv. f. Klin. Med., 1905, lxxxiii, p. 413. Abstract in THE JOURNAL on page 1284.



soon afterward a diminution in the growth or complete death of the bacteria. The exact cause of this action remains unknown.

It was found further, that if the intestinal mucosa is injured, bacteria can grow unhindered. This bactericidal power of the normal, living intestine is the same whether acting alone or in combination with bile or pancreatic secretion. The acidity of the chyme as it enters the small intestine has an inhibitory effect on the growth of bacteria. If the stomach contents are neutralized many more bacteria are carried into the intestine than otherwise. The authors consider that although peristalsis by itself has no direct effect on the growth of bacteria, by quickly carrying bacteria from a fluid of one reaction to that of another, it serves to prohibit abundant growth, since different bacteria require different reactions for their best growth.

It is worthy of special emphasis that if the mucous membrane of the small intestine is injured an enormous growth of bacteria results. This was found to occur whether the reaction was acid or alkaline. The conclusions are reached, consequently, that the mucous membrane of the small intestine has the power of protecting the small intestine from bacteria by destroying them, and, further, that if the mucosa is inflamed or changed in other ways it loses this power, and the intestinal contents now furnish a good medium for bacterial growth.

While the results of these investigations on the rabbit can not be applied directly and with full force to human beings, yet they help us to understand better certain phases of intestinal infection in man. For instance, there may be found to exist a natural, local immunity of the intestinal wall to the typhoid bacillus, infection with which perhaps can not take place without previous mechanical or chemical lesions of the wall itself. In this way may be explained, at least in part, the fact that so many persons escape typhoid fever under conditions that surely must lead to the presence of typhoid bacilli in the intestinal contents. We know that in times of cholera and dysentery epidemics individuals may harbor the respective bacilli in the intestinal tract without any recognizable harmful results, i. e., without infection. Now, it may be that in such cases there was no disturbance of the intestinal wall sufficient to upset its normal resistance. In connection with this, the suggestion may be made that the acquired immunity to typhoid fever and cholera, which seems to persist long after the disappearance of the newly developed antibodies in the blood, may depend on an acquired local immunity of the intestinal wall.

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#### "PERUNA AND THE BRACERS."

The exposure of the alcoholic nostrum is now fairly complete. Well begun by the *Ladies' Home Journal*, the task was last week well rounded out by *Collier's Weekly*. Samuel Hopkins Adams' article entitled "Peruna and the Bracers" proved even more extended and more informing than was anticipated. Many of his facts are

more or less familiar to physicians, but more are not. Medical men should read the article and call it to the attention of their patients. Showing that the drug content of peruna is less than one-half of 1 per cent., and that the alcohol content is about 23 per cent., Mr. Adams appears to make it inevitable that the manufacturer and the retailers of this nostrum are to feel the full weight of the new ruling of the United States Commissioner of Internal Revenue as to the imposition of the internal revenue liquor tax. The cost of peruna being 7 to 8 cents a bottle and the retail price \$1, it is not hard to see where the fortunes come from. The direct testimony of the production of intoxication—even of fatal narcosis—as well as of chronic alcoholism, should stir the sense of justice of the most negligent. In the prohibition districts of our southern states the consumption of peruna as an intoxicating beverage is so great that Mr. Adams says a number of southern newspapers are advertising a cure for the "peruna habit." Physicians will be interested to learn from this article that two popular nostrums, one of which is advertised to physicians, are owned by a distilling company. For the injurious traffic in "the bracers" two remedies are proposed: (1) "That the government no longer permit liquors to disguise themselves as patent medicines"; and (2) that the manufacturers be compelled to "label every bottle with the percentage of alcohol it contains." The first is now being applied by the Commissioner of Internal Revenue; the second will be provided for if Congress will enact this winter the pure food and drug bill that is so insistently demanded. Of course, the wide publicity itself is certain to have a marked restraining effect on the innocent purchasers of the disguised alcoholics by persons seeking "medicine." Physicians now can aid the reform in two ways: First, by working hard for the passage of the pure food and drug bill, and second, by exercising moral suasion on the proprietors of the newspapers which are active partners in the destructive trade.

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#### THE UNIVERSAL CRAVING FOR ALCOHOL.

Medical readers are familiar with the statistics of the liquor trade in this and in other countries. The per capita consumption of spirits and malt liquors by all nations is appalling in its proportions, and has long been the occasion for grave concern on the part of thoughtful publicists. Present revelations of the magnitude and ubiquitous pervasiveness of the traffic in alcoholic nostrums are staggering. The per capita consumption of these thinly disguised liquors escapes the statistician, but the rapidly amassed wealth of the purveyors of the fraudulent "tonics" and "bitters" testifies loudly to the tremendous extent of the business. As these exposures proceed, the public sees that many of the active opponents of the open liquor traffic are themselves tipplers. Women, children, clergymen, temperance workers, are the victims of this dreadful trade. All this can mean but one thing, namely, that the craving for alcohol is all but universal. All that is needed to arouse the taste is the first sample, and the canny compounders of the alcoholic nostrum take full advantage of this human weakness, adding to the enormity of their crime by selling their wares under



false pretenses. Because of this craving for alcohol the public can not be left to care for itself against the disguised liquors. The label must tell the composition of the nostrum, so that the weak and wholly innocent may be protected.

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#### FOUND DROWNED ON LAND.

A curious fact, if it is such, that may have some medicolegal importance, is reported in the press dispatches from London. A man was found dead in a field near a brook, and the medical testimony was that drowning was the cause of death. The evidence seemed to show that he had fallen into the water and that he had been able to crawl out but had practically drowned on dry ground from the water he had taken in. The possibility of a man's being able to get out of the water and still being unable to free his lungs and therefore practically drowning on dry land is not altogether un-supposable, though little is said of it in works on medical jurisprudence.

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#### HOURS OF SLEEP FOR SCHOOL CHILDREN.

It will scarcely be denied that many of the ills of modern life can be traced to overwork and under-rest. Work and rest are habits and they can be cultivated so as to yield mutually the most productive results. The need for sleep varies with the individual. The average adult requires not less than eight hours in twenty-four. While some seem to be able to do well with less, not a few are better for more. Old persons generally get less—at least they do not sleep so long consecutively; but they can take additional rest with advantage in the middle of the day. Without question, children should invariably secure more than eight hours of sleep in each day. The new-born infant sleeps almost all the time, and the young child should receive a maximum amount of sleep. The growing boy or girl requires a large amount of sleep to compensate for the expenditure of energy in growth and development, and a similar statement is applicable to the youth of both sexes at school. In an interesting communication dealing with some phases of this subject, Dr. T. D. Acland<sup>1</sup> points out that in not a few of the great public schools of England an insufficient number of hours are allowed for sleep, in some institutions in defiance of the recommendations of an appointed medical officer. The conditions are more satisfactory in the United States. As the result of an inquiry among masters and medical officers of schools, physiologists and physicians, the conclusion is reached that growing boys need from nine to ten hours of sleep. Rather more is required in the winter than in the summer. Not only the quantity but the quality of the sleep must be taken into consideration. Among influences contributing to the latter are darkness, freedom from noise and other disturbance, a comfortable degree of heat and proper ventilation. A factor of great importance that is often ignored is the inculcation of the habit of sleep with respect to both regularity and time.

#### "HUMANE" MURDER.

In his "Blithedale Romance," Hawthorne remarks that the woman reformer, in her attacks on society, has an instinctive sense of where the life lies, and is inclined to aim directly at the spot. However true or otherwise this may be in a general way, there have been striking illustrations of it of late. During the past few months an irregular medical practitioner of the sex usually called the "gentler," strongly advocated, in a meeting of her own sect, the killing off of the degenerates, and was flattered by an extensive press appreciation in the way of quotation and republication. Still more recently, a woman, a delegate to the American Humane Association, offered a resolution asking for the legalization of the murder by anesthetics of persons painfully and fatally injured, and advocated also the same for persons suffering from lockjaw, consumption and other painful and hopeless diseases. Her resolution was very properly ruled out by the presiding officer, but that it should have been offered is a rather striking commentary on the extreme views that are held by some would-be philanthropists. Ill-balanced reformers, with an imperfect or twisted moral sense, are always too common, and the publicity of their vagaries is often a serious drawback to progress in real and necessary reforms. One of the most objectionable facts in connection with this class is the unscrupulousness with which persons like the one referred to claim the indorsement of others for their own peculiar individual hobbies. The woman referred to, it is said, quoted the names of prominent clergymen and others as favoring her idea. Apparently, she did not venture to quote the names of reputable medical men, and for that we are thankful.

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#### THE NEED OF AN ANATOMIC LAW IN TEXAS.

An anomalous condition—at least anomalous at this age—exists in the state of Texas. Practitioners of medicine are required to have a knowledge of the human body and medical colleges are chartered to teach the science and art of medicine in that state, and yet there is no legal provision whereby the student or the physician can secure the dissecting material. To desecrate a grave in Texas is a crime punishable by six months' imprisonment, or a fine of \$500 or less. To disinter or to carry away any human body or the remains thereof, or to conceal it knowing it to be illegally disinterred, is a crime punishable by a fine not exceeding \$2,000. It is legal to dissect bodies before burial, but it is impossible to secure them legally. In 1900 a measure to legalize means of providing dissection material passed the legislature, but the governor vetoed it. In 1904 a bill was prepared containing provisions which, it was thought, would prevent any of the abuses which had been feared by the public, and yet it was impossible to secure a vote in the senate on the question. The profession of Texas certainly deserves better treatment than this. It has been suggested that in suits for malpractice it would be a legal defense in the state of Texas to show that the laws of the state, if adhered to, prevent the student or the practitioner from securing a working knowledge of the human body, and that, therefore, a suit for malpractice could not stand. The situation de-

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1. *Lancet*, July 15, 1905, p. 136.



mands a prompt remedy, and we trust that our Texas brethren will leave no stone unturned until they are allowed to use unclaimed bodies, instead of the present necessity of resorting to illegal means.

#### PRESCRIPTION GRAFT.

Now that lay journals are aiding in the exposure of the evils of the nostrum traffic, there is increasing lay interest and discussion of medical affairs. Thus we find reference to druggists paying commissions to physicians on prescriptions, and of course the practice properly is condemned. It is indefensible, and we hope it is not sufficiently common to need more than passing remark. As the public becomes better posted on these points, the offender in this respect must not be surprised when he meets with exposure and loss of professional standing. Such methods are certain of ultimate discovery, and it is folly to risk one's reputation for so petty and so mercenary a stake.

#### COLLABORATION OF THE PRESS IN SCIENTIFIC CONGRESSES.

In an able review of the work accomplished by the International Tuberculosis Congress at Paris last month, the *Semaine Médicale* of Paris comments on the way in which the lay press seized the opportunity of the congress to insert advertisements in its reading text. At the opening of the congress the secretary general remarked: "Thanks to the generous and untiring collaboration of the press, not only the scientific, but the literary and political press, this congress will be able to spread throughout the world the idea of the solidarity of all human races in respect to tuberculosis. The seed has fallen into good ground." The article continues: "The lay journals gave plenty of space to accounts of the congress, but these journals—which give such ample hospitality to the flaunting advertisements of shameless irregulars—can they be relied on to propagate sound ideas in regard to the struggle against the redoubtable scourge? No illusions could be retained after seeing in one of these journals the detailed program of the congress followed by a recommendation of an establishment for the cure of tuberculosis. Under the heading 'Tuberculosis Congress,' was the following notice: 'At the moment when the antituberculosis congress is on the point of convening, we must call attention to the cures obtained at the medical institute of ———' (giving the name and address of the institute, hours for consultations, etc.). A few days later, in the same journal, the report of the congress was followed by a paragraph to the effect that 'the omnipresence of the tubercle bacillus is the main point established by the congress, but the destruction of the bacillus is still under discussion. The members of the congress, however, recognized that the ——— company has found the elegant solution of this problem.' After these experiences it would require the optimism of a Pangloss to maintain that a scientific congress can count on the useful collaboration of the political press, and that 'the seed has fallen into good ground.' Unfortunately, it is not in the political press alone that the advertisements press close on the report of the Tubercu-

culosis Congress. We have seen a certain medical journal, in one of its most recent issues, recording the transactions of the congress, devote one-half of each of the congress pages to advertisements of medicines for tuberculosis, dividing the page equally between the congress and the ads." The writer probably refers to the issue of the *Presse Médicale* for October 6, which bears the special heading "Congrès International de la Tuberculose, No. 80 (Supplémentaire)." The upper half of twelve pages is devoted to the congress, while the lower half of eight of them contains a running advertisement of medicines to use in tuberculosis. Our contemporaries across the water have commercialism to hold in check, it seems, as do we on this side.

#### WOMEN STUDENTS AND THE STUDY OF ANATOMY.

At a recent meeting, the Melbourne University council, according to the *Australasian Medical Gazette*, discussed the question of the accommodation for women medical students in the study of anatomy. It was pointed out that as the women occupy a separate room they are at a disadvantage, and one of the professors expressed a decided opinion in favor of the men and women using the same dissecting room, but he said that the women, in view of opinions being expressed that there was impropriety in the practice, did not care to adopt it. As the *Gazette* points out, if women are to be admitted to the medical curriculum at all, and especially if they attend coeducational schools, they must be prepared to work alongside of men students throughout their whole course; and any suggestion that they should receive separate instruction is based on false sentiment. The two sexes must meet in the postmortem room and in the hospital wards, and if they must be associated in the later part of their curriculum, surely there can be no objection to such a practice when they are studying anatomy. There need be no more impropriety in the conscientious study of human anatomy than in the study of botany or biology; the impropriety is not in the subject, but in the attitude of mind of the student.

#### "INTERNAL" VACCINATION.

An Iowa judge has recently ruled against a local board of health which had refused to admit to the public schools pupils who had only ingested vaccine matter in the manner endorsed by certain members of the homeopathic school of practice instead of by direct inoculation. It was held that a method of vaccination endorsed by one of the recognized schools of medicine could not be discriminated against by any local health board. It is unfortunate that such matters have to be left to lay judges to decide. THE JOURNAL has already expressed an opinion regarding the value of this method of vaccination. The situation affords an opportunity for some of those who do not advocate this method to observe some of its possible effects.

**Therapeutic Misinformation.**—Certain writers have asserted that an alkali given before eating always increases the secretion of HCl, and given after meals lessens it. This is not true. This piece of misinformation has been handed down from the time of Sydney Ringer at least.—Boardman Reed.



## Medical News

### ARKANSAS.

**New Hospital.**—A new Catholic hospital has been established at Fort Smith.

**College Opens.**—The twenty-seventh annual session of the Medical Department of the Arkansas University, Little Rock, began October 16, the opening address being delivered by Dr. Edwin Bentley, dean of the faculty.

**Fined for Prescribing Baths.**—Dr. Thomas B. Rider, Hot Springs, was arrested October 3 by a deputy United States marshal on the charge of prescribing hot water baths for patients, he being an unregistered physician. On his trial October 4 he was fined \$50 and costs.

**Personal.**—Dr. John Hern, interne at the City Hospital, Little Rock, has resigned and gone to Tucson, Ariz., for his health.

—Dr. Milton Vaughan has resigned as contract surgeon United States Army and will resume practice in Little Rock.

—Dr. George W. Hudspeth, Little Rock, was operated on for kidney disease October 6 at St. Vincent Infirmary. He is reported making favorable progress toward recovery.—Dr. Edmund D. Shortledge, United States Army, who has been spending some time in Hot Springs, has returned to his home in Wilmington, Del.

### CALIFORNIA.

**Personal.**—Dr. Maude Noble, San Francisco, sailed for home from Antwerp November 4.

**County Hospital Too Small.**—Although the Los Angeles County Hospital was completed less than a year ago, all but 20 of its 212 beds are occupied, with the worst months for illness—December and January—yet to be heard from. The entire capacity of the hospital is 250 beds.

**Guilty of Assault.**—Dr. L. T. Holland, Los Angeles, formerly coroner of Los Angeles County, on October 13 was fined \$30 for battery on Mrs. Eliza Flick. Mrs. Flick alleges that Dr. Holland struck her a blow on October 3, when she demanded rent due her. The physician claims that Mrs. Flick ran into his fist.

**Crusade for Pure Milk.**—The board of health of Los Angeles and the city health officer have recently inaugurated a crusade for pure milk. After personal visitation of dairies within and outside of the city limits, followed with analyses by the city bacteriologist, the board has decided that a dairy selling milk which contains more than 500,000 colonies of bacteria to the cubic centimeter shall be the subject of investigation.

**Sent to Asylum.**—Dr. Frederick W. Harris, San Francisco, appeared before the lunacy commissioners October 8 and begged to be committed to an asylum. After examination he was committed to the Agnew State Hospital.—Dr. W. N. Moore, Ukiah, county physician of Mendocino County, was committed to the Mendocino State Hospital, Ukiah, October 17. He was once elected medical superintendent of this hospital, but lost the position in the legal contest which followed.

**Physician Assaulted.**—Dr. James F. Rinehart, Oakland, has sworn out a warrant for the arrest of John Rose, a saloon-keeper, on the charge of assault with a deadly weapon. The physician states that he called on Rose to collect a bill of \$42.50, but that Rose refused to pay, tendering \$25. On Dr. Rinehart's refusal to accept this amount, it is said that Rose picked up a club and, without warning, struck the physician a blow on the head which felled him to the floor insensible.

### DISTRICT OF COLUMBIA.

**Needs Larger Appropriation.**—Dr. William C. Woodworth, Washington, health officer of the district, has asked for an appropriation of \$141,240 for the health department for the next fiscal year. This is an increase of \$48,460 over the amount asked for last year.

**Obstetrical and Gynecological Society.**—The annual meeting of the Washington Obstetrical and Gynecological Society was held October 30. The election of officers resulted as follows: Dr. George N. Acker, president; Dr. Miller, secretary; Dr. Prentiss, treasurer, and Dr. Loren P. T. Johnson, corresponding secretary.

**Health of the District.**—The report of the health officer for the week ended October 21 shows the total deaths to have been 108—white 57, colored 51; births, 131—white 88, colored 43; stillbirths, 16—white 7, colored 9. There were under treatment at the close of the week 29 cases of diphtheria, 8 of scarlet fever, 205 of typhoid fever and 1 of smallpox.

**New Medical Society Formed.**—The George Washington Alumni Association (medical branch) met October 21 and formed a new medical society for its members. It is proposed to hold meetings monthly during the scholastic year. Dr. A. Barnes Hooe was elected president, Dr. John W. Chappell, vice-president; Dr. Daniel W. Prentiss, secretary, and Dr. Louis Taylor, treasurer.

**Report of the Surgeon-General of the Navy.**—Surgeon-General Presley M. Rixey of the Navy, in his annual report recommends enlarging the Naval Hospital at Norfolk, Va., to a capacity of 300 patients, and the establishment of a hospital or camp at Park Royal, S. C., for the care and treatment of tuberculosis. He also recommends extensive improvements in the hospital at Pensacola, Fla.

**Hospital Named in Honor of Walter Reed.**—By order of the War Department the Army General Hospital, which will be constructed in the District of Columbia, under the authority conferred by the act of Congress approved March 3, 1905, will be known as the Walter Reed United States Army General Hospital, in honor of the late Major Walter Reed, surgeon, United States Army, "whose demonstration of the mode of transmission of yellow fever is of the highest public importance."

**Student's Suit Still Rejected.**—On October 21 Judge Barnard refused a writ of mandamus to Frank A. Davis, a medical student, who holds a diploma from the medical department of Howard University, and who sought to compel the District Board of Medical Supervisors to allow him to take the examination for a physician's license. The medical supervisors, however, took a different view, holding that a two years' course in pharmacy was not equivalent to one year in medicine and that, therefore, the applicant had not completed the four years' study required by the law.

**Freedman's Hospital Report.**—In his report to the Secretary of the Interior Dr. William A. Warfield, the surgeon in charge, says:

The most important event affecting the management of the hospital occurred when Congress, by the sundry civil act, approved March 3, unified the management under the Department of the Interior, in accordance with the recommendation contained in your last annual report. Although it has been only two months since the change became operative the wisdom of the act has been clearly demonstrated, and it is further emphasized by the lack of embarrassment which so frequently proceeded from a dual control of the hospital, and the facility with which supplies are now received.

In compliance with the act above referred to, patients from the District of Columbia are now admitted to the hospital on a contract basis. The hospital receives from the board of charities of the District of Columbia \$1.10 per day for the care and treatment of all persons over twelve years of age, 65 cents per day for those under 12 years, and 40 cents per day for those born in the hospital, Congress having appropriated \$25,500 for the same. This sum will not be sufficient to care for the District of Columbia patients throughout the present year if the rate of admissions continues as high as during July and August.

Two thousand nine hundred and eighteen were admitted, 187 were born in the hospital and 114 were remaining July 1, 1904, making a total of 3,219 under care during the year; 3,066 were discharged, leaving 153 in the hospital July 1, 1905, as against 114 the preceding year. Of the number discharged, 1,997 were cured, 424 were improved, 191 unimproved, 66 not treated and 201 died.

### GEORGIA.

**Had No License.**—"Dr." W. C. Williams, a colored individual of Atlanta, at whose office all diseases were alleged to be cured, was fined \$25 and costs September 18 for practicing medicine without a license.

**Health Board Wants Prompt Report.**—The Augusta board of health has sent out personal letters to the physicians of the city urging on them the necessity of full and prompt reports of all communicable diseases and of births and deaths.

**Personal.**—Dr. W. Monroe Smith, Atlanta, was fined \$15.75 September 27 for exceeding the automobile speed limit.—Dr. Eben G. Russ, formerly of Atlanta, who has been ill at St. Mary's, Pa., is convalescent and has been taken to Atlantic City, N. J.

**To Observe Ethics.**—The Muskogee County Medical Society, at its regular meeting, October 4, adopted a resolution requesting the newspapers of the city not to publish the names of attending physicians in their accounts of accidents. The object of the resolution is to prevent even the semblance of advertising on the part of the physician.

**Medical Schools Opened.**—The Medical College of Georgia, Augusta, was formally opened October 2 for its seventy-fourth term with an address by Dr. De Saussure Ford.—The Atlanta College of Physicians and Surgeons held its opening exercises October 5, when the new president, Dr. William S. Elkins, and Drs. Hunter P. Cooper, William P. Nicholson and Abner W. Calhoun made short addresses.—The Atlanta



School of Medicine was formally opened October 3 with addresses by Governor Northen and the board of trustees, Drs. William S. Kendrick, Charles D. Hurt and Edward G. Jones. The school applied on the same day for a charter, the application stating that the institution will not be for gain, but that its objects are to teach the practice of medicine, surgery, dental surgery and pharmacy, and to establish a school for training nurses.

**Training School for Medical Missionaries.**—A training school for medical missionaries was opened in Atlanta September 1. The institution admits both men and women, and the degree of doctor of medicine will be conferred on the completion of the legal requirements and the passage of the examination required by the state. The faculty comprises the following: Dr. James McFadden Gaston, dean of the faculty, professor of principles and practice of surgery, and lecturer on chemistry; Dr. Joseph H. Green, professor of obstetrics and diseases of women, and lecturer on anatomy; Dr. Ephraim Smith, professor of physiology and lecturer on histology and clinical medicine; Dr. Edmond Lee Awtry, professor of materia medica and therapeutics and lecturer on diseases of children; Dr. George Brown, professor of diseases of the eye, ear, nose and throat; Dr. William S. Wood, professor of principles and practice of medicine; Dr. J. Chester King, associate professor of diseases of nervous system; Dr. Walter B. Emery, associate professor of genitourinary diseases; Dr. J. W. Duncan, associate professor of diseases of chest and clinical medicine; Dr. Charles F. Maddox, associate professor of diseases of the eye, ear, nose and throat; Dr. Isaac T. Catron, professor of military and naval surgery, assistant to the chair of surgery; Dr. H. Bak, lecturer on tropical diseases and internal medicine; Dr. Willis B. Parks, professor of psychology; Dr. Ludwig Amster, lecturer on gastrointestinal diseases, and Dr. Thomas C. Longino, demonstrator of anatomy.

#### ILLINOIS.

**Hospital Established.**—The Cairo Colored Hospital has been incorporated by Fannie Williams, Nancy Bugg and Adminia A. Watkins to maintain a charitable hospital for the colored indigent sick and a training school for colored nurses.

**Civil Service in State Institutions.**—By the law which became operative November 1 all the charitable institutions of the state will be under the civil service law. This will carry with it the application of the merit system to the employment of several hundred servants of the state, and should result in the betterment of the care and treatment of the insane, the helpless and the diseased.

**Personal.**—Dr. Alpheus A. Bondurant, Cairo, has gone to St. Mary's Infirmary for beneficial rest and change after his illness.—Dr. and Mrs. Frederick W. Werner, Joliet, have returned from Washington.—Dr. Fred. J. Parkhurst, Danvers, is taking a trip through Texas and Mexico.—Dr. Edward Bollenger has resigned as a member of the medical staff of the Illinois Eastern Hospital for the Insane, Kankakee.

**Military Tract Officers.**—At the sixty-sixth annual meeting of the Military Tract Medical Association, held in Canton October 19, the following officers were elected: President, Dr. Ralph C. Matheny, Galesburg; vice-presidents, Drs. W. E. Shallenberger, Canton, and John P. Roark, Bushnell; secretary-treasurer, Dr. Franklin E. Wallace, Monmouth; censors, Drs. Joseph B. Bacon, Macomb; Sumner M. Miller, Peoria, and Maude T. Rogers, Cuba; committee on necrology, Dr. William E. Grigsby, Blandinsville. Dr. James E. Coleman, Canton, was appointed delegate from the society to the Senn banquet, in Chicago, November 11.

**Anticipating Merit Rule.**—The governor has made numerous changes in the staffs of the charitable institutions of the state, to take effect before November 1, when the new state civil service law becomes operative. Among these appointments are the following: Dr. George A. Zeller, reappointed superintendent of the Illinois Hospital for the Incurable Insane, Bartonville; Drs. Walls, Chicago Heights; William H. O. Galland, Charles G. S. Rydin, and Wells, Chicago, at the Illinois Eastern Hospital for the Insane, at Hospital, and Drs. Frank H. Jenks, Aurora, and Ira O. Paul, Winnebago, at the Illinois Northern Hospital for the Insane, Elgin.

#### Chicago.

**Donations to Charities.**—The Schwabenverein, at its quarterly meeting, donated \$2,500 to the charities of Chicago and vicinity, \$1,250 of which went to hospitals.

**Stricken with Paralysis.**—Dr. Julius W. Oswald, who suffered a cerebral hemorrhage while operating at Alexian Brothers' Hospital, October 31, is reported as slightly improved, but paralysis of the right side remains. He is in a grave condition.

**American Academy of Medicine to Meet.**—This body will hold its thirtieth annual meeting in Chicago, November 9 to 10. Physicians and others interested will be welcome at the open sessions, November 9 at 11 a. m. and 8 p. m., and November 10 at 10:30 a. m. The program was published in THE JOURNAL, October 14, page 1178.

**Increase of Diphtheria.**—Diphtheria continues to increase most markedly in South Chicago, Kensington and Burnside. Of the 113 cases reported during the week 33 were on the North Side, 28 on the West Side and 52 on the South Side. Of the 52 cases 24 were in the district south of Eightieth Street. Sixteen deaths were reported from the disease during the week.

**Deaths of the Week.**—During the week ended October 28, 470 deaths were reported, equivalent to an annual death rate of 12.30 per 1,000. Four more deaths occurred than in the previous week and 58 more than in the corresponding week of 1904. Consumption takes the lead in death causes with 61, followed by pneumonia and heart diseases, each with 53; acute intestinal diseases with 45, Bright's disease and cancer, each with 36, and violence, including suicide, with 32.

**Antitoxin Always on Hand.**—The commissioner of health calls attention to the fact that by the revised municipal code the commissioner of health is required at all times to keep on hand "a sufficient quantity of antitoxin to permit the treatment therewith of any dependent or deserving person who shall apply to him for that purpose, and that he shall, without charge, treat with antitoxin any and all persons who may apply to him for such treatment, and who, in his opinion, require such treatment."

**American College of Medicine and Surgery.**—This college, the medical department of Valparaiso University, and located at 339 South Lincoln Street, Chicago, has made extensive changes in its policy and in the personnel of its faculty. Formerly an eclectic school, it has ceased to be sectarian and has made application for membership in the American Association of Medical Colleges, claiming that it has conformed its curriculum to the requirements of that body. Many new members have been added to the faculty and the few old members remaining have applied for membership in the Chicago Medical Society. The following are the heads of departments in the reorganized school: Henry S. Tucker, dean, gynecology; Ross C. Whitman, pathology and medicine; Victor J. Baceus, surgery; J. Newton Roe, chemistry; Charles H. Francis, secretary, ophthalmology; Henry F. Lewis, obstetrics; Henry G. Anthony, dermatology, genitourinary and venereal diseases; Leonard L. Skelton, neurology; Robert H. Good, laryngology and rhinology; George J. Tobias, hygiene and preventive medicine; George F. Butler, therapeutics; William L. Copeland, anatomy; Mason L. Weems, physiology.

#### INDIANA.

**In the Hands of the Law.**—Leslie N. Beaven, an osteopath of Vincennes, was fined \$25 and costs October 18 for practicing medicine without a license.

**Diphtheria Epidemic.**—The schools of Princeton have been closed on account of an epidemic of diphtheria.—As a result of diphtheria at Newton the public schools of the town have been closed.

**Cornerstone Laid.**—The cornerstone of the administration building of the Methodist Hospital, Indianapolis, the first and largest of the group of buildings to be erected, was laid with appropriate ceremonies October 25.

**Pathologic Laboratory Installed.**—The new division of bacteriology and pathology of the State Library of Hygiene, established for the purpose of disease prevention and treatment, will be in operation November 1 under the charge of Dr. T. Victor Keene, city sanatorian of Indianapolis.

**District Society Meeting.**—The Thirteenth Councilor District Medical Society held its annual meeting at Elkhart October 19, at which Dr. Charles C. Terry, South Bend, was elected president; Dr. John M. Ward, Kewanna, vice-president, and Dr. John C. Fleming, Elkhart, secretary and treasurer. The next meeting will be held in South Bend in March, 1906.

**Would Avoid Even Appearance of Evil.**—The Clay County Medical Society has adopted a resolution agreeing to call the attention of the reading public to the fact that it is non-ethical and beneath the dignity of a scientific profession for physicians to allow their names to be published in connection with local notices of sickness, accidents or surgical operation.

**Personal.**—Dr. and Mrs. Jonah M. Bye, Indianapolis, are going to Mexico for the winter.—Dr. Reuben E. Brokaw has been elected secretary, and Dr. William P. Schwartz, treasurer,



of the Portland City Hospital.—Dr. George C. Mason has succeeded Dr. W. I. West as a member of the school board of Oakland City.—Dr. Lewis C. McFatridge, Atlanta, and daughter, have gone to California.—Dr. John M. Pulliam, assistant physician at Longcliff Hospital for the Insane, Logansport, has resigned and will practice in Fort Wayne.—Dr. Kent K. Wheelock, Fort Wayne, has been chosen as a member of the faculty of the medical department of Purdue University.

#### KANSAS.

**Diphtheria Closes School.**—School District No. 51, south of Richland, has been closed on account of the prevalence of diphtheria.

**Sentence Commuted.**—Dr. Samuel B. S. Wilson, Olathe, who was sentenced to eight months' imprisonment for violating the prohibitory law of the state, has had his sentence commuted by the governor on consideration that the fine and costs be paid.

**Practiced Without License.**—In the case of "Dr." Renshaw, Pittsburg, charged with practicing medicine without a state license, the defendant was released on his own recognizances, on his promise to procure the money necessary to pay the costs, and his agreement to leave town.

**Infectious Diseases.**—During September 91 cases of tuberculosis were reported to the State Board of Health and 62 deaths; 294 cases of typhoid fever, with 51 deaths; 224 cases of diphtheria, with 11 deaths; 106 cases of scarlet fever, with no deaths; 58 cases of smallpox, with 1 death, and 72 cases of dysentery, with 18 deaths.

**South Kansas Society Election.**—At the annual sessions of the South Kansas Medical Society, held at Wichita, October 17-18, the following officers were elected: Dr. John D. Clark, Wichita, president; Drs. Richard H. Haury, Mound Ridge, and William H. Smethers, Moline, vice-presidents; Dr. George K. Purvis, Wichita, secretary, and Dr. Fred S. Brown, Wichita, treasurer.

**Personal.**—Dr. John Morgan, Iola, has resigned as health officer of Allen County, and Dr. Robert O. Christian, Iola, has been appointed to fill the vacancy. Dr. Morgan has moved to Neosho Falls.—Dr. William G. Muir, mayor of Harper, was shot by a cowboy who was "shooting up the town" October 9, but was not seriously injured.—Dr. Oliver C. McNary, National Military Home, assistant surgeon of the Soldiers' Home, has been appointed chief surgeon of the Pacific branch of the National Home for Disabled Volunteer Soldiers, Santa Monica, Cal.

#### KENTUCKY.

**Changes in Medical Faculty.**—As the result of the vacancy caused by the death of Dr. John A. Ouchterlony the following changes have been made in the faculty of the department of medicine of the University of Louisville: Dr. John G. Cecil was made professor of the practice of medicine, Dr. Henry A. Cottell was given the chair of materia medica, and Dr. Edward R. Palmer was assigned to the chair of physiology.

**Personal.**—Dr. Joseph Barr, Lebanon, has assumed the position of physician at the state penitentiary, Frankfort, made vacant by the death of Dr. Hugh L. Tobin.—Dr. F. P. Thomas, Hopkinsville, has been suffering from an infected wound of the finger.—Dr. H. W. Watts, Long View, has been adjudged of unsound mind and has been committed to the Western Kentucky Asylum for the Insane, Hopkinsville, for treatment.—Dr. William Sanders, Louisville, has been made lecturer on the practice of medicine in the Kentucky School of Medicine.

#### LOUISIANA.

**As a Dangerous Character.**—Joseph Albert, self-styled "oriental professor," industrial mechanic and chronic disease curer, was fined \$25 for practicing medicine without a license and was sent to the Orleans parish prison, New Orleans, as a dangerous and suspicious character, October 14.

**Entrance Not Graduation.**—Dr. Felix A. Larue, New Orleans, requests us to correct a news note which stated that he recently visited his alma mater at Emmitsburg, Md., to celebrate the silver jubilee of his graduation. Dr. Larue entered the institution in 1880 and the jubilee was of his entrance to St. Mary's College.

**Personal.**—Dr. Joseph Darracott, Shreveport, has resigned his position in the Shreveport Sanatorium and has accepted a position in the Cotton Belt Railway Hospital, Texarkana, Ark.—Dr. Norwood K. Vance, assistant health officer of Shreveport, has resigned.—Dr. Thomas Y. Aby, assistant quarantine officer at Quarantine, at the mouth of the Mississippi, has

resigned owing to advancing years and ill health.—Dr. and Mrs. Joseph S. Hebert, New Orleans, have returned from a two months' stay in the North and East.

#### MAINE.

**Smallpox.**—East Machias reports that at the close of the week ended October 14 there were 7 cases of smallpox of mild type in the town.

**Golden Wedding.**—Dr. and Mrs. James M. Bates, Yarmouth, celebrated the fiftieth anniversary of their wedding October 11.

**Hospital News.**—The new North Arostook General Hospital at Eagle Lake Mills is almost completed.—The contract for the enlargement of the Chipman Memorial Hospital, Calais, has been let and work will begin at once. The estimated cost of the addition is \$6,000.—Webber Hospital Association, Biddeford, formed several years ago to erect a hospital in that city, has been offered a tract of land as a site for the institution.

**Suicides.**—Dr. A. G. Young, registrar of vital statistics, reports that during the past year 77 persons committed suicide in the state, 27 more than last year. Of that number 60 were males and 17 females. Of those who committed suicide 21 hung themselves, 21 died from gunshot wounds, 15 were drowned, 13 took poison, 4 cut their throats, 2 jumped from high places and 1 died from asphyxiation.

**Personal.**—Dr. Albion G. Young, Augusta, secretary of the State Board of Health, and wife, have gone to the Pacific Coast.—Hugh F. Quinn, a senior student in the Medical School of Maine, Brunswick, has been appointed a state bacteriologist.—Dr. Daniel W. Wentworth, Sanford, who has been ill with rheumatic fever, is improving.—Dr. John F. Stevens, Millinocket, has been appointed a member of the local board of health.—Dr. Harvey L. Jewell, Bangor, after a long illness with sciatica, has assumed practice.—Dr. Sarah L. Hunter, Machias, has taken a trip to the Pacific Coast.—Dr. and Mrs. Frederick Thayer, Waterville, have gone to Mexico.—Dr. and Mrs. Ralph W. Bucknam, Portland, returned to California October 20.

#### MARYLAND.

**The Mosquito Question.**—A public meeting on the mosquito question was held at the Johns Hopkins University, Baltimore, November 1, at which Prof. John B. Smith, state entomologist of New Jersey, delivered an illustrated lecture.

**Recovery from Anthrax.**—Dr. Arthur D. Mansfield of Owings' Mills has just recovered from a severe attack of anthrax supposed to have been contracted in Kent County August 17 from an abrasion on his neck caused by the rubbing of his collar, which became infected by contact with some straw on which an infected animal had been lying. He underwent fifteen operations.

**Society Election.**—The Worcester County Medical Society held its annual meeting at Snow Hill October 24. It was organized two years ago by Dr. William S. Thayer of Baltimore, and embraces in its membership 18 of the 24 physicians in the county. Six were added at the meeting. The following officers were elected: President, Dr. John S. Aydelotti, Snow Hill; vice-president, Dr. Edwin J. Dirickson, Berlin; secretary, Dr. R. Lee Hall; treasurer and delegate to the State Society, Dr. Paul Jones, Snow Hill, and attorney, Mr. Robley D. Jones.

**Personal.**—Dr. Lewellys F. Barker delivered an address before the Library and Historical Society of the University of Maryland, Baltimore, October 26, on "The Ordering of Life." Dr. Barker has been elected president of the Medical Journal Club.—At the annual meeting of the Society of the War of 1812 Dr. James D. Iglehart was elected vice-president, and Drs. Charles E. Sadtler and Nicholas L. Daspiell were elected members of the executive committee, all of Baltimore.—Dr. John T. O'Mara, resident physician to St. Agnes' Hospital, Baltimore, resigned November 1.—Dr. Montgomery Higgins, Boyds, has gone to Panama under assignment by the government on the medical staff.

#### MASSACHUSETTS.

**Diphtheria Closes School.**—The South Street school, Ware, has been ordered closed for two weeks on account of the prevalence of diphtheria.

**The Leper Home.**—The State Board of Charities has officially visited the State Leprosarium on Penikese Island, of which Dr. Louis Edmonds, Harwich, was recently appointed superintendent.

**Wins Suit from Railroad Company.**—In the case of Dr. John A. Fitzhugh, Amesbury, vs. the Boston & Maine Railroad, in



which the plaintiff claimed damages of \$1,250 for himself and of \$300 for loss of horse, damage to carriage, etc., the jury found for the plaintiff.

**Hospital Notes.**—Mrs. Henry Haywood and Miss Helen R. Haywood will erect a hospital at Gardner to the memory of the late Herman Haywood, and will in addition give a sufficient endowment for its maintenance.—Marlboro Hospital will receive \$501 as the result of the field day September 16.

**Pleads Guilty.**—Mrs. Annie Brown, who pleaded guilty to having been an accessory before the act at a criminal operation on Mrs. Elsie Allen, Winthrop, was found guilty October 18 and sentenced to imprisonment in the Women's Reformatory at Sherburn, for five years and three months.

**Thurber Society Election.**—At the fifty-second annual meeting of the Thurber Medical Society, held at Milford October 12, Dr. Nathan W. Sanborn, Belingham, was elected president; Dr. Osman C. B. Nason, Medway, vice-president; Dr. Ambrose J. Gallison, Franklin, secretary; Dr. Charles B. Hussey, Franklin, treasurer; Dr. Christopher D. Albro, Milford, librarian; Dr. Wilfred W. Browne, Blackstone, orator, and Dr. E. L. Hill, Millis, alternate.

**Personal.**—Dr. John H. Lindsey, Fall River, has reconsidered his resignation as a member of the staff of the City Hospital.—Dr. Charles Harrington, Boston, secretary of the State Board of Health, has gone to Europe, and Dr. George P. McGrath, his assistant, is attending to the duties of the office.—Dr. Alfred I. Noble, Worcester, has been elected superintendent of the Michigan Asylum for the Insane, Kalamazoo, to succeed the late Dr. William R. Edwards.—Dr. Edgar Dwight Hill, Plymouth, has been appointed a member of the board of trustees of the Medfield Insane Hospital.

#### MICHIGAN.

**Personal.**—Dr. Iman Wisse, Grand Rapids, has been ordained as a minister of the Congregational church.—Dr. Austin O'Leary has been appointed assistant at the Sorsen Private Hospital, Laurium.—Dr. William J. Robinson has been appointed city physician of Lapeer.

**Diphtheria.**—Menominee is alarmed at the present outbreak of diphtheria in the city.—In Washington Island business is practically at a standstill from the general quarantine, and several deaths have been reported.—In Grand Rapids 30 cases have been reported in two days and the Congress Street school has been closed pending fumigation.—Schools have been closed indefinitely at Camden and all exposed people have been quarantined on account of the prevalence of the disease.

**State Board of Health.**—At the meeting of the State Board of Health in Lansing October 13, the board ordered printed a new and amended edition of 20,000 copies of "The Dangerous Communicable Diseases, How Restricted and How Spread"; the secretary was instructed to revise certain of the publications of the board and to prepare the same in the form of a manual for the use of local health officers, and a new edition of 2,000 copies of the amended pamphlet on "Embalming and the Removal and Transportation of Dead Bodies" was ordered printed.

**Opposed to Contract System.**—At the annual meeting of the Pontiac Medical Society October 17 the following resolutions were adopted regarding contract and lodge practice:

WHEREAS, In recent years there have been frequent calls on the members of our society to render medical and surgical services to individual members of orders, lodges or societies at contract prices; and,

WHEREAS, Some of our members have been prevailed on to render an indefinite amount of service for a definite fee; therefore,

**Resolved,** That the Pontiac Medical Society hereby places itself on record as opposed to the lodge or contract system, so called.

**Resolved,** That the executive committee of this society be asked to present at our next meeting some of the more cogent arguments for such action in the form of a circular letter, which may be sent to each of our members.

The following officers were elected: President, Dr. Nathan B. Colvin; vice-president, Dr. George H. Drake; secretary, Dr. Carlton D. Morris, and treasurer, Dr. James J. Murphy.

#### MINNESOTA.

**Personal.**—Dr. Emil C. Robitshek, Minneapolis, has returned from abroad.—Dr. John M. White, LeRoy, has been appointed assistant physician at the St. Peter State Hospital for the Insane, vice Dr. Charles E. Burleson, resigned.

**Death Prevents Trial.**—The indictment against Arthur Klementz, St. Paul, charged with practicing medicine without a license, was stricken from the docket October 17, as the defendant had died since the indictment was turned in.

**Defer Bequests.**—The board of regents of the University has asked that the \$150,000 bequest for the Elliot Memorial Hospital on the college campus be deferred until the legislature can approve the gift and make provision for the maintenance of the institution.

**Hospital Fire.**—St. Raphael's Hospital, St. Cloud, was destroyed by fire, which started near an elevator shaft, October 10. Fifty-three patients and 16 sisters of the Order of St. Benedict were removed in safety. The loss is estimated at \$60,000, with an insurance of \$33,000.

**Brown-Redwood County Medical Society.**—At the annual meeting of this society September 12, Dr. James L. Adams, Morgan, was elected president; Dr. Jacob W. B. Welleome, Sleepy Eye, vice-president; Dr. W. A. Brand, Redwood Falls, secretary, and Dr. Christopher P. Gibson, Redwood Falls, censor.

**Grave Charges.**—Dr. H. M. Braeken, secretary of the State Board of Health, charges that the city health office of Minneapolis has directly violated the state laws relative to the inspection and licensing of maternity hospitals. He stated that the records of the State Board of Health show only one duly licensed maternity hospital in Minneapolis, and that he was unable to find records of any inspections during the last two years.

**Must Report Accidents.**—In accordance with a measure enacted by the legislature, physicians are required to report to the registrars of deeds of their respective counties all accidents which come under their care, providing the patients are incapacitated from pursuing their usual vocations for a period of at least two weeks. Any failure to make such reports on the part of physicians renders them liable to a fine of \$100 or imprisonment of six months.

**Hospital News.**—At a meeting of the directors of the City and County Hospital Association, Albert Lea, September 22, it was decided to lease the Wilcox Hospital and to take charge of it as soon as possible.—The Norwegians of the Northwest have united and will erect a \$200,000 hospital in Minneapolis, to be known as the United Norwegian Lutheran Hospital. Drs. Knut Hoegh and Alfred N. Bessesen are members of the board of trustees. Dr. Henry Nissen has given \$1,000 toward the building fund.—The new hospital at Luverne was formally opened October 16. The building has been erected by Dr. A. E. Spalding at a cost of \$10,000, and is well built and thoroughly equipped.—Drs. Helen and Jane C. Hughes, Mankato, have remodeled and equipped a building as a maternity hospital, which was opened October 16. The institution has accommodations for 15 patients.

#### MISSOURI.

**Academy Wants to Build.**—The Kansas City Academy of Medicine, at a meeting October 9, decided to purchase land and build a clubhouse at a cost of \$30,000.

**Quarantine Hospital.**—The House of Delegates has passed a bill appropriating \$75,000 for the construction of a hospital at quarantine, south of St. Louis.

**Sanatorium Located.**—Chigger Hill, north of Mount Vernon, has been selected as the site for the State Sanatorium for the Treatment of Tuberculosis. The site comprises 190 acres and is well adapted for the purpose.

**Hospital News.**—On October 18 the new St. Mary's Hospital, Jefferson City, was dedicated with appropriate ceremonies. The building will accommodate about 60 patients and has cost nearly \$100,000.—The receipt of a check for \$2,500 insures to Carthage a hospital to cost \$25,000.

**Schedule of Clinics.**—The schedule of clinics for the medical college season at the City Hospital is as follows: Monday and Saturday are given to the eclectic and homeopathic schools respectively; Tuesday to the College of Physicians and Surgeons; Wednesday to the Washington University; Thursdays to Barnes Medical College, and Friday to the Marion-Sims Medical College.

**Southwestern Doctors Meet.**—The John T. Hodgen Medical Society, embracing the counties of Cass, Bates, Vernon and Barton, held its annual meeting in Nevada October 5. The following officers were elected: Dr. McCord G. Roberts, Lamar, president; Drs. Theodrick C. Boulware, Butler, and M. P. Overholzer, Harrisonville, vice-presidents, and Dr. Thomas F. Lockwood, Butler, secretary and treasurer. The next meeting will be held in Lamar.

**Personal.**—Drs. S. B. Wells and Joseph E. Dibble, Kansas City, have been appointed official vaccinating physicians.—Dr. Moritz F. Weymann, St. Joseph, was committed to State



Hospital for the Insane No. 2, St. Joseph, September 30.—Dr. Avis E. Smith, Kansas City, was given the degree of M.A. at the recent convocation of the University of Illinois.—Dr. Mary H. McLean, St. Louis, has returned from a trip to the Orient.—Dr. George B. Thompson, Kansas City, is in a serious condition from an accident received a month ago on the Leavenworth electric line.

#### MONTANA.

**Charge Dismissed.**—The charge against H. De Pew, Anaconda, of practicing medicine without a license, has been dismissed on motion of the assistant county attorney.

**Practiced Without License.**—A. R. Lucas, Bozeman, charged with practicing medicine without a certificate from the State Board of Examiners, was found guilty October 11 and was fined \$100 and costs, a total of \$170.80.

**Hospital Notes.**—A hospital has been opened in Red Lodge by Dr. Samuel M. Souders.—The Murray-Freund Hospital, Butte City, will be known hereafter as Murray's Hospital and will be under the direct supervision of Dr. Thomas J. Murray.

**Personal.**—Dr. Dan J. Donohue, Glendive, has been commissioned captain in the Second Infantry, Montana National Guard.—Dr. Havelock H. Hanson, Butte, was thrown from his buggy in a runaway accident and sustained a bad fracture of the left arm below the shoulder and an injury to the left knee.—Dr. Malcolm G. MacNevin and family, Butte, have gone to Europe.

#### NEBRASKA.

**Colleges Opened.**—The University of Nebraska College of Medicine, Omaha, opened September 28.—The Creighton Medical College, Omaha, was opened September 30.

**Fever at Insane Hospital.**—The Nebraska Hospital for the Insane at Lincoln is suffering from a serious epidemic of typhoid fever; 19 cases have already appeared.

**Personal.**—Dr. Ernest J. C. Sward, Oakland, has succeeded Dr. Andrew B. Summers, Omaha, as secretary of the State Board of Health.—Dr. Samuel K. Spalding, Omaha, has been elected health inspector.—Dr. Edwin Oxford, Omaha, has been made assistant physician of the Latter Day Saints' Hospital, Salt Lake City.

**Attack Legality of State Medical Board.**—The attorneys for Drs. Erick Munck and D. G. Walker, Platte County, whose medical certificates were revoked several months ago by the State Board of Health, have filed briefs in the Supreme Court in which they question the legality of the statute providing for the establishment of that body. It is charged that the statute is violative of the constitutional provision that requires all fees of office to be paid in the state treasury.

#### NEW HAMPSHIRE.

**Bequest.**—By the will of Mrs. Edward C. Thayer, Keene, \$10,000 is devised to the New England Hospital for Women and Children, Boston.

**Fire in Sanatorium.**—The North Elm Street residence of Dr. Noel E. Guillet, Manchester, was destroyed by fire September 10, with a loss of \$3,500, entirely covered by insurance.

**Would Force Contract Practice on Physicians.**—At a convention of delegates representing fraternal benefit societies of Nashua resolutions were adopted protesting against the action of the Nashua Medical Society in agreeing to refuse to enter into any contract with fraternal societies or to hold consultations with contract physicians of such fraternal societies.

**Hospital News.**—Rev. Jeremiah S. Jewett, Warren, has offered \$3,000 worth of real estate as a site for a hospital for Laconia. When \$10,000 has been secured a bequest made by Rhoda Ladd will be available.—A friend of Dr. William J. W. Beattie, Littleton, who does not wish his name made public, has offered \$5,000 toward the erection of a hospital in that town and \$1,000 a year for the next five years, provided the town of Littleton will support the project.

#### NEW YORK.

**Gift Fair Open.**—The German Hospital gift fair opened at City Convention Hall, Buffalo, October 30, to continue for one week. It promises to be the largest fair for a public charity ever conducted in Buffalo and a huge financial success is to be expected.

**Personal.**—Dr. Robert A. Taylor, Otisville, has been appointed surgeon by the contractors in charge of constructing the Erie tunnel at that place and a hospital equipment has been installed in his home.—Dr. Robert Abbe, New York City, has been elected president of the Associate Alumni of the

College of the City of New York.—Dr. James E. King has been elected a member of the staff of the Buffalo General Hospital, and Dr. Regina F. Keyes has been appointed an assistant on the gynecologic service.—Dr. Max Breuer has returned from several months in Europe.

**Central Medical Society.**—The Medical Association of Central New York held its annual meeting at Buffalo, October 24. The following officers were elected: President, Dr. David M. Totman, Syracuse; vice-presidents, Drs. William B. Jones, Rochester, and Lemuel L. Tozier, Batavia; secretary, Dr. Clarence A. Greenleaf, Rochester, and treasurer, Dr. William M. Brown, Rochester. The meeting was held in the Historical Society building at Buffalo and was presided over by Dr. Charles G. Stockton. At the close of the meeting the members were entertained by a supper and smoker at the Buffalo Club.

#### New York City.

**To Build Hospital Pavilions.**—The commissioner of charities has filed plans for seven emergency hospitals to be erected on Blackwell's Island. They are to be 20 feet front and 100 feet deep and will each have 28 beds. The cost of the group is estimated at \$17,150.

**Tuberculosis Hospital Assured.**—The board of estimate has appropriated \$800,000 toward the construction of the proposed tuberculosis hospital on Staten Island, and has bound itself by resolution to appropriate the balance of the \$2,000,000 needed to carry out the plans in detail.

**Panic in City Hospital.**—Fire destroyed a small frame structure on Blackwell's Island adjacent to the City Hospital. This precipitated a panic among the inmates of the Almshouse and City Hospital, which for a time threatened to be serious, and required all the efforts of physicians, nurses and attendants to allay.

**The Williamsburg Hospital.**—This institution has added to its staff Dr. Glentworth R. Butler, Brooklyn. The service of the hospital has become so large that at a recent meeting of the board of directors it was stated that negotiations were under way to purchase the adjoining property to make room for the increased service.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended October 21, 326 cases of tuberculosis, with 151 deaths; 218 cases of diphtheria, with 28 deaths; 113 cases of measles, with 2 deaths; 99 cases of typhoid fever, with 17 deaths; 75 cases of scarlet fever, with 6 deaths, and 10 cases of cerebrospinal meningitis, with 8 deaths.

**Smallpox at Ellis Island.**—An immigrant taken from the *Nord Amerika* with a well developed case of smallpox is in the Kingston Avenue Hospital for Contagious Diseases, Brooklyn. The passengers who occupied the same compartment with him, 59 in number, are at Ellis Island awaiting developments. The ship had passed quarantine before the case was discovered.

**Water Plan Approved.**—The board of estimate and apportionment has approved the report of the board of water supply, providing for the outlay of \$161,000,000 for tapping the Catskill Mountains and bringing to the city 660,000,000 gallons of water daily in addition to the present supply. This will give a supply sufficient for all purposes for the next twenty years.

**Sterilized Milk Urged.**—Mr. Nathan Strauss of this city read a paper before the Milk Congress of Paris as to the need of pasteurizing the entire milk supply of cities. Dr. Harvey W. Wiley, chief of the bureau of chemistry, has given his unqualified indorsement to Mr. Strauss' suggestion that the pasteurizing of milk should be made a municipal function and that it is quite as important that pure milk should be furnished to cities as that they should have pure water.

**New Hospital Ready.**—The Philanthropic Hospital which was recently chartered by the State Board of Charities, was dedicated October 29. The temporary building is located at the corner of Briggs Avenue and Maple Street, Williamsbridge, and the permanent hospital will be in the immediate vicinity. A training school for nurses will be maintained at the hospital, and an ambulance service will be established in a short time. Louis Mann organized a concert a short time ago for the benefit of this institution which netted \$1,000.

#### OKLAHOMA.

**Diphtheria.**—The public schools at Blackwell and Perry have been closed on account of the prevalence of diphtheria, and at Blackwell church services have been discontinued for the same reason.

**Personal.**—Dr. G. F. Border, Mangum, who was in charge of the Emergency Hospital at Snyder after the tornado last May, was presented with a handsome medal for his services in that



emergency.—Drs. H. Coulter Todd and Ulbus L. Russell, Oklahoma City, are studying in London.

**Medical College Opens.**—The medical department of Epworth University opened for its second annual session October 12. Only the first two years of a medical course have thus far been taught, but with increased hospital facilities the school will open for a full four years' course in 1906.

**Oklahoma City and Not Guthrie Hospital Closed.**—The superintendent of the Guthrie Hospital requests us to state that that hospital has not closed, but is enjoying a very flattering success. The hospital which closed owing to disagreement of the staff regarding its management was the Oklahoma City Hospital, Oklahoma City.

#### PENNSYLVANIA.

**Personal.**—Dr. Horatio C. Wood was guest of honor at the annual meeting of the Pittsburg Alumni Association of the University of Pennsylvania, October 20.

**Typhoid at Nanticoke.**—The number of cases of typhoid fever reported at Nanticoke thus far is nearly 400, and the total number of deaths reported thus far is more than 40.

#### Philadelphia.

**Dr. McCracken to Go to China.**—At the recent meeting of the board of directors of the Christian Association of the University of Pennsylvania it was resolved to send Dr. Josiah C. McCracken to China for a period of one year in order to study the situation on the field and arrange details of establishment of the proposed medical school in Canton.

**Personal.**—Dr. Charles B. Penrose has resigned from the advisory board of the Department of Health and Charities. —Dr. Thomas W. Jackson, U. S. A., will deliver a series of lectures on tropical medicine in the Jefferson Medical College during the term.—Dr. and Mrs. Walter Lindley of Los Angeles, Cal., visited this city during the week and were entertained at dinner by Dr. E. E. Montgomery, October 30. Dr. Lindley is dean of the Medical College of Southern California and editor of the *Southern California Practitioner*.

**Health Report.**—The deaths reported from all causes during the week numbered 410. This is an increase of 12 over last week, and an increase of 3 over the corresponding period of last year. The principal causes of death were: Typhoid fever, 5; diphtheria, 14; tuberculosis, 52; cancer, 16; diabetes, 6; apoplexy, 24; tetanus, 1; heart disease, 44; acute respiratory diseases, 33; enteritis (under 2 years), 25; enteritis (over 2 years), 6; Bright's disease, 38; suicide, 2, and accidents, 22. There were 200 cases of contagious disease reported, with 22 deaths, as compared with 212 cases and 16 deaths during the preceding week.

**Food Adulterators Imprisoned.**—The cases known as the "Navy Yard food cases" were tried in court October 26. The defendants were charged with furnishing oleomargarine to the men at the Navy Yard instead of butter. Two firms were found guilty and sentenced to sixty days in jail, to pay a fine of \$250 each, and ordered to pay the cost of the prosecution. At the same time Fred M. Hall, the manager of Swift & Co., beef dealers, paid a fine of \$100 for selling to the Navy Yard sausages preserved with boric acid. He was also ordered to pay the costs, not only of court, but also of the test which proved the presence of the adulterant in the sausage. An estimate of these costs by an attaché of the dairy and food commissioner's office placed them as high as \$1,000.

#### GENERAL.

**Dr. Herzog Studies Beriberi.**—Dr. Maximilian Herzog, who for the last two years has been connected with the government laboratories of Manila, has been studying beriberi in the military hospitals of Japan for the past three months, by order of the government of the Philippines.

**Removal of Quarantine Against the Isthmus.**—The quarantine which the island of Jamaica has maintained against Colon during the past six months has been removed, and the Royal Mail Line of steamships is now permitted to take passengers to Jamaican ports. *Public Health Reports* states that large numbers of Jamaican negroes have been waiting for this opportunity to return to their homes in Jamaica, and the removal of this quarantine will be a considerable relief to the Isthmus.

**The Title of Surgeon-General.**—It is reported from Washington that Dr. O'Reilly, surgeon-general of the Army, has called attention to the fact that the respective heads of the Navy Department and of the Public Health and Marine-Hospital Service bear the same title of surgeon-general, alleging that in time of war it might cause dire confusion. As the head of the

Army Department has borne the title longest, Dr. O'Reilly thinks that the heads of the other departments should be designated in some other way.

**Health Report of the Philippines.**—The report of the Board of Health of the Philippine Islands states that during June, 1905, there were 583 births in the city of Manila, 295 males and 288 females. During the month there were 627 deaths, of which 593 were of residents and 34 transients. Gastroenteric diseases were especially prevalent among children under 2 years, 84 deaths being caused by gastroenteritis and diarrhea among children of that age. There were 7 cases of bubonic plague, with 6 deaths, and 3 cases of smallpox, with 1 death.

**Yellow Fever News.**—During the week New Orleans has had a day when no new cases were reported, while the new cases at Pensacola have exceeded those at New Orleans. President Roosevelt has been at New Orleans, where enormous crowds gathered, but as the fever was practically extinct there was little or no danger to anyone.—Failure of citizens and physicians at Pensacola to report cases having practically nullified the efforts to exterminate the infection, drastic action was taken. Dr. L. C. Phillips and Dr. James S. Herron of Pensacola were arrested for failure to comply with the notification ordinance.—Chattanooga, Tenn., abolished its quarantine on October 26.—The northern part of Alabama has been freed from quarantine. At Castleberry, in southern Alabama, there have been two cases of fever whose origin thus far has not been discovered.—The Arkansas quarantine has been abolished except as to two counties on the Louisiana border.—Texas raised its quarantine as to the uninfected parts of Louisiana and Mississippi.—On October 25 only 5 cases of yellow fever were known to exist in the republic of Mexico. It is hoped that next year will pass without any case.—As a result of the late calamity, New Orleans will have a permanent emergency hospital and a permanent sanitary organization. Unofficially it is announced that there will be a considerable surplus left of the fund raised (\$250,000) to fight the fever. This balance will be used for the permanent emergency hospital.—A freak of the epidemic is the estimate made by certain newspapers that the arsenic craze led to the sale and self-administration of 3,000,000,000 tablets—about 6 tons.—Surgeon White, United States Public Health and Marine-Hospital Service, who conducted the winning campaign at New Orleans among compliments and the thanks of citizens, is the victim of a malapropos incident. On John H. Whyte, a reporter on the staff of the *Daily States*, has sued Surgeon White for \$10,000 damages. Early in the epidemic the correspondent used his name in such a way as to have it confused with the officer's. Dr. White promptly explained the true state of affairs, and his remarks are made the basis of the suit.—The coming Chattanooga conference on quarantine, a direct result of this season's epidemic, will, it is said, mark a long step toward better conditions.

#### CANADA.

**Trachoma in Canada.**—In 1901 the American authorities instituted surveillance over emigrants arriving by way of Canada and turned back those presenting evidences of trachoma. This led to the accumulation of a number of cases in Canada, and, for the first time, the attention of the Canadian government was attracted to the subject of trachoma. In 1902 the regulation was adopted excluding from the country the emigrants with severe cases of the affection, while those with the apparently curable form were taken into the Canadian hospitals and discharged when cured. In 1904 detention hospitals were organized at Quebec and placed in charge of Dr. P. H. Bryce, and here all the emigrants with signs of trachoma are sent for treatment and final judgment on their case. During the year about 800 emigrants were sent to these hospitals and 300 were sent back to the country whence they had emigrated. In 1905 about 1,000 persons have already been sent to the detention hospitals. This large number is due to the increased immigration, and also to the fact that one ship had 330 passengers affected with trachoma from accidental contagion during the nineteen days' voyage. Most of these persons were released after two or three weeks. The steamship companies are beginning to realize that it is to their interest not to bring over trachoma subjects, and during the last few months not a case has been found among the emigrants. The Quebec hospitals also report very few cases under observation during the last year or so, but physicians in the Northwest write that they seem to have an unduly large proportion of trachomatous patients. They are probably old cases, in emigrants who entered the country before the present regulations were enacted. The difficulty of differentiating incipient trachoma from ordinary conjunctivitis renders the question one of the



most puzzling that a physician is called on to decide.—From article by J. D. Page, of Quebec, in *Bull. Med. de Québec*, for September.

#### FOREIGN.

**Plague in the Argentine Republic.**—It is reported from Buenos Ayres that in the beginning of October there was a reemergence of plague in Choya.

**A Medical Hotel at Rome.**—The *Riforma Medica* states that a medical hotel or sanatorium is to be constructed at Rome, equipped according to the most modern ideas of comfort and medical care and attendance.

**Medical Social Club at Rio de Janeiro.**—A club for social and benevolent purposes has been organized at Rio de Janeiro, the membership being restricted to physicians. The club meets at present in the rooms of the Academy of Medicine. There are 300 members.

**Typhoid in Great Britain.**—The health officer from Stoke-on-Trent has reported an outbreak of typhoid fever at Trent Vale, which he attributes to the water supply. Bacteriologic examination has shown that a certain well is polluted with sewage to a dangerous extent.

**Asiatic Cholera on a British Vessel at Suez.**—The steamship *City of Manchester* arrived at Suez from India with one case of cholera on board. The patient, a Hindoo sailor, was landed at the quarantine station, where a bacteriologic examination confirmed the diagnosis. The patient died.

**Circular for Workers in Lead.**—The German board of health has issued a circular to be distributed to painters and other workers in lead, informing them of the way in which lead poisoning occurs, and means to prevent it. The circular is worded in a concise, popular style and is given free to all interested in the subject, and can be purchased at the news stands.

**Yellow Fever in Central America.**—Minister Coombs reports from Guatemala City that the epidemic of yellow fever which has been present on the north coast of Guatemala and as far inland as Zacapa and Gualan, has apparently run its course and that conditions are greatly improved. The government has maintained a military quarantine around the infected region.

**Medals Awarded by the Tuberculosis Congress.**—The recipients of the medals are Drs. Robert Koch and P. Brouardel, Bang of Copenhagen, Biggs of New York, Broadbent of London and von Sehroetter of Vienna. In our mention of the award last week we included the name of Dr. Billings of New York on very reliable authority, but later reports omit his name and give that of Dr. Herman M. Biggs.

**Society for the Prevention of Tuberculosis.**—It is reported that a society is being formed in Chester for the prevention and cure of consumption. The object of the association is to furnish gratuitous treatment to the poor. Patients will be received and examined and special attention will be given to children. The danger from sputum will be explained, as well as the value of fresh air in promoting recovery.

**Proposed National Memorial to Dr. Barnardo.**—Appeals are being published in England for the endowment of a fund of a million and a quarter dollars as a national memorial to the late Dr. Barnardo to insure the maintenance of the Barnardo homes for waifs. The appeal states that the number of children rescued, trained and placed out in life by these homes now amounts to 55,962. The work is going on the same since the death of the founder.

**Hospitals in Cambogia, Indo-China.**—The French resident in Cambogia is organizing a hospital service for that country. The French correspondent of the *British Medical Journal* states that some months ago it was decided to build a native hospital and maternity, and it is expected that the first block will soon be completed. The king, who realizes the benefits to the people of the proposed innovations, has expressed his willingness to defray part of the expense.

**Experimental Research on Tuberculosis Infection.**—The *Riforma Medica* for September 23 states that Fatta and Coseo have been conducting research at Rome under the auspices of the local board of health to decide whether man can be affected with tuberculosis from animals and *vice versa*. After long, careful experimental work they announce their conclusions to the effect that sputum from persons affected with pulmonary tuberculosis is incapable of infecting tuberculous cattle.

**Physicians Elected to Spanish Senate.**—The last *Siglo Medico* brings word that ten physicians were elected senators during the election just held. Taboada was appointed a senator for life by the government; Calleja is another physician who has long been a life member of the senate. The National Academy of Medicine has also the right of electing a senator, this year

its choice falling on the professor of pharmacy, G. Pamo. Three pharmacists are also members of the lower house.

**Fourth International Congress of Medical Examiners for Life Insurance.**—The program for this meeting, which convenes at Berlin, Sept. 11-15, 1906, has already been given out. The five subjects to be discussed are: "Early Determination of a Tendency to Tuberculosis, Especially of the Lungs," "Obesity in Its Relation to Life Insurance," "Influence of Syphilis on Length of Life," "The Vaccination Clause in the Insurance Contract," and "Influencing of Internal Affections by Accidents."

**Honors for the Editor of the "Riforma Medica."**—Prof. G. Rummo of Palermo is the publisher and editor of the *Riforma Medica*, now in its twenty-second year. He has been professor of clinical medicine at Palermo, on the island of Sicily, in Italy, for about ten years, but has recently accepted a call to Naples to take charge of the new medical clinic. His friends in Sicily presented him with a gold medal before he left. Subscriptions were received from all parts of the island from former patients and friends as well as from members of the medical profession.

**Themes to be Discussed at the Next International Surgical Congress.**—The next reunion of the International Association of Surgeons will be held again at Brussels, where the central office of the association is located. Czerny of Heidelberg will preside, and five subjects have been appointed for discussion. No communications are admitted to these congresses except those bearing on the subjects previously announced. These are: Cancer, surgery of the liver, anesthesia, spine and hernias. Our foreign exchanges have given full reports of the proceedings of the recent congress, of which a brief description was given in THE JOURNAL, on page 1180.

**Seventh Australasian Medical Congress.**—The seventh session of the Australasian Medical Congress was held at Adelaide the beginning of September. The inaugural address was delivered by Professor Stirling of the University of Adelaide; the address in pathology by Professor Welch of the University of Sydney; the address in surgery by Dr. F. D. Bird of Melbourne; the address in medicine by Dr. Colquhoun of Dunedin; the address in gynecology by Dr. W. S. Bryne of Brisbane, and the address on public health by Dr. W. G. Armstrong, medical officer of health for Sydney. Dr. H. B. Allen, professor of pathology in the University of Melbourne, is the president-elect.

**Anniversary Number of the Havana Revista de Medicina y Cirugia.**—The *Revista* celebrates the tenth anniversary of its foundation by a special souvenir number of 130 pages, profusely illustrated. It contains data and illustrations of the various medical institutions of Cuba, besides a number of articles by prominent physicians on the medical profession in Havana, the evolution of surgery in Cuba, medical instruction and medical organization in the island, and an article from Juan Santos Fernandez describing the rise of medical journalism in Cuba. Dr. N. G. Gutierrez was the founder of the medical press in Cuba, and also of the Academy of Sciences. His first medical journal was launched in 1840, and since then Cuba has had a large number of medical periodicals, many of them flourishing to-day.

**Sanitation in Rio de Janeiro.**—The *Brazil Medico* states that the hygienic transformation of the city in the last year has made marvelous strides. Many streets have been widened and straightened, others abolished altogether to make room for the new, superb Avenida Central. Streets are being paved by improved methods, preventing emanations from the subsoil, and trees are being planted to line them throughout, while vacant plots have been transformed into small parks. The editorial continues: "Rarely has there ever been witnessed such a harmonious and well planned movement on an immense scale for the rapid sanitary and esthetic transformation of a great city as is now going on in Rio de Janeiro under the vigorous rule of the present prefect, Dr. Passos, supported by the national government."

**Practice of Medicine in the Straits Settlements.**—The legislative council of the Straits Settlements, according to the *British Medical Journal*, has passed an ordinance providing for the establishment of a medical school in Singapore. The new school is to be managed by a medical man, who is to be selected by the governor of the colony, and he will be required to do his work under the supervision and control of a school council. The president of the latter body must be the individual for the time filling the office of principal medical officer in the colony and one of its six "official" members; he must be a medical man not in government employ, but holding British qualifications. The council will appoint professors,



lecturers and officials of the school, will draw up rules for the admission of students and for the course of instruction, and will grant scholarships.

**Warning Against "Gallstone Cures."**—The Board of Health of Carlsbad, Germany, has been investigating the claims of a local "Heil-Magnetopath" who advertises that he can expel gallstones in two days. He administers a strong purgative and then some oil, and in less than forty-eight hours peculiar yellowish balls are evacuated, which he claims are softened gallstones. The public warning against paying the excessively high rates charged by the magnetopath for this simple purge states that these balls are always observed after a person takes a strong purge, followed by oil. They are not gallstones, containing none of the ingredients of gallstones, and this treatment is liable to be very injurious to persons with existing inflammation at any point in the intestines. The warning further states that the magnetopath in question has been examined by two members of the medical faculty and has been found incapable of making a correct diagnosis.

**Health Conditions Among the Australasian Maoris.**—The report of Dr. Pomare, a native health officer, gives some interesting facts regarding the lives of these people and of the attempts to teach them the rudiments of hygiene and sanitation. He states that owing to the non-registration of Maori deaths it is impossible to obtain correct mortality statistics and says that typhoid fever and tuberculosis cause a large number of the deaths. Dr. Pomare believes that if smallpox were to break out in New Zealand or in any of the adjacent islands the Maoris would be helpless to combat it. In view of this danger, pamphlets in the native language have been distributed, telling of the dangers of the disease and explaining the benefits of vaccination. Dr. Pomare states that leprosy is not so prevalent as has been supposed and that many cases believed to be leprosy are in reality lupus vulgaris, tubercular syphilide, gangrene, or ichthyosis. He reports in detail three cases of true leprosy. He urges the appointment of native health inspectors and native nurses for work among these people, who are now rapidly becoming extinct.

**Seventh International Prison Congress.**—This congress convened at Budapest Sept. 3 to 9, 1905, and twenty-eight countries, including Cuba and Japan, were officially represented. The four sections of the congress were devoted to criminal law, prison administration, preventive measures and youthful delinquents. In the section on preventive measures an address was read by S. A. Knopf of New York regarding the prevention of tuberculosis in prisons, and a special committee was appointed to study the best means of avoiding infection from this source. The special feature of the congress was the American innovation of children's courts. Accounts of their workings aroused great interest. A number of prison officials advocated the adoption of out-of-door employment of prisoners. The next congress will be held at Washington in 1910, forty years after the idea of holding an international prison congress was first suggested by the United States. A report of the congress in *Charities* for October states that Hungary is one of the most progressive of nations in prison reform and in industrial and technical training of the young.

**Sanitary Measures for Puerto Cortez.**—The prominent citizens of Puerto Cortez, where yellow fever is prevalent, held a meeting October 1 and organized an association to take the necessary measures to place the country in such sanitary condition as will meet the requirements of the United States Public Health and Marine-Hospital Service. The merchants and planters along the line of railroad have been asked to co-operate in raising funds to do this work, and to employ a competent physician to act as inspector for the government. The inspector is to have absolute authority to direct the sanitary measures that are necessary and to disburse the funds, which are to be raised by local subscription. The physician is to be appointed with the approval of President Bonilla and to be satisfactory as regards his reliability and competency. A telegram was sent to President Bonilla stating the action taken. He replied that the government would be glad to do anything to place the infected zone in good sanitary condition. Up to this date, says *Public Health Reports*, the absolute authority has not been granted.

**Congress for Occupation Affections.**—An international congress devoted solely to discussion of professional affections and their prophylaxis has been organized to convene at Milan next spring. There are to be three sections, one devoted to the physiologic, pathologic and hygienic aspects of the subject, one to prophylaxis and one to assistance. Both scientific and industrial circles are co-operating to make the congress productive of results. Among the themes proposed are the

injuries of night work; forms of neurasthenia in railroad employes; insanity and crime in relation to irrational regulations in various trades, etc.; professional, non-traumatic deafness; special occupation affections observed in Italy; tuberculosis and legislation on labor; women in factories and protection of infants; working in very hot or very cold rooms; alcohol; tobacco; dietetics, and various special occupation affections, studied from several points of view. The membership fee is \$2 and there are no language restrictions. Brief summaries of all the articles must be sent to the secretary before the congress, and original communications must be sent in before the close of this year, to enable the committee to have them published and distributed before the opening of the congress.

**Postgraduate Courses in Germany.**—On the occasion of the inauguration of the "Empress Friedrich House" in Berlin next spring a series of notable postgraduate lectures will be given by eminent specialists from different parts of the country. This building has been designed and erected to serve as a center for practically free postgraduate instruction throughout the empire. The course next spring will be on "borderland" subjects. Bäumlér will discuss the "Medicinal and Mechano-hydrotherapeutic Treatment of Respiratory and Circulatory Disturbances"; von Bergmann, "Surgical Treatment of Affections of the Nerve Centers"; Curschmann, the "Indications for Surgical Intervention in Affections of the Peritoneum and Intestine"; Edinger, the "Present Status of Treatment of Nervous Affections"; Ehrlich, "Serum Therapy"; Frenkel, "Mechanical Treatment of Nervous Affections"; Gaffky, "Prevention of Infectious Diseases on the Basis of the Most Modern Experiences"; Hoffa, "Exercise, Mechanics and Massage in Treatment of Bone and Joint Affections"; Kehr, "Internal and Surgical Treatment of Gallstones"; Lassar, "Light as a Curative Factor"; Lexer, "Treatment of Septic Infection"; Michel, "Eye and Brain"; Müller, "Evolution of Diagnostic Means and Methods," and Rumpf, "Appendicitis."

**Eighth International Veterinary Congress.**—This congress was held at Budapest in September; many of the speakers were heard afterward at the International Tuberculosis Congress at Paris. In the section on pathology, the principal subject discussed was the spread of tuberculosis by domestic animals, especially the dog. The relations between tuberculosis in man and in animals was the subject of several addresses, and also the mode of infection in tuberculosis of domestic animals. De Jong of Leyden was one of those who emphasized the fact that human bacilli are identical with those of the larger domestic animals, including the dog, although the bacilli may display variations in virulence. As a rule, he said, human tubercle bacilli are less virulent than those of animals. A resolution presented by Bang of Copenhagen and Regner of Stockholm was unanimously adopted asking that the state should pay the expenses of bacteriologic diagnosis when the tuberculin test in cattle results negatively but the symptoms still indicate tuberculosis. Also that measures should be taken against tuberculosis of the lungs in cattle the same as are now enforced against udder tuberculosis. The congress further adopted a resolution asking that the extensive tests of protective vaccination should be undertaken under governmental auspices.

**Another Victory for the Organized Profession in Germany.**—THE JOURNAL chronicled at the time the wholesale resignations of the medical officers of the semi-official sickness insurance societies in Germany a year or so ago. The length of treatment was doubled by official decree while the societies refused to increase the remuneration of their physicians to correspond. The medical officers won their point nearly everywhere, but Remscheid was the scene of what was supposed to be unqualified defeat. The societies succeeded in finding enough physicians to supply the needs of the policy-holders. The imported physicians were guaranteed life positions with fair remuneration on good behavior. Two of them have recently been summarily dismissed by one society because they declined to attend a maternity case. The first one summoned was physically unable to leave his house, after a very exhausting night and day service, and the other was engaged with a number of patients whom he could not leave. When these two medical officers were thus dismissed, all the other medical officers of all the local societies resigned also in a body. The other physicians in town returned good for evil by espousing their cause. The *Leinsiger Verband* also promised them pecuniary aid. The result has been that the societies have yielded completely and agreed to the terms proposed by the organized profession at the beginning of the struggle.

**Sanitation in Australia.**—Dr. Jamieson, the health officer of Melbourne, has drawn up a brief and interesting survey of the



progress made in that city in public health during the last thirty years, says the *British Medical Journal*. He selects as indications of advance or otherwise: (a) the general death rate, (b) the mortality from typhoid fever, (c) the phthisis death rate, (d) the infant mortality, and (e) the cancer death rate. With the exception of the last named he finds a marked improvement. The death rate from all causes has declined from 18.4 in 1870-2 to 14.7 in 1900-2, though there was an increased rate of 19.6 in the triennial period—which is frequently taken as a standard—1880-2. The mortality from typhoid fever was 65 per 100,000 persons in 1870-2, and has now fallen to 16 per 100,000 in 1900-2. This decline Dr. Jamieson considers to have been largely brought about by the extension of the system of deep drainage. The phthisis deaths per 100,000 were 210 in 1870-2 and 146 in 1900-2, and other tuberculous diseases have declined, though not at the same ratio. The triennial period of chief decline was in 1890-2 and subsequently. The lessened mortality from consumption is attributed to “general measures of improved sanitation, as better drainage and house construction, but, above all, to more general recognition of the benefits to be got from good lighting and ventilation, both in private dwellings and in factories, work-shops and offices.” The infant mortality has fallen from 177.9 per 1,000 births in 1873-5 to 121.5 in 1900-2. In 1904, owing to exceptional conditions, it fell to 92.7 per 1,000 births. Dr. Jamieson has a different report to make regarding cancer, for in 1870-2 deaths from cancer numbered 301 per 100,000 of the population of 45 years of age and upward. In 1880-2 the rate was 324, in 1890-2, 420, and in 1900-2 509. Allowing for fallacy owing to age incidence and the proportion of persons of cancerous age living, he is of the opinion that the increase is so great and so uniform that it can hardly be explained by any changes in medical nomenclature or improvement in methods of diagnosis. On the whole, the record shows that in Melbourne preventable diseases have been in fair measure prevented.

#### LONDON LETTER.

##### The Cause of “Return Cases” of Infectious Diseases.

The Metropolitan Asylums Board has issued a report on return cases of scarlet fever and diphtheria, by Dr. A. G. R. Cameron, who was appointed to investigate the subject. The object was to ascertain the conditions under which return cases arise and to determine if their incidence bore any relation to the period of detention in hospital. The total number of inquiries was 900, of which about 800 were in connection with return cases of scarlet fever and diphtheria. Dr. Cameron inquired into 688 alleged infecting cases of scarlet fever, which formed 4.1 per cent. of the patients discharged from the board's hospitals during the period of inquiry, and found that 46 per cent. of these were the cause of return cases. These return cases occurred in all months of the year, but especially from November to April. No close correspondence was found between high infectivity rates and short periods of detention in hospital. Patients between the ages of 4 and 10 years appear to carry home infection more frequently than those in any other age period. Dr. Cameron attributes the infection of return cases to complications such as nasal discharge rather than to failure of disinfection or shortness of detention in hospital. He thinks that with more extended means of isolation combined with asepsis the number of return cases can be diminished. He draws much the same conclusions with regard to diphtheria. Return cases of diphtheria are less frequent than return cases of scarlet fever, but a larger proportion of the former are not preventable, as no abnormal condition, apart from bacteriologic examination, can be discovered in the infecting case. The value of the report is enhanced by an appendix of observations by the medical superintendents of the board's fever hospitals. They conclude that patients with discharging or inflamed noses are more likely than any other class to cause infection. They think that in scarlet fever late desquamation is not evidence of infectivity and that infection is sometimes carried by persons free from the disease and its sequelæ.

##### The Quarterly Journal of Tropical Veterinary Science.

The want of a journal dealing with veterinary pathology in the tropics has been felt for some time. To supply this want certain officers of the Indian Civil Veterinary Department have undertaken the publication of a quarterly periodical to be called the *Journal of Tropical Veterinary Science*. Though emanating from India, it is hoped that the sphere of its activity and utility will not be limited to that country. It will contain original scientific articles, and reviews and abstracts of current literature. Among the subjects to be dealt with in the

forthcoming numbers are a series of articles on the anatomy, physiology and pathology of the camel and the elephant; the intestinal and other parasites of animals; and the biting flies and ticks of India, with their importance in the transmission of disease. The first number will be ready Jan. 1, 1906. The annual subscription will be about \$4.50. Communications for the editors are to be addressed to the Lahore Veterinary College, Punjab, India. Business letters should be sent to the publishers, Messrs. Thacker, Spink & Co., Calcutta.

##### Epidemic Dermatitis.

The report of Dr. Monckton Copeman on an outbreak of epidemic skin disease which occurred at the Central London Sick Asylum, Hendon, in 1903, has been published by the local government board. Dr. Copeman found that this disease was similar to a malady originally termed “epidemic eczema,” which had previously been observed at various metropolitan infirmaries. It occurs under a plurality of forms and does not always conform to a strictly eczematous type. In the severer cases there is considerable pyrexia and the eruption is associated with marked irritability and itching. Desquamation is a constant feature and ranges from the mere casting off of powdery scales to the shedding of the entire cuticle over the affected regions. Compared with previous outbreaks, in which the constitutional symptoms were frequently severe and the mortality reached as much as 10 per cent., the Hendon outbreak was mild. Only two deaths occurred and one of these was largely attributable to other causes. The persons attacked were generally of comparatively advanced age and subjects of various chronic ailments. Dr. Copeman has a strong suspicion that milk played an important part in the causation of the disease. When Swiss milk was substituted for the ordinary milk supply all the patients began to improve. In previous outbreaks suspicion has fallen on the milk, but bacteriologic and chemical examination failed to reveal the *materies morbi*. In the Hendon outbreak, however, a clue was afforded by the observation that the milk remained good for an abnormally long time; special attention, therefore, was directed to the detection of preservatives, with the result that in all the milk formalin was found. Hence this agent is suspected of playing a part in the causation.

##### Leprosy and Fish Eating.

A work entitled “Leprosy and Fish Eating,” by Mr. Jonathan Hutchinson, is announced for early publication. Mr. Hutchinson's persistent advocacy of the doctrine that leprosy is due to the eating of badly cured fish is well known. This volume will contain information as to the history of leprosy, its prevalence in different countries and the circumstances under which it has disappeared from many. Mr. Hutchinson contends that leprosy is not contagious and that the segregation of lepers is useless and their compulsory detention unjustifiable. He gives an account of his tours of inquiry in South Africa and India, and discusses the measures best adapted for the suppression of the disease in different countries. The volume will contain maps and illustrations. Whether or not Mr. Hutchinson will convince his readers of the truth of his views remains to be seen. The book will be a most important contribution to the subject of leprosy. Mr. Hutchinson has made a life study of the subject, and one of the feats of his extraordinarily capacious mind is a most minute knowledge of the history and distribution of leprosy in every country in the world.

##### Importation of Chinese Pigtales.

Considerable sensation has been produced by the revelation at an inquest at Bradford on a workman who died of anthrax and who had been employed in opening camel hair, low foreign wool, low hair and human hair for a firm of wool combers. In reply to the coroner the foreman said that the human hair came from China in 1,000-pound packages. The hair came in just as if it had been cut from a Chinaman's head and rolled up in pigtales. For all the foreman knew, the hair might have been cut from the head of a man suffering from plague or other infectious disease. The deceased had been inoculated with Selavo's serum without result. The coroner said that under the circumstances and considering the fact that two cases of anthrax had occurred at these works, he thought that further inquiries should be made with regard to the human hair manipulated by the firm. Ordinarily the hair that came from China was made into wigs. He said that he thought this hair should be examined.

##### Plague in Calcutta in 1904.

The official report on plague in Calcutta by Dr. F. T. Pearse, special health officer, with appendices by Drs. Hossack and



Crake, has just been issued. The most striking feature of the plague in Calcutta, as in other parts of the world, is the persistency of the seasonal recurrence. Plague in Calcutta reaches a maximum in the month of April and falls to a minimum in July, and the very weeks of the maximum and minimum recur year after year with remarkable regularity. The coincident appearance of plague in rats is confirmed to a striking degree. In the month of January of each year the mortality in rats increases and cases of plague of the bubonic type reappear in man about the same time. The type of plague during the "quiescent period," i. e., when the disease is more or less sporadic, differs from that encountered during the period of "active" outbreak. With the approach of the active period the bubonic type prevails and increases as the outbreak waxes in virulence. With the wane of the outbreak the bubonic type of the disease diminishes, and during the quiescent stage is rare or absent. Cases of illness during the quiescent period are in danger of being returned as plague when due to other causes. Dr. Hossack is so impressed with this fact that he thinks that for a period of two or three months the city is practically free from plague. Exact computation of the number of cases of plague in Calcutta is impossible. When a death is reported the medical inspectors are dependent on the history of the illness given by the friends of the deceased, whether the patient suffered from plague or not. As in the majority of cases the patients are not seen alive, and most of the dead are buried without postmortem examination, bacteriologic examination is seldom possible. The mortality from plague, whatever the season, is over 90 per cent., and it is actually computed to be higher during the quiescent period than during the active period of disease. It is satisfactory to hear that the operations of the plague department caused no excitement or agitation. The upper middle class are pleased at the removal from their neighborhood of insanitary dwellings, while the compensation paid to hut owners is amply sufficient, especially as the owner is allowed to retain the materials of his hut.

#### Opening of a Scottish College of Hygiene.

A college of hygiene and physical training instituted by the Carnegie Dunfermline trustees has been formally opened by Lord Linlithgow, secretary for Scotland. Following the method established for the training of teachers in elementary schools, it will form a great practicing school for 4,500 school children. The college proper consists of young women preparing for the teaching of physical culture as a profession or acquiring a knowledge of it for their personal benefit. In the near future it is proposed also to receive men.

#### Sex and Genealogy.

A writer in the lay press, Mr. Fox-Davies, who has made a special study of genealogy, brings forward some curious and interesting facts. The list known as the the Roll of Battle Abbey gives the names of the upper classes of the Norman invaders of England. 1. With very few exceptions all those names have now ceased to exist. 2. At the present day the names of plebeian origin show an overwhelming preponderance over those of patrician origin. 3. All the ancient baronies heritable by women have without exception left the family in which they were created. Another aspect of the same phenomenon is that although baronies have been created in continuous succession since 1446 (the date of the earliest one which has survived), the baronies in existence may be divided as follows: A small number (about twenty), are ancient baronies heritable by women, and about 320 are to heirs male. Of the latter as many as 250 have been created since 1802 and as many as 175 since 1850. Of all the baronies created between 1446 and 1802 only 70 survive. On the other hand, most of the old Norman families can be shown still to exist in the female line. The obvious deduction from these facts is that the tendency in patrician families is for the girls to survive. Mr. Fox-Davies thinks that this bears out Schenk's theory that good living and abundance of food tends to make a woman produce females and privation to make her produce males.

#### DUBLIN LETTER.

##### Election of Representative to the General Medical Council.

The medical profession in the United Kingdom is governed by a body known as the general medical council, the constitution of which is somewhat peculiar. It consists of one representative from each of the universities and licensing bodies of the kingdom, together with three nominees of the crown,

one from each country, and three representatives elected directly by the members of the profession. These so-called direct representatives sit for a period of five years and are eligible for re-election. The present representative for Ireland, Sir William Thomson, has held his seat since 1896, and consequently has to offer himself for re-election at the beginning of next year. In 1901 he was opposed by Dr. Laffan, a well-known general practitioner in the south of Ireland, who however, received but little support. At the forthcoming election more vigorous opposition is promised. It is, of course, a matter of discontent among the rank and file of the profession that their government is so much in the hands of the consultant and specialist class, from whom the college and crown representatives are entirely chosen. It is urged, therefore, that it is unwise to miss an opportunity of returning a general practitioner to the council, and as Sir William Thompson is, of course, a well-known Dublin surgeon and teacher, it looks as if he would have to make room for a "man of the people." Two well-known country practitioners have announced their intention of being candidates—Dr. Leonard Kidd of Enniskillen and Dr. Mahon of Ballinrobe. The former is an ex-president of the Irish Medical Association, while the latter is a well-known and energetic member of the same body. Each is receiving a large share of support throughout the country, particularly in his own district. In addition, Belfast, which always shows great jealousy of the capital in medical as well as in other matters, is giving much support to Dr. Kidd. It is probable, however, that in spite of the opposition, Sir William Thomson will retain his seat.

#### Irish Prisons.

The twenty-seventh report of the general prisons board of Ireland was issued recently and shows that the health of the prisoners on the whole has been good, while there has been no outbreak of infectious disease. In fact, the only zymotic disease which runs into two figures in the statistics of incidence is influenza, from which Mountjoy, County Waterford and Maryborough prisons suffered heavily. The number of cases of phthisis treated during the year is remarkably small—19. Apart from executions there were only 8 deaths during the year; one of these was from rupture of the heart in the case of a prisoner awaiting execution, and another was from perforation of the intestine in typhoid fever. Twenty prisoners were released during the year on medical grounds. Viewed from the social aspect, it is very satisfactory to note the continued decrease of serious crime in Ireland. One prison (that of Wexford) has been closed during the year, thus reducing the 42 which existed at the passing of the prison act in 1877 to 19. It is hoped, moreover, during the current year to close the Limerick female prison. The number of local prisoners has remained fairly constant for the past few years, but the number of convicts is remarkably small. Whereas on Jan. 1, 1855, there were 3,427 convicts in custody, and in 1870, 1,230. on Jan. 1, 1904, there were only 252. Of these only 10 were women. The industries in which the prisoners are employed are very varied, including baking, brush making, carpentry, cutting firewood, mat making, knitting, needlework, sack making, shoemaking, smithing, stone breaking, tailoring, washing, weaving of matting, frieze, linsey and blankets, mail bag making, and cutting of linen for paper making. On a daily average only 163 were employed in picking oakum. It is intended to extend as much as possible the principle of associated labor, and the prisons board at present is erecting large workshops in Mountjoy.

The number of inmates of the State Inebriate Reformatory at Ennis during the year has been a little over 30. It is unfortunate that more use is not made of this institution, as experience up to the present, in the case of those who have undergone prolonged sentences, gives gratifying evidence of the beneficial results of the treatment. On this point the board remarks: "As it has now been clearly proved that the reformatory treatment in many cases has succeeded beyond expectation, it is a matter of much regret that more of the habitual inebriates for whom the institution was established are not sent there, and also, that in the cases of some of those who are sent, the term of committal is so short as not to afford a fair opportunity of applying the remedial influence of the reformatory. There was an improvement shown in this respect last year, as compared with 1903, inasmuch as while in 1903 three sentences of less than eighteen months were passed, only one such was passed in 1904. This latter, however, was for the very short term of six months, a period in the opinion of all those who have any experience of the institution, altogether too short."



## Pharmacology

### Sal-Codeia—Bell.

According to the advertisements "Salacetin"

"is a combination with heat of salicylic and glacial acetic acids with phenylamine, the irritating, depressing and blood corpuscle destroying elements removed."

According to the Committee on Chemistry of the Council on Pharmacy and Chemistry of the American Medical Association, whose report was published in THE JOURNAL of the American Medical Association June 3, 1905, p. 1791, "Salacetin" is a mixture of acetanilid, salicylate of sodium and bicarbonate of sodium. Sal-Codeia (Salacetin-Codein), therefore, would be the same as the above with codein added. Of course, acetanilid and codein will relieve pain (it could not be otherwise) and consequently make a very good combination in certain conditions, if not used too often and if used with care. While the continued use of codein is not likely to produce a drug habit, it, as well as acetanilid, does do so sometimes, and it must be remembered that codein is a motor paralyzant, and is not the best combination to be used with acetanilid. For those who wish to give a combination of acetanilid, salicylate of sodium and codein, the following prescription is suggested:

R. Acetanilid .....	3i	4
Sodii bicarbonatis .....	3ss	2
Sodii salicylatis .....	3ss	2
Codein sulph. ....	gr. vi	4

M. et div. chart No. xxiv.

This will make five-grain powders which may be put in papers, capsules, cachets or tablets. Each will contain  $2\frac{1}{2}$  grains (0.15) of acetanilid and  $1\frac{1}{4}$  grains (0.075) each of sodium salicylate and sodium bicarbonate, with  $\frac{1}{4}$  grain (0.015) of codein.

The doses of acetanilid and of codein approximate the average adult doses, but the sodium salicylate, to have any appreciable effect, must be increased, for  $1\frac{1}{4}$  grains of salicylate of sodium in a dose is insignificantly small. Sodium salicylate with acetanilid makes a fairly good combination in certain rheumatic troubles, but it is not indicated by any means as a cure-all, as one would judge from the literature sent out by the Sal-Codeia—Bell people.

### Resolutions on Patent Medicines.

At a meeting of the third councilor district of the Michigan State Medical Society, Oct. 18, 1905, the following resolutions were presented by Dr. A. S. Kimball of Battle Creek, and were adopted by the Society:

*Whereas*, The American people are being daily humbugged, robbed and poisoned by venders of patent nostrums, and that, largely through the medium of the press, and

*Whereas*, Through their fearless, scathing and denunciatory editorials, their concise analyses and clever exposures by their contributors, *Collier's Weekly* and the *Ladies Home Journal* are doing immeasurable good in their praiseworthy campaign against this "American Fraud," be it

*Resolved*, That this meeting of the Third Councilor District of the Michigan State Medical Society extend its heartiest thanks and earnest commendations to P. F. Collier and Son, and the Curtis Publishing Co. for this splendid work. And be it further

*Resolved*, That copies of these resolutions be furnished the editors of *Collier's Weekly*, *The Ladies' Home Journal*, THE JOURNAL of the American Medical Association, and *The Journal of Michigan State Medical Society*.

### Proprietary Remedies in Great Britain.

In an editorial on the recent meeting of the British Medical Association at Leicester, the *Bristol Medico-Chirurgical Journal* in commenting on the drugs, appliances, etc., which were exhibited, states: "It is satisfactory to find that the supply of special proprietary exhibits appears to be declining; it is impossible to use more than a small fraction of those on the market, and many of them are no better than the simpler preparations of the Pharmacopeia. Regardless of the principles of scientific drugging, the prescriber appears to have drifted into the hands of the semiscientific pharmacist in search of some proprietary compound to which a short but meaning-

less name may be attached, and it is too often the case that an elaborate but unscientific compound is selected by the prescriber instead of a more simple preparation of the drug he requires. The art of prescribing appears to be fast dying out; even physicians are adopting the ways of the surgeons by prescribing some well-known elaborate compound, the name of which is short and takes little time to write. The pharmacist makes his compounds elaborate in order that they may be the less easily imitated, but who can say what will be the combined effect of some twenty drugs in combination, even if the individual effect of each one may be foretold. Doubtless many of these combinations have proved themselves to be useful and have come into general use deservedly, but on the other hand there are many others whose only virtue depends on an incessant and barefaced laudatory advertisement."

### An Australian Point of View.

Medical acts all the world over have been passed, not in the interests of the medical profession, but for the purpose of protecting the public and enabling them to distinguish between those who are regarded by the state as properly qualified and those who are not. A considerable number of medical practitioners think that legislative action should be taken for the repression of unqualified practice altogether. Most of those who clamor for the legal restriction of quacks do so openly in the interests of the public. I venture to take a different view. Personally, I do not believe that quackery does the slightest harm to the medical profession from a pecuniary point of view. But that is not the important question. What is requisite is that the public should be better informed on these matters, and more will be done by educating the people than by legal enactment. People must be made to realize both the limitations and possibilities of treatment, and must get rid of their antiquated and superstitious notions of the action of drugs, too many of which, I regret to say, are too often supported by some of our own profession. Much could be done by making public the real composition of quack preparations, and here legislation can be of service. The mysterious always appeals to the ignorant. Even the cultured can be attracted by artistic mysticism, as evidenced by the vogue of Maeterlinck, the so-called Shakespeare of Belgium. Take away the cloak of secrecy from quack medicines; let it be known that so-and-so's "Wizard Oil" is only turpentine, camphor and ammonia; that somebody else's "Soothing Syrup" is composed of morphia, with essence of anise and balsam of tolu, and the occupation of their manufacturers would be, like Othello's, gone. Hence the angry commercial protest against recent legislation in New Zealand on the subject of patent and proprietary medicines. The New Zealand Parliament passed an act, under which regulations were framed, making it compulsory that the formula of all patent and proprietary medicines should be printed on the bottle, and that if any poison were contained in the preparation it must be labelled accordingly. The manufacturers of patent medicines, and their agents, raised such powerful protests, and brought such influence to bear, that the regulations were modified, to the extent that the formula, instead of being placed on the bottle, was to be lodged with the Health Department. The manufacturers still objected, and, as no further alterations in the regulations could be obtained, they decided not to send their medicines to New Zealand. Evidently they realize very clearly that, once the real nature and commercial value of their preparations became publicly known, they would have no demand at the extravagant prices at which they had hitherto been sold.—G. A. Syme, M.S., F.R.C.S., in *Intercolonial Medical Journal of Australasia*.

### The Great American Fraud, Peruna, and the "Bracers."

SAMUEL HOPKINS ADAMS.

A distinguished public health official and medical writer once made this suggestion to me:

"Let us buy in large quantities the cheapest Italian vermouth, bad gin and bitters. We will mix them in the proportion of three of vermouth to two of gin with a dash of bitters, dilute and bottle them by the short quart, label them 'Smith's Revivifier and Blood-Purifier; dose, one wineglassful



before each meal; advertise them to cure erysipelas, bunions, dyspepsia, heat rash, fever and ague, and consumption; and to prevent loss of hair, smallpox, old age, sunstroke and near-sightedness, and make our everlasting fortunes selling them to the temperance trade."

"That sounds to me very much like a cocktail," said I.

"So it is," he replied. "But it's just as much a medicine as peruna and not as bad a drink."

Peruna, or, as its owner, Dr. S. B. Hartman of Columbus, Ohio (once a physician in good standing), prefers to write it, *Pe-ru-na*, is at present the most prominent proprietary nostrum in the country. It has taken the place once held by Green's nervura and by Paine's celery compound, and for the same reason which made them popular. The name of that reason is alcohol. Peruna is a stimulant pure and simple, and it is the more dangerous in that it sails under the false colors of a benign purpose.

According to an authoritative statement given out in private circulation a few years ago by its proprietors, peruna is a compound of seven drugs with cologne spirits. This formula, they assure me, has not been materially changed. None of the seven drugs is of any great potency. Their total is less than one-half of 1 per cent. of the product. Medicinally, they are too inconsiderable, in this proportion, to produce any effect. There remains to peruna only water and cologne spirits, roughly in the proportion of three to one. Cologne spirits is the commercial term for alcohol. Any one wishing to make peruna for home consumption may do so by mixing half a pint of cologne spirits, 90 proof, with a pint and a half of water, adding thereto a little cubeb for flavor and a little burnt sugar for color. It will cost, in small quantities, perhaps seven or eight cents per quart. Manufactured in bulk, so a former peruna agent estimates, its cost, including bottle and wrapper, is about eight and one-half cents. Its price is \$1.00. Because of this handsome margin of profit, and by way of making hay in the stolen sunshine of peruna advertising, many imitations have sprung up to harass the proprietors of the alcohol-and-water product. *Pe-ru-vi-na*, *p-ru-na*, *purina*, *anurep* (an obvious inversion); these, bottled and labeled to resemble peruna, are self-confessed imitations. From what the peruna people tell me, I gather that they are dangerous and damnable frauds, and that they cure nothing.

What does peruna cure? Catarrh. That is the modest claim for it; nothing but catarrh. To be sure, a careful study of its literature will suggest its value as a tonic and a preventive of lassitude. But its reputation rests on catarrh. What is catarrh? Whatever ails you. No matter what you've got, you will be not only enabled, but compelled, after reading Dr. Hartman's peruna book, "The Ills of Life," to diagnose your illness as catarrh, and to realize that peruna alone will save you. Pneumonia is catarrh of the lungs; so is consumption. Dyspepsia is catarrh of the stomach. Enteritis is catarrh of the intestines. Appendicitis—surgeons, please note before operating—is catarrh of the appendix. Bright's disease is catarrh of the kidneys. Heart disease is catarrh of the heart. Canker sores are catarrh of the mouth. Measles is perhaps, catarrh of the skin, since "a teaspoonful of peruna thrice daily or oftener is an effectual cure" ("Ills of Life"). Similarly, malaria, one may guess, is catarrh of the mosquito that bit you. Other diseases not specifically placed in the catarrhal class, but yielding to peruna (in the book), are colic, mumps, convulsions, neuralgia, women's complaints and rheumatism. Yet, "peruna is not a cure-all," virtuously disclaims Dr. Hartman, and grasps at a golden opportunity by advertising his nostrum as a preventive against yellow fever! That alcohol and water, with a little coloring matter and one-half of one per cent. of mild drugs, will cure all or any of the ills listed above is too ridiculous to need refutation. Nor does Dr. Hartman himself personally make that claim for his product. He stated to me specifically and repeatedly that no drug or combination of drugs, with the possible exception of quinin for malaria, will cure disease. His claim is that the belief of the patient in peruna, fostered as it is by the printed testimony, and aided by the "gentle stimulation," produces good results. It is well established that in certain classes of disease the opposite is true. A considerable proportion of tu-

berculosis cases shows a history of the peruna type of medicines taken in the early stages, with the result of diminishing the patient's resistant power, and much of the typhoid in the Middle West is complicated by the victim's "keeping up" on this stimulus long after he should have been under a doctor's care. But it is not as a fraud on the sick alone that peruna is baneful; but as the maker of drunkards also.

"It can be used any length of time without acquiring a drug habit," declares the peruna book, and therein, I regret to say, lies specifically and directly. The lie is ingeniously backed up by Dr. Hartman's argument that "nobody could get drunk on the prescribed doses of peruna."

Perhaps this is true, though I note three wineglassfuls in forty-five minutes as a prescription, which might temporarily alter a prohibitionist's outlook on life. But what makes peruna profitable to the maker, and a curse to the community at large, is the fact that the minimum dose first ceases to satisfy, then the moderate dose, and finally the maximum dose, and the unsuspecting patron, who began with it as a medicine, goes on to use it as a beverage, and finally to be enslaved by it as a habit. A well-known authority on drug addictions writes me:

" . . . I have, in the last two years, met four cases of persons who drank peruna in large quantities to intoxication. This was given to them originally as a tonic. They were treated under my care as simple alcoholics. . . ."

"But why should any one who wants to get drunk drink peruna when he can get whiskey?" argues the nostrum maker.

There are two reasons, one of which is that in many places the "medicine" can be obtained and the liquor can not. Maine, for instance, being a prohibition state, does a big business in patent medicines. So does Kansas. So do most of the no-license counties in the South, though a few have recently thrown out these disguised "boozees." Indian Territory and Oklahoma . . . have done so because of Poor Lo's predilection toward curing himself of depression by these remedies, and for a time, at least, peruna was shipped in in unlabeled boxes. . . .

The other reason why peruna or some other of its class is often the agency of drunkenness instead of whisky is that the drinker of peruna doesn't want to get drunk; at least she doesn't know that she wants to get drunk. I use the feminine pronoun advisedly, because the remedies of this class are largely supported by women. Lydia Pinkham's variety of drink depends largely on its alcohol. Paine's celery compound relieves depression and lack of vitality on the same principle that a cocktail does, and with the same necessity for repetition. I knew an estimable lady from the Middle West who visited her dissipated brother in New York—dissipated from her point of view, because she was a pillar of the W. C. T. U.—and he frequently took a cocktail before dinner and came back with it on his breath, whereon she would weep over him as one lost to hope. One day in a mood of brutal exasperation, when he hadn't had his drink, and was able to discern the flavor of her grief, he turned on her:

"I'll tell you what's the matter with you," he said. "You're drunk—maudlin drunk!"

She promptly and properly went into hysterics. The physician who attended diagnosed the case more politely, but to the same effect, and ascertained that she had consumed something like half a bottle of Kilmer's swamp root that afternoon. Now, swamp root is a very creditable "hooze," but much weaker in alcohol than most of its class. The brother was greatly amused, until he discovered to his alarm that his drink-aborring sister could not get along without her patent-medicine bottle! She was in a fair way, quite innocently, of becoming a drunkard.

#### DUFFY'S MALT WHISKEY.

From its very name, one would naturally absolve Duffy's malt whiskey from fraudulent pretence. But Duffy's malt whiskey is a fraud, for it pretends to be a medicine and to cure all kinds of lung and throat diseases. It is especially favored by temperance folk. "A dessertspoonful, four to six times a day, in water, and a tablespoonful on going to bed" (personal prescription for consumptive), makes a fair grog allowance for an abstainer.



"You must not forget," writes the doctor in charge, by way of allaying the supposed scruples of the patient, "that taking Duffy's malt whiskey in small or medicinal doses is not like taking liquor in large quantities, or as it is usually taken. Taking it a considerable time in medicinal doses, as we direct, leads to health and happiness; while taken the other way, it often leads to ruin and decay. If you follow our advice about taking it, you will always be in the temperance fold, without qualm of conscience."

It has testimonials ranging from consumption to malaria, and indorsements of the clergy. On the opposite page is reproduced a Duffy advertisement showing the "portraits" of three "clergymen" who consider Duffy's pure malt whiskey a gift of God; and above them a saloon window-display of this product. For the whiskey has its recognized place behind the bar, sold by the manufacturers to the wholesale liquor trade and by them to the saloons, where it may be purchased over the counter for 85 cents a quart. This is cheap, but Duffy's pure malt whiskey is not regarded as a high-class article.

Its status has been definitely settled in New York state, where Excise Commissioner Cullinan recently obtained a decision in the Supreme Court declaring it a liquor. The trial was in Rochester, where the nostrum is made. Eleven supposedly reputable physicians, four of them members of the health department, swore to their belief that the whiskey contained drugs, which constituted it a genuine medicine. The state was able to show conclusively that if remedial drugs were present, they were in such small quantities as to be indistinguishable, and, of course, utterly without value; in short, that the product was nothing more or less than sweetened whiskey. Yet the United States government has long lent its sanction to the "medicine" status by exempting Duffy's pure malt whiskey from the federal liquor tax. . . . Other "drugs" there are which sell largely, perhaps chiefly, over the bar, Hostetter's bitters and Damiana bitters being prominent in this class.

Hostetter's bitters contain, according to an official state analysis, 44 per cent. of alcohol; Lydia Pinkham appeals to suffering womanhood with 20 per cent. of alcohol; Hood's Sarsaparilla cures "that tired feeling" with 18 per cent.; Burdock's blood bitters with 25 per cent.; Ayer's sarsaparilla with 26 per cent.; and Paine's celery compound with 21 per cent. The fact is that any of these remedies could be interchanged with peruna or with each other, so far as effect goes, though the iodid of potassium in the sarsaparillas might have some effect on the stomach as likely to be harmful as helpful, which would be lacking in the simpler mixtures. . . .—Excerpts from *Collier's Weekly*, October 28.

## Correspondence

### Reciprocity Between New Jersey, New York and Other States.

CAMDEN, N. J., Oct. 31, 1905.

*To the Editor:*—At a conference held between the board of regents of New York and the State Board of Medical Examiners of New Jersey, at Trenton, N. J., October 16, it was decided to indorse each other's examined licentiates without further examination, beginning Jan. 1, 1906.

The medical license of New Jersey is indorsed, at this time, in lieu of further examination, by Maine, Vermont, Delaware, Virginia, South Carolina, Texas, Ohio, Illinois, Michigan, Minnesota, Wisconsin, Kansas and Colorado.

New Jersey will indorse the medical license issued by any state, after examination, whose educational, examining and licensing requirements are substantially equal to or higher than those of New Jersey, irrespective of reciprocity, provided the applicant complies with the conditions of indorsement.

The standard of requirements of New Jersey consists of a high school diploma issued after four years of study, and a medical diploma issued after four courses of lectures of at least seven months each, in four different calendar years, in a medical college of approved standing.

E. L. B. GODFREY, M.D.,  
Secretary State Board of Medical Examiners of New Jersey.

## Marriages

M. LUTHER KOSER, M.D., to Miss Blades, both of Cherryvale, Kan., October 18.

E. STANTON HYMER, M.D., to Miss Helen Richardson, both of Chicago, June 29.

WALTER B. DOBSON, M.D., to Miss Clio Legard Best, both of Leland, Miss., October 19.

M. H. SAWYER, M.D., to Miss Barbra Peterson, both of Linn Grove, Iowa, October 18.

EDMUND JOSEPH BALL, M.D., to Miss Margaret Daly, both of Valparaiso, Ind., October 18.

FRANCIS E. FITZGERALD, M.D., to Miss Rose Jennings Hynes, both of Omaha, October 18.

J. EDWARD SMITH, M.D., to Miss Lucy Spalding, both of Bardstown, Ky., October 11.

MOSES EISENSTAEDT, M.D., to Miss Blanche Janet Benjamin, both of Chicago, November 1.

HERMAN H. KAMMAN, M.D., to Miss Bessie Tormohlen, both of Columbus, Ind., October 19.

SIDNEY R. CARSELY, M.D., to Miss Lois Emerette Lyon, both of Vergennes, Vt., October 18.

FRED BAUMGART, M.D., Danville, Ill., to Miss Anna Hoehn of Columbus, Neb., October 26.

WILLIAM HERBERT POWERS, M.D., to Miss Violet Harris, both of Ocala, Fla., October 16.

WILLIS BRYANT JONES, M.D., to Miss Lena Elizabeth Swift, both of Atlanta, Ga., October 25.

GARLAND M. VADEN, M.D., Capeville, Va., to Miss Evelyn Wyatt of Onancock, Va., recently.

REXWALD BROWN, M.D., Chicago, to Miss Elizabeth Murphy of Hortonsville, Wis., October 21.

O. W. OKERLIN, M.D., Liscomb, Iowa, to Miss Sue R. Denne of near Atlantic, Iowa, October 18.

ROBERT EARL CONKLIN, M.D., Alma, Neb., to Miss Jessie A. Riley of Fairbury, Neb., October 18.

JACKSON LEE MARTIN, M.D., Fresno, Cal., to Miss Elizabeth Kirk of Marysville, Cal., October 18.

EMMA PEARSON, M.D., Van Wert, Ohio, and C. M. RANDALL, M.D., of Bay City, Mich., October 18.

J. FRANK HUSS, M.D., Atlanta, Ga., to Miss Annie Lamar Jackson of Covington, Ga., October 25.

HUGH EMORY SMITH, M.D., St. Johns, Mich., to Miss Alberta Allen of Kalamazoo, Mich., October 18.

JOHN G. RULISON, M.D., Ann Arbor, Mich., to Miss Edith Benjamin of Flushing, Mich., October 18.

NATHAN P. STAUFFER, M.D., Philadelphia, to Miss Anna L. Pennock of Lansdowne, Pa., October 26.

JAMES L. HOLDEN, M.D., to Miss Hazel R. Coyle, both of Zanesville, Ohio, at Cincinnati, October 18.

CHARLES G. MCEACHERN, M.D., to Miss Laura Donna Griffin, both of Moss Point, Miss., October 26.

CHARLES M. RUSSELL, M.D., Columbia, Ky., to Miss Angeline Clark of Bowling Green, Ky., October 24.

PAUL GERHARDT WOOLLEY, M.D., to Miss Helen Bradford Thompson at Yokohama, Japan, August 8.

WILLIS E. GOULD, M.D., North Leeds, Maine, to Miss Eunice Libby of South Hartford, Maine, October 18.

ETHELBERT HINES GALLOWAY, M.D., to Miss Mabel Clare Johnson, both of Jackson, Mich., November 1.

THOMAS CHESTER RUTTER, M.D., Hazleton, Pa., to Miss Veronica H. Tait of Weatherly, Pa., October 19.

G. BROWN MILLER, M.D., Washington, D. C., to Miss Virginia Blake of Woodlands, Ascot, England, recently.

BENJAMIN R. SANFORD, M.D., Glimp, Tenn., to Miss Hattie Bruce Fitzpatrick of Henning, Tenn., October 18.

SAMUEL WALTON DAY, M.D., Auburn, N. Y., to Miss Minnie Belle Hasbrouck of Skaneateles, N. Y., October 17.

REYNOLDS J. MAPES, M.D., Encampment, Wyo., to Miss Anna L. Terry of Chicago, at Rawlins, Wyo., October 20.

PAUL J. BURRELL, M.D., Winslow, Ill., to Miss Minnie Van Dervort of Warren, Ill., at Galena, Ill., October 17.

PETER J. GILLEN, M.D., Prairie du Rocher, Ill., to Miss Mae E. Burch of Fort Gage, Ill., at Cairo, Ill., October 17.

WILLIAM G. WEGNER, M.D., South Bend, Ind., to Miss Laura Christine Braeckly of Huntingburg, Ind., October 24.



THOMAS JEFFERSON COLLIER, M.D., Atlanta, Ga., to Miss Gertrude McCarley of Chattanooga, Tenn., October 10.

DAVID RUSSELL LYMAN, M.D., Wallingford, Conn., to Miss Virginia Scott Cocke of "Lower Brems," Va., October 12.

HARVEY L. BIGGS, M.D., Prestonburg, Ky., to Miss Lota Newman of Ashland, Ky., at Ironton, Ohio, September 23.

EDITH CADWALLADER, M.D., Philadelphia, and THOMAS REID CROWDER, M.D., of Chicago, at Titusville, Pa., October 26.

FREDERICK L. VAN SICKLE, M.D., Olyphant, Pa., to Miss Christine Law Macmillan of Kansas City, Mo., October 25.

JOHN MORRIS ENGLISH, M.D., to Miss Sophronia Mary Clarkson, both of Elizabethtown, Ky., at Louisville, Ky., October 19.

## Deaths

Charles M. Shanley, M.D. Baltimore Medical College, 1894, died from a relapse of yellow fever at his plantation home, Bayou Barataria, La., October 16. Dr. Shanley was formerly a member of the American Medical Association and was one of the proprietors of the Lidgerwood (N. D.) sanatorium. He moved to Louisiana in 1902, where he bought a plantation. On the outbreak of yellow fever in that section Dr. Shanley volunteered, although he was not immune, and did good and valiant service until he was attacked by the disease. He was brought to New Orleans at once, was cared for at the Emergency Hospital, and was discharged in due time as cured. Without waiting fully to recover from the effects of his illness, he returned to Bayou Barataria, against the advice of his brother physicians, to resume his self-sacrificing work, but the strain proved to be more than his enfeebled condition could bear and, suffering a relapse, he died. The Jefferson Parish board of health, at a meeting held in Gretna, adopted resolutions commendatory of the life and work of Dr. Shanley.

Frank K. Owen, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, dean of the medical profession of Ypsilanti, Mich., and health officer of that city; surgeon of the Thirty-first Michigan Infantry, U. S. V., in the Spanish-American War, and a veteran of the Civil War, died suddenly from heart disease at St. Mary's Hospital, Detroit, where he had gone to prepare for the removal of a small tumor from the left arm, October 14, aged 64.

William F. Milligan, M.D. Medical College of Ohio, Cincinnati, 1892, of Wabasha, Minn., a member of the American Medical Association, member of the Minnesota legislature in 1900; twice mayor of Wabasha; one of the founders of St. Elizabeth's Hospital, a man who stood high both in his profession and as a man of affairs, died at the Chicago Hospital, Chicago, October 1, twenty-four hours after an operation for appendicitis, aged 37.

Abram Hugh Moss, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1879, a member of the American Medical Association and the Louisiana State Medical Society; for many years one of the leading practitioners of Lake Charles, La., died at his home in San Bernardino, Cal., October 12, from heart disease of long standing, aged 62.

John W. Mock, M.D. Medical College of Ohio, Cincinnati, 1863, assistant physician at Longview Asylum, Cincinnati, then acting assistant surgeon United States Army and later assistant surgeon of the Eleventh Ohio Volunteer Infantry during the Civil War, died from nephritis at his home in Covington, Ind., September 26, aged 69.

Joseph Francis Pickerel, M.D. Kansas Medical College, Topeka, 1895, a member of the American Medical Association; health officer of Butler County, Kan.; who had practiced in Beverly, Lincoln and Wichita, Kan., shot and killed himself in his office in Eldorado, Kan., October 12, while under the influence of drugs, aged 39.

John Howard Taylor, M.D. University of Pennsylvania, Philadelphia, 1852, surgeon in the Civil War, who attended General Hancock after he was wounded at the battle of Gettysburg; for several years medical inspector of the Philadelphia Bureau of Health, died at his home in Philadelphia, October 24, aged 73.

James W. Smith, M.D. Kansas City (Mo.) Medical College, 1878, formerly superintendent of Hospital for the Insane No. 1, Fulton, and one of the board of managers of Hospital for the Insane No. 4, Nevada, died suddenly at his home in Pleasant Hill, Mo., October 20, from nephritis, after a long illness.

Wilbur Fiske Myers, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1875, a member of

the Venango County (Pa.) Medical Society; once a member of the city council of Franklin, died suddenly at his office in that city October 3 from heart disease, aged 55.

John O. Dawson, M.D. Rush Medical College, Chicago, 1879, a member of the American Medical Association, and a leading practitioner of Lincoln, Neb., died suddenly at his office in that city, October 18, from angina pectoris, aged 57.

Max Urwitz, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1881, a member and president of the school board of Houston, Texas, died suddenly at his home in that city, October 2, from cerebral hemorrhage, aged 55.

Lorenzo Adelbert Snyder, M.D. Ohio Medical University, Columbus, 1898, of Chicago Heights, Ill., died at the Augustana Hospital, Chicago, October 16, after an illness of five weeks, and five days after an operation for appendicitis, aged 33.

Judson Pennypacker, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 186-, assistant surgeon United States Army during the Civil War, died at his home in West Chester, Pa., October 4, aged 67.

Orrin Peak, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1854, surgeon of the Twentieth Wisconsin Volunteer Infantry in the Civil War, died at his home in Oak Park, Ill., October 8, aged 79.

W. H. Walthall, M.D. Medical College of Virginia, Richmond, 1861, surgeon in the Confederate service throughout the Civil War, died at his home in Roanoke, Va., October 18, from paralysis, after an illness of one year, aged 70.

John W. Lansing, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1887, mayor of Ritzville, Wash., health officer of Adams County, died at his home in Ritzville, October 16 from chronic interstitial nephritis, aged 44.

George Johnson, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1854, a member of the Medical and Chirurgical Faculty of Maryland, died at his home in Frederick, Md., October 25, aged 73.

David J. Reese, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1873, of Renovo, Pa., died from paralysis in the Lock Haven Hospital September 30, after an illness of two years, aged 65.

Frederick A. Smith, M.D. Harvard University Medical School, Boston, 1878, a practitioner of Boston for many years, died at Belhart, Texas, September 26, from tuberculosis, after a prolonged illness, aged 50.

Louis J. A. Simard, M.D. Bellevue Hospital Medical College, New York City, 1865, a well-known oculist and aurist of Quebec, P. Q., died at his home in that city, October 6, after an illness of two years.

William Henry Purman, M.D. Howard University Medical Department, Washington, D. C., 1887, of Bloomsburg, Pa., died at Millheim, Pa., October 2, from heart disease, after a long illness, aged 49.

William W. Park, M.D. Years of Practice, Illinois, 1878, a veteran of the Civil War, was struck by a freight train near his home in Woodberry, Ill., October 19, and died a few minutes later.

Henry W. Wales, M.D. Illinois, 1863, of Lanark, Ill., a veteran of the Civil War, died at Walter's Park Sanitarium in Pennsylvania, October 6, after an invalidism of a year, aged 65.

Edwin L. Sessions, M.D. Louisville (Ky.) Medical College, 1879, died at his home in Hillsboro, Texas, October 12, from cerebral hemorrhage, after an illness of one week, aged 63.

John Slavens, M.D. University of Louisville (Ky.) Medical Department, 1848, an old resident of Putnam County, Indiana, died at his home in Brick Chapel October 10, aged 94.

John W. Ogilvie, M.D. Medical College of the State of South Carolina, Charleston, 1845, died at his home near Allendale, S. C., September 27, after a lingering illness, aged 87.

Percy E. Terry, M.D. Rush Medical College, Chicago, 1886 died at his home in Rochester, Ind., September 30, from spinal disease after an illness of two months, aged 44.

George W. Parsons, M.D. Cincinnati, 1864, a veteran of the Civil War, of Kansas City, Kan., died at the Soldiers' Home, Leavenworth, Kan., October 18, aged 68.

Thomas J. Peer, M.D. Illinois, 1872, of Ontario, N. Y., died suddenly in Rochester, N. Y., October 13, from heart disease, aged 63.

James E. Smith, M.D. Medical College of Ohio, Cincinnati, 1870, died at his home in Mauston, Wis., September 18, aged 57.



Samuel J. Wallace, M.D. Jefferson Medical College, Philadelphia, 1881, died at his home in Castine, Maine, September 28.

William Robinson, M.D. University of Buffalo (N. Y.) Medical Department, 1862, died at his home in Chicago, October 10

William H. Owsley, M.D. Examination Oklahoma, 1894, died at his home near Lexington, Okla., October 2, aged 60.

Ira D. Moser, M.D. Jefferson Medical College, 1880, of Philadelphia, died suddenly in Reading, Pa., October 21.

## Book Notices

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN. For Physicians and Students. By B. Sachs, M.D. Second Edition. Cloth. Pp. 571. Price, \$4.00. New York: Wm. Wood & Co.

The second edition of this work is 95 pages shorter than the edition of ten years ago, due to omission of the two chapters in the former edition on the anatomy and physiology of the spinal cord and the brain. The bibliographies and many detailed case reports are also omitted. A comparison of the texts of the chapters on hysteria, chorea and Pott's paralysis showed no significant changes. The chapter on insanity also is nearly the same as before, the former classification on mental disorders being retained in preference to that of Kraepelin.

A TEXT-BOOK OF MEDICAL PRACTICE for Practitioners and Students. Edited by W. Bain, M.D. With Illustrations. Cloth. Pp. 1011. Price, \$7.00 net. New York: Longmans, Green & Co. 1904.

The special feature of this text-book, which is a very commendable one, is the insertion of short articles on the anatomy, physiology and histology of the organ as a preface to the discussion of its diseased conditions. This is convenient and helpful to the practitioner and student who have finished with a study of their anatomy proper. These prefaces include a synopsis of the salient points on the anatomy, histology and physiology of the organ, such as the kidney, heart, liver. This feature is a new departure in a text-book of this sort and one that might be adapted to advantage in others.

The last chapter includes a discussion on the "interrelations" of organs in disease. These relations of certain organs to one another are shown in some cases to rest on an anatomic basis; in other instances they are dependent on a physiologic cause, such as the common relation between ovary and mammary gland. In still other cases, a pathologic relationship is presented, such as the effects of a diseased kidney on the heart. The book presents a good arrangement and classification of the different subjects. The list of contributors includes some of the best known English authors.

THE EDINBURGH STEREOSCOPIC ATLAS OF ANATOMY. Prepared under the auspices of the Department of Anatomy of the University of Edinburgh, by Professor J. R. Cunningham, M.D. (Edin. et Dubl.), D.Sc., LL.D. (Glasg. et St. And.), D.C.L. (Oxon.) Edited by David Waterston, M.A., M.D., F.R.C.S.E., F.R.S.E., Lecturer Senior Demonstrator in the Department of Anatomy, Edinburgh University. Five sections, 250 stereographs: Section 1—Central Nervous System. Section 2—Thorax. Section 3—Abdomen and Pelvis. Section 4—Head and Neck. Section 5—Upper Limb: Lower Limb. Each section in a neat cloth case, titled on the back, suitable for placing in a bookcase. The complete set with stereoscope, \$50. Sections 1 and 2 now ready. Imperial Publishing Co., No. 27 East 22d St., New York.

This consists of a stereoscope and 250 stereoscopic views of the various parts of the human body. The accuracy of the representations is guaranteed by the fact that they are photographs of representative specimens carefully dissected and labeled to show the various points of anatomy. Each view is on a card containing description. This series will be found of great value to any one who wishes to study anatomy and will be a valuable accessory to the manuals now in use in conjunction with work on the cadaver. The well-known clearness with which views of scenery are brought out by the stereoscope and the popularity of this instrument throughout the country makes it a little surprising that no adaptation of this principle to the study of the body has previously been made. The price of the set seems considerable, but the labor and expense required for its production is to be taken into consideration.

TEXT-BOOK OF PHYSIOLOGICAL CHEMISTRY for Students of Medicine. J. H. Long, M.S., Sc.D. Cloth. Pp. 424. Price, \$2.50. Philadelphia: P. Blakiston's Son & Co., 1905.

In writing this new text-book Professor Long's aim has been "to present a brief account of the important principles of physiologic chemistry in a form suitable for the use of medical students who may be assumed to have completed courses

in general inorganic and organic chemistry." The ground is fully covered in four sections devoted to the chemistry of the nutritives, of ferments and digestive processes, of the blood, the tissues and secretions of the body, and of the end products of metabolism, excretions, and the energy balance. Besides the descriptive matter, explicit instructions are given for an abundance of well-chosen laboratory experiments from which a selection can readily be made so that the book may serve as a laboratory manual as well as a text-book. Himself an investigator and a contributor of many new results to the science of physiologic chemistry, it is not surprising to find that Professor Long has not only brought his book up to date in the matter of new discoveries and modern theories and methods, but that he has also succeeded in producing in every part of the work the altogether satisfying impression that physiologic chemistry is not a cut and dried science but a rapidly growing one, in which knowledge is daily being increased by observation and experiment, theories modified, abandoned and created, and in which particularly large gaps are still frankly left for the genius of investigation to fill. This spirit is bound to have the excellent effect that the student will know that his study of physiologic chemistry must not stop with the curriculum of a medical school, but must continue through his later career; the fair, conservative weighing of evidence, the critical, relentless attitude of the real scientist shown in the book, will prepare the student admirably for selecting maturely his own conclusions from his later readings in medical and chemical journals. It will also probably inspire him to wish to contribute in some measure himself by observation or experiment to the growing science. For the same reasons the present practitioner will find this new text-book a lucid guide through most of the recent developments in physiologic chemistry. Special chapters are devoted to an outline of the chemical phases of some of the recent theories of immunity as well as to important applications of the methods of physical chemistry to medical work, notably of cryoscopy and electrical conductivity. A thorough exposition is given of the most recent work and ideas concerning those important agents, the enzymes, and the rôle played by the physicochemical behavior of salts as electrolytes and of colloids as subject to electrical changes is touched on. Good paper, large, clear type and a very full index are some of the best mechanical features of the book. Few typographical errors were observed, the only two of any moment noted being in the chemical equations on pages 123 and 316.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON, Centenary 1805-1905. Written at the request of the President and Council by N. Moore, M.D., F.R.C.P., and S. Paget, F.R.C.S. Cloth. Pp. 337. Aberdeen University Press, Limited. 1905.

This is a history of what we believe is the oldest medical society in London, based on the recorded minutes of the society. Besides the usual matter, the minutes contained the titles and, in some instances, abstracts of the papers read, and the important ones are selected for mention. Among them will be found the most epoch-making papers of the past one hundred years. For during nearly all these years the Medico-Chirurgical Society of London has been one of the most important local societies in the world and has numbered among its members some of the well-known physicians and surgeons of England. Among those who were instrumental in its organization were: Abernethy, Atley, Cooper, Hunter, Edward Jenner, Bright, and others whose names are almost as familiar. It is interesting to read of the struggle, the self-sacrifice—both in time and money—that was required of the members on many occasions to keep the society up to the standard originally set for it. But it was kept up and, while the average attendance was seldom large, the work accomplished, as revealed by the minutes and especially by the transactions, was of the highest order and was probably excelled by no other medical society. There were some battles royal during the century, but none more virile than those in 1880-81 between Lawson Tait and his adherents on one side and Knowsley Thornton and Spencer Wells on the other on the then live question of Listerism. The following quotations from the minutes of the first meeting in 1881 make interesting reading after 25 years.



Mr. Thornton, at the first meeting of the year, presented to the society the tables of 172 antiseptic abdominal sections:

"The cases have all been treated on one common plan, viz., by Lister's method. When I say this, I mean by Lister's own method, to the exclusion of all so-called modified Listerism. They have nearly all been also treated by 'complete intraperitoneal ligature.' There is, I am afraid, a growing tendency to ascribe to Lister's method bad results, which should more properly be ascribed to imperfect knowledge of Lister's teaching, and to consequent imperfect application of his method. As a result of this imperfect knowledge and performance, we have endless varieties of so-called modified Listerism, the modification generally striking so deeply at the foundations of true Listerism that it is an absurdity to attempt to connect such methods with his, even in name. The fact that, by rigid adherence to the teachings of my old master, I have in one of the operations (ovariotomy) steadily improved my results, lowering my rate of mortality from 23.94 per cent. to 4 per cent., is to me a sufficient reward for resisting this craze for variety."

Sir Spencer Wells, February 22, presented 200 additional cases of ovariotomy, making 1,000 cases in all, and said:

"To my mind, one great merit of the antiseptic system is that it has made the intraperitoneal method, which was formerly the less, now the more successful method of dealing with the pedicle. Another great gain from the antiseptic system is that drainage of the peritoneal cavity is now scarcely ever necessary. My own experience has not only convinced me that by the use of antiseptics, especially of phenol, the success of ovariotomy has been remarkably increased, that a much smaller proportion of deaths to recoveries has been obtained; but, further, that those who have recovered have suffered much less from fever, while convalescence has been more rapid than it used to be."

The book will be found of interest to those who have a liking for medical history, to those who want to peer into the past, and to those who desire to come into direct contact, as it were, with the men who made English medicine.

**PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, in Childhood and Early Life.** By James Taylor, M.A., M.D., F.R.C.P. Cloth. Pp. 512. Price, \$4.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

In his preface the author says that this book "is, in effect, an expression of personal opinions, the result of the writer's observations, modified and extended by his knowledge of the views of others, on subjects which have interested him for a good many years, and in regard to which he had the good fortune to have special opportunities of acquiring experience." It certainly is written from the standpoint of the writer. Apparently, he has treated the different diseases at a length proportioned to his interest in them, and the same is true of the different parts of the several subjects. Had he kept the reader and his needs more in mind the book might be much more valuable. The matter of treatment in detail seems to interest the author but little, even in such diseases as chorea and epilepsy, and consequently, throughout the work receives rather cursory and perfunctory attention. As further evidence of this personal bias may be mentioned the paltry three pages devoted to epidemic cerebrospinal meningitis, and nine pages on convulsions in childhood, while syringomyelia receives eighteen pages. There is a chapter on stammering, in which the physiology of this disorder is treated, but in a way beyond criticism, but as to putting the reader in a position to treat a single case—the entire chapter might just as well have been omitted.

Some parts of the book are exceedingly good. The chapter on intracranial tumors is more than good; it is exceptionally fine. There are sixty-three pages of it; it is eminently practical and full of information. It will be helpful alike to student, general practitioner, pediatricist, surgeon and neurologist. The subjects of infantile hemiplegia and cerebral diplegia are very well done, anterior poliomyelitis (infantile paralysis) receives adequate attention, and the chapters on Friedreich's ataxia, muscular dystrophy and epilepsy are good. Many of the short chapters on less familiar diseases will be useful to student and practitioner. Among these may be

mentioned posterior basic meningitis, amaurotic family idioey, achondroplasia, hemierania and third nerve paralysis (migraine ophthalmoplegique), hereditary optic atrophy and family periodic paralysis. Why the author should omit serous meningitis he alone knows. To write somewhat at length on juvenile general paralysis, cretinism and mongolian imbecility and say no word of dementia præcox, seems unusual. Three or four pages are given over to "functional paraplegia," which seems to have greatly mystified the author, but in the entire book there is nothing at all about hysterical paralysis. Nor has the reviewer been able to find anything on the paralysis of multiple neuritis in children, although the disease is far from rare. Laryngismus stridulus is surely a nervous disease of childhood, but it is quite overlooked.

In short, the book is useful, but of most unequal value. It will serve well as an adjunct to other books. In it the searcher is liable to find that for which he hunts and likely to find it not. It is too good to be ignored, not good enough to set great store by. The pediatricist and neurologist will want it, and the general practitioner who is a student can use it to advantage.

**TEXT-BOOK OF PHYSIOLOGY, Normal and Pathological, for Students and Practitioners of Medicine.** W. S. Hall, Ph.D. Second edition Revised and enlarged; 340 engravings and Three Colored Plates. Cloth. Pp. 795. Price, \$4.00 net. Philadelphia: Lea Brothers & Co. 1905.

The principal, older, well-established facts of physiology, especially physical, are concisely and clearly stated in Professor Hall's book, but we are surprised to find that practically no mention is made of recent work concerning the rôle of physico-chemical factors in fundamental physiologic processes. Whatever the reason may be, this omission weakens the value of the book, because it fails to give the student any adequate indication of the direction in which physiology is growing at present. The newer knowledge of the normal protective powers of the blood against infection, of its solvent action on alien corpuscles, and other normal properties of this kind are not considered. Throughout the book great stress is placed on morphologic considerations. The chapter on reproduction, for example, is principally descriptive in its character; it might answer very well for a book on embryology, but the underlying causes of the various phenomena described, or the present theories of those causes, are not discussed. The chapters on digestion and metabolism give a clear statement of the many complex processes, chemical and physical, that here come into play. "The most notable additions to the work are the sub-chapters on 'Pathologic Physiology.' It is becoming apparent to medical educators that to master normal physiology alone without applying its laws to the symptomatology of disease is to miss a large part of the service which physiology should render, just as the mastery of structural or morphologic pathology without an understanding of the modification which structural changes induce in the functions, implies the loss of a large part of the advantage which the study of pathology should give to the student and practitioner of medicine. The author has attempted to cover this most important field." According to this extract from the preface, one would naturally look for carefully digested discussion of certain phases of true pathologic physiology, but instead we find inserted brief synopses mostly from the pens of instructors in different laboratories of the pathology (meaning pathologic anatomy), symptomatology and physiology of some of the principal diseases of the most important systems of organs. Some of these synopses are accompanied with rather loosely constructed bibliographic lists. The synopses are in reality condensed statements and tabulations of matter presented fully in books dealing with medicine and surgery, and their introduction here hardly warrants the title of the book, "A Text-Book of Normal and Pathological Physiology." In a book described by this title we expect to find discussions of general pathologico-physiologic problems, and we trust that in coming editions Professor Hall will take a broader and more general view of the important subject of pathologic physiology. By so doing we believe he will promote the services of physiology to practical medicine more successfully than by the present method, which in reality only touches on special points in pathologic physiology. Large bodies of facts are not handled and discussed in such a way that any general deductions can



be drawn and general laws formulated. In spite of the shortcomings here outlined, many teachers of physiology will be grateful for having within easy reach so much of the physiologic knowledge considered essential to medical education.

### Miscellany

**To Disguise Taste of Quinin.**—Yvon writes to the *Gaz. des Hôp.* to the effect that a mixture of fat prevents the saliva from dissolving quinin and thus disguises its taste in the mouth. He mixes from 15 to 20 per cent. olive or vasclin oil with the quinin after dissolving the oil in ether. The mixture is then flavored with peppermint or some other aromatic oil; the ether is allowed to evaporate, and the mixture is taken with water or some other fluid.

**Clips in Appendix.**—Potherat reported to the French Société de Chirurgie the finding of two Michel clips in the appendix in a case of perforating appendicitis. These little clips (*agrafes*), are being extensively used to hold wound edges together, to help in suturing or to take the place of a suture. In the present case they had been used in a preceding operation on this patient for the removal of an ovarian cyst. It was not explained how the clamps had reached the appendix.

**Milk Diet in Scarlet Fever to Prevent Nephritis.**—Ziegler states that he has not had a single case of nephritis during the last twenty-one years among 231 children with scarlet fever whom he kept on an exclusive milk diet. Before he made this the rule he encountered nephritis in fully half of all his cases of scarlet fever. During this period also he observed 9 cases of nephritis among 10 children who were not put on the milk diet. His communication was originally published in the *Obl. f. Kinderheilkunde* last May.

**Collodion When a Nail Is Being Thrown Off.**—The painfulness of the loss of a nail can be prevented by applying collodion to the spot. It holds the old nail firmly in place and protects the new nail tissue that is forming, while it does not interfere with the growth of the latter. The *Corr.-bl. f. Schweiz. Aerzte* for October 1 cites Porosz to the above effect, adding his warning that the collodion must not be applied to the skin, but merely to the bed of the nail.

**Circumcision of Mohammedan Children.**—The Constantinople correspondent of the *Lancet* states that one of the curious acts of benevolence which the Sultan exercises on festive occasions is the circumcision of poor Mohammedan children at the expense of his private purse. Recently about 3,000 children were thus circumcised at the Hamidié Hospital. Every one of them received also, after the performance of the religious operation, presents from the Sultan. The operation was performed by twenty medical men in co-operation with the hodjas of the Islam. The usual age at which Mohammedan children are circumcised is 13 years, but this varies greatly according to circumstances. It very frequently happens that Mussulmans are subjected to the religious operation at the age of 20 years and even later.

**Swallowing Lint After Sharp Foreign Bodies.**—A Russian confrère, N. Otcheredin, writes to the *Vratchebnaya Gazeta*, for September 3, that he succeeded in promoting the passage and safe evacuation without apparent injury of two sharp tacks swallowed by a lad of 9. He fed the boy with a thick potato gruel made with milk into which he stirred a large quantity of fresh lint from a clean rag. The child was brought to him about fifteen minutes after the tacks had been swallowed, and about a glass and a quarter of this potato and lint puree were ingested. Six hours later he was given two tablespoonfuls of castor oil. The two tacks enveloped in lint were found in his stool the same evening. In this country slippery elm bark has been used with success. The lint is a valuable idea, especially for young children.

**Exanthem a Natural Revulsion.**—Einisse writes to the *Vratchebnaya Gazeta* of August 13 to suggest that the exanthem of the eruptive fevers, etc., may be merely a means of revulsion adopted by nature. The eruption should be promoted in every way to favor hyperemia of the skin. He has found the best

measure for the purpose is to wrap the patient in a blanket after a warm bath. In two cases of erythema nodosum he noted that the intense painfulness of the joints subsided as the eruption of an intercurrent scarlet fever developed. The symptoms in another patient simulated those of appendicitis, but they all vanished as a measles eruption appeared. The benefit from an intercurrent eruptive affection in certain diseases is a familiar fact, and is probably the result of the exanthem which nature uses as a revulsive measure.

### Queries and Minor Notes

#### PHYSICIANS' CARDS IN NEWSPAPERS.

Here is another amusing card to add to those already reproduced in these columns. We have substituted other names for the real ones.

DR. J. MARK DOE,  
Physician and Surgeon.

Office at Four Corners. Open Day and Night.  
Medicines, Fruit and Candy,  
Notious and Sundries.  
Soft Drinks, Canned Goods  
and Lunch, etc.  
Sherington, Daconsota.

This appeared in a weekly paper in a small inland hamlet in one of the northern states. The population of the place is perhaps not sufficient to support a physician, a druggist, a confectioner, a dry-goods merchant, a grocer and a restaurateur separately.

#### MEDICAL RECIPROCITY.

Dr. N. K., after reading the letter from Dr. Aronson, in *THE JOURNAL*, October 21, p. 1261, was reminded of a case in which reciprocity was strongly indicated, but was not forthcoming, and which, in his opinion, shows how unjust are the laws under which some medical examining boards have to operate. The candidate, aged 49, has been an honorable practitioner of medicine for the last twenty-seven years, is a graduate of two prominent medical schools, has been in continued practice since graduation, and, although his time was very much taken up "relieving suffering and prolonging life," he found enough time to keep up with the times by reading good medical journals and standard text-books, etc. In order to regain his lost health, due to long years of country practice, he decided to change climate, and went to a certain western state that requires an examination, or will reciprocate with certain other states, providing the candidate has a certificate "by examination" from one of these states. This candidate prepared for the examination for three months. During this time he practiced under a temporary certificate, but to his sorrow, after the examination, learned that he, like the fair flower, had been "plucked." This means three more months of hard work, and should he fail again, a move to another, perhaps more merciful, state. Of the recent graduate, who should, and easily can, pass examinations, this board requires none, providing the candidate once took an examination before a board reciprocating with this one. As examinations in nearly all states are recent requirements, it gives the old man, who has devoted his life to others, the "double cross." In other words, concludes our correspondent, the one of whom he writes was careless in the selection of his parents; he was born too soon.

#### DISPOSAL OF WASTE.

ILL., Oct. 20, 1905.

*To the Editor:*—Can you advise me of sources of information on the disposal of garbage and other refuse matter, incinerators, etc.?  
S. C.

ANSWER.—The results of American experience are embodied in the reports and papers of the American Public Health Association during the last few years. The "Report of the Committee on Disposal of Garbage and Refuse" in 1897-98 and that in 1902 are especially valuable. In the "Proceedings of the Twenty-ninth Annual Meeting of the American Public Health Association (Buffalo, 1901), are two important papers on refuse disposal in the District of Columbia and in Boston. For publications of this body, if not accessible in libraries within reach, address the secretary, Dr. Charles O. Probst, Columbus, Ohio. Reference may also be made to a paper on "Incineration and Cremation of Waste," in *Municipal News* (Municipal News Assoc., 309 Broadway, New York), Sept. 25, 1905, in which statements are made concerning the present methods of garbage disposal in a number of American cities.



## State Boards of Registration

### COMING EXAMINATIONS.

Nebraska State Board of Health, State House, Lincoln, November 8-9. Secretary, George H. Brash, Beatrice.

Board of Registration in Medicine of Massachusetts, State House, Boston, November 14-15. Secretary, E. B. Harvey, Boston.

Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.

State Board of Health of Louisiana, New Orleans, November 14-15. Secretary, F. A. Larue, New Orleans.

State Board of Health of West Virginia, Clarksburg, November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.

**New Louisiana Examination Dates.**—The fall examination of the Louisiana State Board of Medical Examiners did not take place on October 20 to 21, as had been announced, but was postponed because of quarantine regulations. November 14 and 15 are the new dates set.

**Arkansas October Report.**—Dr. J. P. Runyan, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Oct. 10, 1905. The number of subjects examined in was 7; total number of questions asked, 60; percentage required to pass, 75. The total number of candidates examined was 14, of whom 7 passed, including an undergraduate, and 7 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per
		Grad.	Cent.
University of Missouri	.....	(1904)	81.8
Chattanooga Med. Coll.	.....	(1905)	82.8
St. Louis University	.....	(1905)	80
University of Arkansas (undergraduate)	.....		80
Tulane University	.....	(1873)	84
College of P. and S., Atlanta	.....	(1905)	81.7
University of Tennessee	.....	(1901)	75

A graduate of the University of Arkansas (1886) and one of the Memphis Hospital Medical College (1895) were granted license to practice under the old registration law.

**Minnesota October Report.**—Dr. C. J. Ringnell, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, Oct. 3-5, 1905. The number of subjects examined in was 12; total number of questions asked, 95; percentage required to pass, 75. The total number of candidates examined was 25, of whom 14 passed and 11 failed. Representatives of the following colleges passed:

passed:	PASSED.	Year.	Per
College.		Grad.	Cent.
University of Minnesota .....		(1905)	78.5
Northwestern University, (1903)	82.4; (1904)	81; (1905)	75.1
McGill University .....		(1904)	79.2
College of P. and S., Chicago .....	(1898)	75.4; (1902)	76.2
Rush Med. Coll.....	(1896) 80.1; (1903)	82.6; (1905)	79.8
Western Med. Coll., Ontario .....		(1905)	86.4
Hahnemann Med. Coll., Chicago .....		(1904)	75.3
Hahnemaun Med. Coll., Philadelphia .....		(1886)	75
George Washington Univ., Washington, D. C.....		(1905)	79.4

**Rhode Island October Report.**—Dr. G. T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, Oct. 5-6, 1905. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, of whom 12 passed and 7 failed. Representatives of the following colleges passed:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Baltimore Med. Coll.	.....	(1905)	75
College of P. and S. Baltimore	.....	(1905)	83.9, 84.2
College of P. and S. Boston	.....	(1904)	75
Harvard University	.....	(1904)	87.1
Jefferson Med. Coll.	.....	(1905)	79.5
Laval University	.....	(1905)	75.4, 75.6
Medico-Chirurgical College, Philadelphia	.....	(1905)	76.5
New York Homeopathic Med. Coll.	.....	(1894)	78.7
University of Vermont	..... (1898)	82.4; (1903)	75

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending October 28.

Johnson, Richard W., surgeon, ordered, as additional duty to take charge of office of chief surgeon, Department of the Missouri, temporarily.

Munson, Edward L., asst.-surgeon, left Washington, D. C., on leave of absence for two months.

McAndrew, Patrick H., asst.-surgeon, granted leave of absence for one month.

Owen, William O., surgeon, ordered to San Francisco, Cal., for examination by army retiring board.

Carter, W. Fitzhugh, surgeon, ordered from San Francisco, Cal., to Fort Monroe, Va., for duty.

Rafferty, Ogden, surgeon, ordered from Fort Monroe, Va., to San Juan, P. R., for duty.

Lippitt, William F., surgeon, ordered from San Juan, P. R., to Fort Assiniboine, Mont., for duty.

Eastman, William R., asst.-surgeon, ordered from San Francisco, Cal., to Army General Hospital, Presidio, San Francisco, Cal., for duty.

Noble, Robert E., asst.-surgeon, ordered from Army General Hospital, Presidio, San Francisco, Cal., to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Lauister, William B., surgeon, returned to Jefferson Barracks, Mo., from leave of absence.

Glenau, James D., surgeon, returned to Fort Myer, Va., from leave of absence.

Quitton, William W., asst. surgeon, left Fort Barraucas, Fla., for his proper station, Fort McPherson, Ga.

Devereux, John R., asst.-surgeon, returned to Fort Logan, Colo., from leave of absence.

Boyer, Perry L., asst.-surgeon, leave of absence extended two months.

Woodbury, Frank T., asst.-surgeon, left New York, N. Y., for San Francisco, Cal., en route to Philippine service.

Vose, William E., asst.-surgeon, left Fort Sheridan, Ill., for San Francisco, Cal., en route to Philippine service.

DeLoffre, Samuel M., asst. surgeon, relieved from duty at Fort Schuyler, N. Y., to proceed to San Francisco, Cal., for Philippine service.

Dale, Frederick A., asst.-surgeon, arrived at Fort Walla Walla, Washington, for duty.

Shortridge, Edmund D., asst.-surgeon, left Wilmington, Del., for San Francisco, Cal., en route to Philippine service.

Edger, Benjamin J., Jr., asst.-surgeon, left Fort Brown, Texas, on leave of absence for four months.

Bourke, James, asst.-surgeon, relieved from temporary duty at Fort Howard, Md., and returned to Medical Supply Depot, New York City, N. Y.

Reagles, James, contract surgeon, leave of absence extended twenty days.

Sievers, Robert E., contract surgeon, granted leave of absence for three months.

Parkman, Wallace E., contract surgeon, granted leave of absence for one month.

Rebert, M. A., contract surgeon, ordered from Fort Totten, N. Y., to Fort Schuyler, N. Y., for temporary duty.

de Quevedo, Luis G., contract surgeon, returned to San Juan, P. R., from temporary duty at Henry Barracks.

McAlister, John A., dental surgeon, granted leave of absence for two months.

Newlove, George, contract surgeon, granted an extension of one month to his leave of absence.

Warwick, Clarence A., contract surgeon, relieved from duty in the Philippines Division, and ordered to duty at Fort Mott, N. J.

Sparrenberger, Frederick H., contract surgeon, relieved from duty at Fort Mott, N. J., and ordered to Fort Washakie, Wyo., for duty.

Kuhn, Charles F., contract surgeon, relieved from duty in the Philippines Division and ordered to Fort Lawton, Wash., for duty.

Purnell, Julius M., contract surgeon, relieved from duty in the Philippines Division, and ordered to duty in the Department of California.

Wythe, Stephen, contract surgeon, relieved from duty in the Department of California, and ordered to the Philippines Division for duty.

Stuckey, Harrison W., contract surgeon, arrived at Fort Snelling, Minn., for duty.

Cass, William E., contract surgeon, arrived at Fort Stevens, Oregon, for temporary duty.

Kellogg, Preston S., contract surgeon, ordered from San Francisco, Cal., to his home at Battle Creek, Mich., for annulment of contract.

Dade, Walter H., contract surgeon, left Fort Du Chesne, Utah, for duty at Fort D. A. Russell, Wyo.

Clayton, George R., contract surgeon, left Columbus Barracks, Ohio, for San Francisco, Cal., en route to Philippine service.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending October 28:

Stepp, J., P. A. surgeon, ordered to the *Southery*, and to additional duty at the navy yard, Portsmouth, N. H.

Dabney, V., acting asst.-surgeon, detached from the *Southery*, ordered home and resignation as acting assistant surgeon accepted, to take effect November 6.

Law, H. L., surgeon, retired, ordered to the naval recruiting rendezvous, Boston, November 3.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending October 25:

Vaughan, George T., assistant surgeon-general, granted leave of absence for three days from October 25.

Sawtelle, H. W., surgeon, granted leave of absence for one month from October 23.

Stoner, G. W., surgeon, granted leave of absence for 12 days from October 18, under the provisions of paragraph 189 of the regulations.

Wickes, H. W., P. A. surgeon, granted two days leave of absence from October 26.

Anderson, J. F., P. A. surgeon, granted leave of absence for one month from November 1.

Robertson, H. McG., asst.-surgeon, granted leave of absence for six days from October 23.

Hunt, Reid, chief, division of pharmacology, Hygienic Laboratory, granted leave of absence for six days from October 23.

Addis, W. E., acting asst.-surgeon, granted leave of absence for seven days.

Lyall, R., acting asst.-surgeon, granted leave of absence for four days.

Hall, R. F., acting asst.-surgeon, granted leave of absence for seven days.

Goodman, F. S., pharmacist, relieved from special temporary duty at New Orleans and Patterson, La., and directed to rejoin station at Norfolk, Va.

Walters, M. H., pharmacist, relieved from duty in Bureau at Washington, and directed to proceed to Chicago, reporting to the medical officer in command for duty and assignment to quarters.



## Society Proceedings

### COMING MEETINGS.

American Academy of Medicine, Chicago, November 7-8.  
Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.  
American Dermatological Association, New York, Dec. 28-30.  
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### KENTUCKY STATE MEDICAL ASSOCIATION.

*Fifty-fifth Annual Meeting, held at Louisville, Oct. 18-20, 1905.*

The President, DR. F. H. CLARKE, Lexington, in the Chair.

#### Election of Officers.

The following officers were elected for the ensuing year: President, Dr. C. Z. Aud, Cecilia; vice-presidents, Drs. Murison Dunn, Richmond; R. M. Coleman, Paducah, and J. M. Salman, Ashland; secretary, Dr. James B. Bullitt, Louisville; treasurer, Dr. W. B. McClure, Lexington; orator in medicine, Dr. W. A. Jenkins, Louisville; orator in surgery, Dr. W. O. Bullock, Lexington; delegate to the American Medical Association, Dr. J. Garland Sherrill, Louisville.

Owensboro was selected as the next place of meeting.

#### Council on Pharmacy and Chemistry Approved.

On motion of Dr. A. T. McCormack, Bowling Green, the association pledged to the Council on Pharmacy and Chemistry of the American Medical Association its most earnest support in the work the council is doing.

On motion of Dr. C. M. Pope, the house of delegates was instructed to extend a vote of thanks to the various lay journals who are making a fight against the patent medicine evil, and tendering them the support of the association.

DR. W. B. MCCLURE, Lexington, introduced a resolution in-dorsing the name of Dr. Ephraim McDowell for a place in Statuary Hall in Washington.

DR. J. M. MATHEWS, Louisville, introduced the following resolution, which was adopted:

WHEREAS, The Honorable John W. Yerkes, commissioner of internal revenue for the United States Government, has recently promulgated and is now enforcing an order that all patent medicines containing over a certain per cent. of alcohol shall be held unsaleable unless the dealer takes out a retail liquor license,

Therefore, Be it resolved that the Kentucky State Medical Association endorse and commend this action of the commissioner of internal revenue.

#### Relation of the Physician to the Community.

DR. CLARKE, in his president's address, spoke of organization in general and referred particularly to the importance of the organization movement carried on by the American Medical Association and the beneficial effect of that movement on the progress of medicine as a science. Among other topics discussed by Dr. Clarke were the relation of the physician to his community as a teacher of sanitation; hygiene and the prevention of disease; the regulation of medical registration; the suppression of the irregular practitioner; the sale of patent medicines; the management of charitable institutions; state provision for the care of epileptics and the treatment of inebriates, and the building of hospitals by the state for the treatment of consumptives.

#### Laboratory Methods.

DR. J. F. MCCLYMONDS, Lexington, chose for his topic for the oration in medicine, "The Relation of Laboratory Methods to Medicine." He reviewed the history of the epoch-making discoveries in medicine, such as the demonstration of bacteria and their relation to disease; the discovery of the stethoscope; the development of chemistry and its relation to medicine; the development of pathology and bacteriology; the relation to disease of animal parasites; the serum diagnosis of disease, and the value of laboratory examination in the diagnosis of such diseases as anemia, chlorosis, tuberculosis, diphtheria, typhoid fever, malaria, etc., and the invention of the compound microscope. He said that to the initiated the laboratory is a blessing; to the uninitiated it is a curse.

#### Surgery of Gastric Ulcer.

DR. LOUIS FRANK, Louisville, in the oration on surgery, discussed the present status of gastric surgery with special ref-

erence to ulcer. He suggested early exploratory incision in doubtful cases where there is any suspicion of cancer, even when the laboratory diagnosis is negative. There is a time in the treatment of gastric ulcer when the surgeon must be called. Gastroenterostomy should be the operation of choice. The safest course is to secure all bleeding points and then to do the gastroenterostomy. He discussed the indications for surgical treatment, the treatment of gastrectasis and the ineffectiveness of medicinal measures. He scouted the value of test breakfasts and stomach washings in the diagnosis of gastric cancer.

#### Postpartum Infections.

DR. EDWARD SPEIDEL, Louisville, advocated the wearing of sterilized rubber gloves during the delivery of the patient, the administration of quinin to combat malarial infection, the stimulation of the hepatic function by means of intestinal flushing, and the use of vaginal douches after delivery. He said that neither the sharp nor the dull curette should be used in the parturient uterus. If curettage is indicated the finger is best for the purpose. If infection occurs and it extends beyond the uterus, its spread should be limited by following out the Ochsner treatment for appendicitis. Speidel also uses nuclein solution hypodermically, giving one ounce daily, and twice daily per rectum, seven and one-half grains of chloral dissolved in two ounces of water. Hysterectomy, he said, is indicated only when the infection is confined to the uterus.

#### Unique Case of Extrauterine Pregnancy.

DR. J. R. MORRISON, Louisville, reported a case in which rupture evidently occurred at about the fourth month, the fetus becoming encysted. The patient had severe pains for about five months afterward. A diagnosis was made of fibroid of the uterus and a laparotomy was performed. However, the tumor was found to be so adherent, and the patient's condition was so poor that the operation was not concluded. The laparotomy wound did not heal up entirely, and two years later there were discharged through the wound the bones of a fetal skeleton of about four months' development.

#### College Education Preparatory to Medicine.

DR. J. W. PRYOR, Lexington, described the course leading to the degree of B.S. given by the State College of Kentucky, the last two years of this course being really preparatory to the study of medicine, and advocated such a preparation for all prospective students of medicine.

#### The Irregular Regular.

DR. G. E. DAVIS, Lawrenceburg, spoke of graft of all kinds, especially medical graft, the profession of getting hurt, the division of fees, and the various subterfuges resorted to by some medical men to acquire a practice. He suggested that the organized profession bring such influence to bear on the public press that it will fight quackery and expose the methods of quacks.

#### Causes of Gastric Ulcer.

DR. CHARLES G. LUCAS, Louisville, advised that careful attention be paid to all cases where an injury to the epigastrium was sustained or where anemia develops. A blood examination should also be made as well as an estimation of the HCl content of the gastric juice.

#### Diagnosis and Treatment of Gastric Ulcer.

DR. S. E. WOODY, Louisville, discussed the differential diagnosis of cancer, ulcer, gastritis, vomiting of pregnancy, etc. He divided the treatment into five stages: 1, The treatment of urgent symptoms; 2, functional rest of stomach; 3, bland diet; 4, proper medicinal treatment to produce healing of the ulcer, and 5, these failing, surgery.

#### Capillary Bronchitis in Infants.

DR. R. B. GILBERT, Louisville, called attention to the fact that in this condition it is important to treat the accompanying intestinal fermentation. He uses saline injections consisting of one heaping teaspoonful of ordinary salt in a pint of water, no medicine being given by mouth, so as to give the stomach complete functional rest. Locally he applies to the chest an ointment consisting of twenty grains of menthol to the ounce of vaselin.



### The Tuberculosis Problem in the South.

DR. DUNNING S. WILSON, Louisville, cited statistics showing that in Kentucky, West Virginia and Tennessee the death rate from pulmonary tuberculosis is over 13 per cent. In Virginia, North Carolina and South Carolina it is over 11 per cent., while in Georgia, Alabama, Mississippi and Louisiana it is over 9 per cent. In Arkansas and Texas the death rate is over 7 per cent., and in Florida it is less than 7 per cent. The average death rate for all these states is 11.2 per cent. In the states having the largest negro population the mortality from tuberculosis is less than in states in which fewer negroes live. In states having cities of large size the mortality is greater than in those states where the population is confined to smaller towns. In Kentucky over 16 per cent live in towns of 8,000 and over. The percentage of deaths from tuberculosis among this number is 14.56 per cent., only 13 per cent. of the population being colored. In Louisiana 47.2 per cent. of the population is colored. Twenty-two per cent. of the entire population lives in cities of over 8,000, with a death rate of only 9.62 per cent. for the state. Among the twelve largest cities New Orleans ranks highest in the death rate from tuberculosis. Wilson says that the negro is susceptible not because of an inherited tendency, but because of his mode of living. An analysis of the figures cited shows that the negroes do not influence unfavorably the death rate from tuberculosis, as is generally supposed; the states having the largest negro population have the lowest mortality. He believes that tuberculosis is curable in any climate, providing proper attention is paid to rest, food and the breathing of fresh air. These patients should be given every care so that they will not be a menace to society, but they should not be considered as pariahs.

The following papers were also read: "Prevention and Treatment of Postpartum Infections," by Dr. Basil M. Taylor, Greensburg; "Rupture of the Uterus," by N. M. Garrett, Frankfort; "The Care of Breast and Nipple During Pregnancy and Puerperium," by Dr. R. N. Coleman, Lexington; "Pleurisy," by J. B. Jackson, Danville; "Infection and Contagion," by W. A. Jenkins, Louisville; "Practical Significance of Arterial Tension," by Dr. J. A. Flexner, Louisville; "Acute Infantile Summer Diarrhea," by Dr. S. J. Harris, Philpot; "Gas Bacillus Infection," by Dr. R. L. Ireland, Louisville; "Nature and Causes of Rheumatism," by Dr. John G. Cecil, Louisville; "Complications of Rheumatism," by Dr. H. E. McKay, Bardstown; "Dionin in Diseases of the Eye," by Dr. S. G. Dabney, Louisville.

### ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

*Fourteenth Annual Meeting, held in Detroit, Sept. 26-28, 1905.*

*(Continued from Page 1355.)*

#### Unification of the Duties of Medical Officers.

SURGEON CHARLES S. STOKES, U. S. Navy, made a plea for the unification of the duties of medical officers of the army and navy, including the national guard and the naval militia. He said that the basis of existence was the same in all branches of the service and that the preliminary requirements were identical. He suggested service school instruction along the same lines, modified only to meet the variations dependent on service afloat or service ashore. He considered that the aims, personnel and material, as far as possible, should be the same. He urged the encouragement of healthful rivalry between the various branches of the service and especially the cultivation of an *esprit de corps*. He considered one of the chief values of the association the bringing together of surgeons of all branches of the service to discuss on an equal footing matters of interest to all. The training and drilling of enlisted men in the working details of military hygiene and first-aid methods he considered the most important problem to be solved by military surgeons and advocated the education of line officers in this regard. To establish a basis for work which would be applicable to all branches of the service, he advised the establishment of a joint board which should formulate the details of the plan of instruction in hygiene, first-aid, etc.

#### New Suture Materials.

COL. N. SENN, surgeon-general of Illinois, informally called attention to surgeons' new suture materials which he had obtained on his recent trip to Greenland. He presented suture material made from the tendon of the whale, the walrus and

the narwhal, and also presented a vegetable fiber from New Zealand, the use of which he advised for superficial sutures.

#### In Manchuria with the Russians.

COL. VALERY HAVARD, assistant surgeon-general, U. S. Army, who was detailed for duty with the Russian army in Manchuria, presented a detailed report of his experiences, in which he gave the ratio of killed to wounded in the Japanese army as 1 to 4.5 and in the Russian army as 1 to 3.96. The wounds from shrapnel comprised the greater majority as compared with those caused by bullets. He also stated that the wounds from bayonet and sword, weapons which have been generally considered obsolete, were still met with, and that before the battle of Mukden 500 Russians had been killed and wounded by the bayonet. The ratio of sick in the Russian army up to June 13, 1904, was 3.28 per cent. After the rainy season had set in, the ratio increased to 3.74 per cent., and on that date the number of cases of communicable disease was 1,117, including all cases of dysentery and diarrhea. At that time there were only 34 cases of typhoid fever, 15 of typhus fever and 9 of recurrent fever. On Dec. 8, 1904, there were in hospitals 819 officers and 17,384 soldiers. Two months later the number had increased to 873 officers and 17,892 soldiers.

The Russian statistics showed that during 1904 at least 20,000 Russians were killed in action or died from wounds, and that during the same period the number of deaths from disease was only 2,730, a ratio of about 7 to 1. He stated that in Manchuria epidemic diseases might have been expected to break out, but that, to his surprise, not only were such epidemics absent, but the usual camp diseases were not prevalent. The variation of percentage of infected wounds in summer and winter dependent on the condition of the skin and the amount of clothing worn by the soldiers was interesting. In Mukden hospitals hardly 10 per cent. of the wounds inflicted in summer were infected, while in winter hardly 10 per cent. of the wounds escaped infection, notwithstanding the primary dressings which had been applied in most cases. He concluded that the prophylactic measures preparatory to battle from a hygienic standpoint should be the taking of a bath, the donning of clean linen and a clean and light uniform, and that, although the soldier should be well fed, his intestines should be empty on the day of battle.

#### Effects of Big Gun Firing.

FLEET SURGEON LLOYD THOMAS, R. N., of the Naval Gunnery School, Portsmouth, England, described the effects incident to the firing of the naval guns of the present day at sea. In barbettes and turrets the occupants suffered at first a feeling of shock and, in addition, a tendency to nausea. The injuries to the ears resultant on big guns firing were rupture of the membrana tympani, or what he termed "gun deafness," the latter being a permanent deafness due to injury from repeated shocks on the internal ear. The pathology of this condition was not clear. Up to the present nothing had been found which would efficiently protect the ear from the concussions due to the firing of heavy guns. Cotton wool, or other substances, had been devised and used for plugging the external meatus. It had been shown experimentally that the intensity of sound was weakened by filling the irregularities of the auricle with wax, oil or vaselin, but neither officers nor crew took kindly to such artificial means.

#### The Canteen.

COL. JEFFERSON D. GRIFFITH, Kansas City, surgeon-general of Missouri, presented the following resolution, which was adopted:

WHEREAS, The abolition of the army canteen in the opinion of those best acquainted with the army, has resulted in the use of an increased amount of bad liquors, instead of light wines and beer as sold at the canteen by the soldiers, resulting in a marked increase in diseases tending to the demoralization of the soldier; and,

WHEREAS, It is found that the anti-canteen law adds to the number of saloons and brothels contiguous to garrisons, and as the result, the monthly stipends are spent outside altogether; and,

WHEREAS, No benefit whatsoever in any line has been the result of the abolition of the canteen; be it

*Resolved*, That this body in session do earnestly request the Secretary of War to use his every effort for the re-establishment of the canteen, assuring him of our hearty support in every manner.

#### Examination of Recruits.

MAJOR CHARLES ADAMS, Chicago, surgeon Illinois National



Guard, made a report of the result of examination of recruits for National Guard service, with especial reference to the period since the Spanish-American war, in which he detailed the findings of examining officers for the last seven years, the proportion of physical disabilities found and their nature. He stated the endeavor should be to conform as closely as practicable to the rules and forms for the examination of recruits in use in the regular establishment.

#### Presentation of Insignia.

On the second day the insignia of the association was formally presented to the delegates from abroad, the presentation remarks being made by the secretary.

### SECOND INTERNATIONAL SANITARY CONVENTION.

*Held at Washington, D. C., Oct. 9-14, 1905.*

*(Concluded from page 1348.)*

#### Sanitary Agreement.

October 13 and 14 were entirely devoted to the consideration and adoption of the following agreement:

*The Presidents of the Republics of Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Mexico, Nicaragua, Peru, United States of America, and Venezuela:* Having found that it is useful and convenient to codify all the measures destined to guard the public health against the invasion and propagation of yellow fever, plague and cholera, have designated as their delegates:

*[Here follow the names of the delegates.]*

Who, having made an interchange of their powers, and found them good, have agreed to adopt, *ad referendum*, the following propositions:

#### CHAPTER I.

REGULATIONS TO BE OBSERVED BY THE POWERS SIGNATORY TO THE CONVENTION AS SOON AS PLAGUE, CHOLERA, OR YELLOW FEVER MAY APPEAR IN THEIR TERRITORY.

##### *Section I.—Notification and subsequent communications to other countries.*

Article 1. Each government should immediately notify other governments of the first appearance in its territory of authentic cases of plague, cholera or yellow fever.

Article 2. This notification is to be accompanied, or very promptly followed, by the following additional information:

- (1) The neighborhood where the disease has appeared.
- (2) The date of its appearance, its origin, and its form.
- (3) The number of established cases, and the number of deaths.
- (4) For plague: The existence among rats or mice of plague, or of an unusual mortality. For yellow fever: The existence of *Stegomyia fasciata* in the locality.
- (5) The measures taken immediately after the first appearance.

Article 3. The notification and the information prescribed in Articles 1 and 2 are to be addressed to diplomatic and consular agents in the capital of the infected country; but this is to be construed as not preventing direct communication between officials charged with the public health of the several countries.

For countries which are not thus represented, they are to be transmitted directly by telegraph to the governments of such countries.

Article 4. The notification and the information prescribed in Articles 1 and 2 are to be followed by further communications dispatched in a regular manner in order to keep the governments informed of the progress of the epidemic.

These communications, which are to be made at least once a week, and which are to be as complete as possible, should indicate in detail the precautions taken to prevent the extension of the disease.

They should set forth: First, the prophylactic measures taken relative to sanitary or medical inspection, to isolation and disinfection; Second, the measures taken relative to departing vessels to prevent the exportation of the disease, and, especially under the circumstances mentioned in paragraph 4 of Article 2 of this section, the measures taken against rats and mosquitoes.

Article 5. The prompt and faithful execution of the preceding provisions is of the very first importance.

The notifications only have a real value if each government is warned in time of cases of plague, cholera or yellow fever and of suspicious cases of those diseases supervening in its territory. It can not then be too strongly recommended to the various governments to make obligatory the declaration of cases of plague, cholera or yellow fever, and of giving information of all unusual mortality of rats and mice especially in ports.

Article 6. It is understood that neighboring countries reserve to themselves the right to make special arrangements with a view of organizing a service of direct information between the chiefs of administration on the frontiers.

##### *Section II. Conditions showing a given territorial area to be infected, or to have been freed from infection.*

Article 7. Information of a first case of plague, cholera or yellow fever does not justify against a territorial area where it may appear, the application of the measures prescribed in Chapter 2 as hereinafter indicated.

On the occurrence of several non-imported cases of plague, or a non-imported case of yellow fever or when cases of cholera form a focus, the area is to be declared infected.

Article 8. To limit the measures to the affected regions alone, governments should only apply them to persons and articles proceeding from the contaminated or infected areas.

By the word "area" is understood a well determined portion of territory described in the information which accompanies or follows notification, thus, a province, a state, "a government," a district, a

department, a canton, an island, a commune, a city, a quarter of a city, a village, a port, a "polder," a hamlet, etc., whatever may be the extent and population of these portions of territory.

But this restriction, limited to the infected area, should only be accepted on the formal condition that the government of the infected country shall take the necessary measures: 1, to prevent, unless previously disinfected, the exportation of articles named in 1 and 2 of Article 12, coming from the contaminated area; and 2, measures to prevent the extension of the epidemic; and provided further that there be no doubt that the sanitary authorities of the infected country have faithfully complied with Article 1 of this convention.

When an area is infected, no restrictive measure is to be taken against departures from this area if these departures have occurred five days, at least, before the beginning of the epidemic.

Article 9. That an area should no longer be considered as infected, official proof must be furnished:

First, That there has been neither a death nor a new case of plague or cholera for five days after isolation, death, or cure of the last plague or cholera case. In the case of yellow fever the period shall be eighteen days, but each government may reserve the right to extend this period.

Second, That all the measures of disinfection have been applied: in the case of plague, that the precautions against rats have been observed, and in the case of yellow fever that the measures against mosquitoes have been executed.

#### CHAPTER II.

MEASURES OF DEFENSE BY OTHER COUNTRIES AGAINST TERRITORIES DECLARED TO BE INFECTED.

##### *Section I. Publication of prescribed measures.*

Article 10. The government of each country is obliged to immediately publish the measures which it believes necessary to take against departures either from a country or from infected territorial area.

The said government is to communicate at once this publication to the diplomatic or consular agent of the infected country residing in its capital as well as to the International Sanitary Bureau.

The government shall be equally obliged to make known through the same channels the revocation of these measures or modifications which may be made in them.

In default of a diplomatic or consular agency in the capital, communications are made directly to the government of the country interested.

##### *Section II. Merchandise—Disinfection—Importation and Transit—Baggage.*

Article 11. There exists no merchandise which is of itself capable of transmitting plague, cholera or yellow fever. It only becomes dangerous in case it is soiled by pestous or choleraic products, or, in the case of yellow fever, when such merchandise may harbor mosquitoes.

Article 12. No merchandise or objects shall be subjected to disinfection on account of yellow fever, but in cases covered by the previous article the vehicle of transportation may be subjected to fumigation to destroy mosquitoes. In the case of cholera and plague disinfection should only be applied to merchandise and objects which the local sanitary authority considers as infected.

Nevertheless, merchandise, or objects enumerated hereafter, may be subjected to disinfection, or prohibited entry, independently of all proof that they may or may not be infected:

1. Body linen, wearing apparel in use, clothing which has been worn, bedding already used.

When these objects are transported as baggage, or in the course of a change of residence (household furniture), they should not be prohibited, and are to be subjected to the regulations prescribed by Article 19.

Baggage left by soldiers and sailors, and returned to their country after death, are considered as objects comprised in the first paragraph of No. 1 of this article.

2. Rags, and rags for making paper, with the exception, as to cholera, of rags which are transported as merchandise in large quantities compressed in bales held together by hoops.

New clippings coming directly from spinning mills, weaving mills, manufactories or bleacheries, shoddy, and clippings of new paper should not be forbidden.

Article 13. In the case of cholera and plague there is no reason to forbid the transit through an infected district of merchandise, and the objects specified in Nos. 1 and 2 of the preceding Article, if they are so packed that they can not have been exposed to infection in transit.

In like manner, when merchandise or objects are so transported that, in transit, they can not come in contact with soiled objects, their transit across an infected territorial area should not be an obstacle to their entry into the country of destination.

Article 14. The entry of merchandise and objects specified in Nos. 1 and 2 of Article 12 should not be prohibited, if it can be shown to the authorities of the country of destination that they were shipped at least five days before the beginning of the epidemic.

Article 15. The method and place of disinfection, as well as the measures to be employed for the destruction of rats, and mosquitoes, are to be fixed by authority of the country destination, on arrival at said destination. These operations should be performed in such a manner as to cause the least possible injury to the merchandise.

It devolves on each country to determine questions relative to the payment of damages resulting from disinfection, or from the destruction of rats or mosquitoes.

If taxes are levied by a sanitary authority, either directly or through the agency of any company or agent, to insure measures for the destruction of rats and mosquitoes on board ships, the amount of these taxes ought to be fixed by a tariff published in advance, and the result of these measures should not be a source of profit for either state or sanitary authorities.

Article 16. Letters and correspondence, printed matter, books, newspapers, business papers, etc. (postal parcels not included), are not to be submitted to any restriction or disinfection. In case of yellow fever postal parcels are not to be subjected to any restrictions or disinfection.

1. The word "isolation" signifies isolation of the patient, of the persons who care for him and the forbidding of visits of all other persons, the physician excepted. By isolation in the case of yellow fever is understood the isolation of the patient in an apartment so screened as to prevent the access of mosquitoes.



Article 17. Merchandise, arriving by land or by sea, should not be detained permanently at frontiers or in ports.

Measures which it is permissible to prescribe with respect to them are specified in Article 12.

Nevertheless, when merchandise, arriving by sea in bulk (vrac) or in defective packages, is contaminated by pest-stricken rats during the passage, and is incapable of being disinfected, the destruction of the germs may be assured by putting said merchandise in a warehouse for a period to be decided by the sanitary authorities of the port of arrival.

It is to be understood that the application of this last measure should not entail delay on any vessel nor extraordinary expenses resulting from the want of warehouses in ports.

Article 18. When merchandise has been disinfected by the application of the measures prescribed in Article 12, or put temporarily in warehouses in accordance with the third paragraph of Article 17, the owner, or his representative, has the right to demand from the sanitary authority which has ordered such disinfection, or storage, a certificate setting forth the measures taken.

Article 19. Baggage. In the case of soiled linen, bed clothing, clothing and objects forming a part of baggage or furniture coming from a territorial area declared contaminated, disinfection is only to be practiced in cases where the sanitary authority considers them as contaminated. There shall be no disinfection of baggage on account of yellow fever.

### Section III. Measures in ports and at maritime frontiers.

Article 20. Classification of ships. A ship is considered as infected which has plague, cholera or yellow fever on board, or which has presented one or more cases of plague or cholera within seven days, or a case of yellow fever at any time during the voyage.

A ship is considered as suspected on board of which there have been a case or cases of plague or cholera at the time of departure or during the voyage, but no new case within seven days; also such ships as have lain in such proximity to the infected shore as to render them liable to the access of mosquitoes.

The ship is considered *indemne*, which, although coming from an infected port, has had neither death nor case of plague, cholera or yellow fever on board, either before departure, during the voyage, or at the time of arrival, and which in the case of yellow fever has not lain in such proximity to the shore, as to render it liable, in the opinion of the sanitary authorities, to the access of mosquitoes.

Article 21. Ships infected with plague are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked and isolated.
3. Other persons should also be disembarked, if possible, and subjected to an observation,<sup>2</sup> which should not exceed five days dating from the day of arrival.
4. Soiled linen, personal effects in use, the belongings of crew<sup>3</sup> and passengers which, in the opinion of the sanitary authorities are considered as infected should be disinfected.
5. The parts of the ship which have been inhabited by those stricken with plague, and such others as, in the opinion of the sanitary authorities are considered as infected, should be disinfected.
6. The destruction of rats on shipboard should be effected before or after the discharge of cargo, as rapidly as possible, and in all cases with a maximum delay of forty-eight hours, care being taken to avoid damage of merchandise, the vessel and its machinery.

For ships in ballast, this operation should be performed immediately before taking on cargo.

Article 22. Ships suspected of plague, are to be subjected to the measures which are indicated in Nos. 1, 4 and 5 of Article 21.

Further, the crew and passengers may be subjected to observation, which should not exceed five days, dating from the arrival of the ship. During the same time, the disembarkment of the crew may be forbidden, except for reasons of duty.

The destruction of rats on shipboard is recommended. This destruction is to be effected before or after the discharge of cargo, as quickly as possible, and in all cases with a maximum delay of forty-eight hours, taking care to avoid damage to merchandise, ships, and their machinery.

For ships in ballast, this operation should be done, if done at all, as early as possible, and in all cases before taking on cargo.

Article 23. Ships *indemne* from plague are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

The only regulation which the sanitary authorities at a port of arrival may prescribe for them consists of the following measures:

1. Medical visit (inspection).
2. Disinfection of soiled linen, articles of wearing apparel, and the other personal effects of the crew and passengers, but only in exceptional cases when the sanitary authorities have special reason to believe them infected.
3. Without demanding it as a general rule, the sanitary authorities may subject ships coming from an infected port to a process for the destruction of the rats on board before or after the discharge of cargo. This operation should be done as soon as possible, and in all cases should not last more than twenty-four hours, care being taken to avoid damaging merchandise, ships, and their machinery, and without interfering with the passing of passengers and crew between the ship and the shore. For ships in ballast, this procedure, if practiced, should be put in operation as soon as possible, and in all cases before taking on cargo.

When a ship coming from an infected port has been subjected to a process for the destruction of rats, this process should only be repeated if the ship has touched meanwhile at an infected port, and has been alongside a quay in such port, or if the presence of sick or dead rats on board is proved.

2. The word "observation" signifies isolation of the passengers, either on board ship or at a sanitary station before being given free pratique.

3. The term "crew" is applied to persons who may make, or, who have made, a part of the personnel of the vessel and of the administration thereof, including stewards, waiters, "cafedji," etc. The word is to be construed in this sense wherever employed in the present convention.

The crew and passengers may be subjected to a surveillance, which should not exceed five days, to be computed from the date when the ship sailed from the infected port. The landing of the crew may also, during the same time, be forbidden except for reasons of duty.

Competent authority at the port of arrival may always demand, under oath, a certificate of the ship's physician, or in default of a physician, of the captain, setting forth that there has not been a case of plague on board since departure, and that no marked mortality among the rats has been observed.

Article 24. When on an *indemne* ship rats have been recognized as pest-stricken as a result of bacteriologic examination, or when a marked mortality has been established among these rodents, the following measures should be applied:

#### 1. Ships with plague-stricken rats:

(a) Medical visit (inspection).

(b) Rats should be destroyed before or after the discharge of cargo, as rapidly as possible, and in all cases with a delay not to exceed forty-eight hours; the deterioration of merchandise, vessels and machinery to be avoided. On ships in ballast, this operation should be performed as soon as possible, and in all cases before taking on cargo.

(c) Such parts of the ship and such articles as the local sanitary authority regards as infected, shall be disinfected.

(d) Passengers and crew may be submitted to observation, the duration of which should not exceed five days, dating from the day of arrival, except in special cases where the sanitary authority may prolong the observation to a maximum of ten days.

#### 2. Ships where a marked mortality among rats is observed:

(a) Medical visit (inspection).

(b) An examination of rats, with a view to determining the existence of plague, should be made as quickly as possible.

(c) If the destruction of rats is judged necessary, it shall be accomplished under the conditions indicated above in the case of ships with plague-stricken rats.

(d) Until all suspicion may be eliminated, the passengers and crew may be submitted to observation, the duration of which should not exceed five days counting from the date of arrival, except in special cases, when the sanitary authority may prolong the observation to a maximum of ten days.

Article 25. The sanitary authorities of the port must deliver to the captain, the owner, or his agent, whenever a demand for it is made, a certificate setting forth that the measures for the destruction of rats have been efficacious and indicating the reasons why these measures have been applied.

Article 26.—Ships infected with cholera are to be subjected to the following regulations:

#### 1. Medical visit (inspection).

2. The sick are to be immediately disembarked and isolated.

3. Other persons ought also to be disembarked, if possible, and subjected, dating from the arrival of the ship, to an observation, the duration of which shall not exceed five days.

4. Soiled linen, wearing apparel, and personal effects of crew and passengers which, in the opinion of the sanitary authority of the port, are considered as infected, are to be disinfected.

5. The parts of the ship which have been inhabited by persons sick with cholera, or which are considered by the sanitary authority as infected are to be disinfected.

6. The bilge-water is to be discharged after disinfection.

The sanitary authority may order the substitution of good potable water for that which is contained in the tanks on board.

The discharge or throwing overboard into the water of a port, of dejecta, shall be forbidden unless they have been previously disinfected.

Article 27. Ships suspected of cholera are to be subjected to measures prescribed under Nos. 1, 4, 5 and 6 of Article 26.

The crew and passengers may be subjected to an observation which should not exceed five days, to date from the arrival of the ship. It is recommended during the same time to prevent the debarkation of the crew except for reasons of duty.

Article 28. Ships *indemne* of cholera are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

The only regulations which the sanitary authorities of a port may prescribe in their case are the measures provided in Nos. 1, 4 and 6 of Article 26.

The crews and passengers may be submitted, in order to show their state of health, to an observation, which should not exceed five days to be computed from the date when the ship sailed from the infected port.

It is recommended that during the same time the debarkation of the crew be forbidden except for reasons of duty.

Competent authority at the port of arrival may always demand, under oath, a certificate from the ship's surgeon, or, in the absence of a surgeon, from the captain, setting forth that there has not been a case of cholera on the ship since sailing.

Article 29. Competent authority will take account, in order to apply the measures indicated in Articles 21 to 28, of the presence of a physician on board and a disinfecting apparatus in ships of the three categories mentioned above.

In regard to plague, it will equally take account of the installation on board of apparatus for the destruction of rats.

Sanitary authorities of such countries, where it may be convenient to make such regulations, may dispense with the medical visit and other measures toward *indemne* ships which have on board a physician specially commissioned by their country.

Article 30. Special measures may be prescribed in regard to crowded ships, notably emigrant ships, or any other ship presenting bad hygienic conditions.

Article 31. Any ship not desiring to be subjected to the obligations imposed by the authority of the port in virtue of the stipulations of the present convention is free to proceed to sea.

It may be authorized to disembark its cargo after the necessary precautions shall have been taken: namely, First, isolation of the ship, its crew and passengers; second, in regard to plague, demand for information relative to the existence of an unusual mortality among rats; third, in regard to cholera, the discharge of the bilge-water after disinfection and the substitution of a good potable water for that which is provided on board the ship.

Authority may also be granted to disembark such passengers as may demand it, on condition that these submit themselves to all measures prescribed by the local authorities.



Article 32. Ships coming from a contaminated port, which have been disinfected and which may have been subjected to sanitary measures applied in an efficient manner, shall not undergo a second time the same measures on their arrival at a new port, provided that no new case shall have appeared since the disinfection was practiced, and that the ships have not touched in the meantime at an infected port.

When a ship only disembarks passengers and their baggage, or the mails, without having been in communication with *terra firma*, it is not to be considered as having touched at a port, provided that in the case of yellow fever it has not approached sufficiently near the shore to permit the access of mosquitoes.

Article 33. Passengers arriving on an infected ship have the right to demand of the sanitary authority of the port a certificate showing the date of their arrival and the measures to which they and their baggage have been subjected.

Article 34. Packet boats shall be subjected to special regulation, to be established by mutual agreement between the countries in interest.

Article 35. Without prejudice to the right which governments possess to agree on the organization of common sanitary stations, each country should provide at least one port on each of its seaboard, with an organization and equipment sufficient to receive a vessel, whatever may be its sanitary condition.

When an *indemne* vessel, coming from an infected port, arrives in a large mercantile port, it is recommended that she be not sent to another port for the execution of the prescribed sanitary measures.

In every country, ports liable to the arrival of vessels from ports infected with plague, cholera or yellow fever, should be equipped in such a manner that *indemne* vessels may there undergo, immediately on their arrival, the prescribed measures, and not be sent for this purpose to another port.

Governments should make declaration of the ports which are open in their territories to arrivals from ports infected with plague, cholera or yellow fever.

Article 36. It is recommended that in large seaports there be established:

(a) A regular medical service and a permanent medical supervision of the sanitary conditions of crews, and the inhabitants of the port.

(b) Places set apart for the isolation of the sick and the observation of suspected persons. In the *stegomyia* belt there must be a building or part of a building screened against mosquitoes, and a launch and ambulance similarly screened.

(c) The necessary installation for efficient disinfection and bacteriologic laboratories.

(d) A supply of potable water above suspicion, for the use of the port, and the installation of a system of sewerage and drainage, adequate for the removal of refuse.

Section IV. Measures on land frontiers. Travelers. Railroads. Frontier Zones. River Routes.

Article 37. Land quarantines should no longer be established, but the governments reserve the right to establish camps of observation if they should be thought necessary for the temporary detention of suspects.

This principle does not exclude the right for each country to close a part of its frontier in case of necessity.

Article 38. It is important that travelers should be submitted to a surveillance on the part of the personnel of railroads, to determine their condition of health.

Article 39. Medical intervention is limited to a visit (inspection) with the taking of temperature of travelers, and the succor to be given to those actually sick. If this visit is made, it should be combined as much as possible with the customs inspection to the end that travelers may be detained as short a time as possible. Only persons evidently sick should be subjected to a searching medical examination.

Article 40. As soon as travelers, coming from an infected locality, shall have arrived at their destination, it would be of the greatest utility to submit them to a surveillance which should not exceed ten or five days, counting from the date of departure, the time depending on whether it is a question of plague or cholera. In case of yellow fever the period should be six days.

Article 41. Governments may reserve to themselves the right to take particular measures in regard to certain classes of persons, notably vagabonds, emigrants and persons traveling or passing the frontier in bands.

Article 42. Coaches intended for the transportation of passengers and mails should not be retained at frontiers.

In order to avoid this retention a system of relays ought to be established at frontiers, with transfer of passengers, baggage and mails. If one of these carriages be infected or shall have been occupied by a person suffering from plague, cholera or yellow fever, it shall be detached from the train for disinfection at the earliest possible moment.

Article 43. Measures concerning the passing of frontiers by the personnel of railroads and the post office are a matter for agreement of the sanitary authorities concerned. These measures should be so arranged as not to hinder the service.

Article 44. The regulation of frontier traffic, as well as the adoption of exceptional measures of surveillance, should be left to special arrangement between contiguous countries.

Article 45. The power rests with governments of countries bordering on rivers to regulate by special arrangement the sanitary régime of river routes.

#### ARTICLES RELATING TO YELLOW FEVER.

Article 46. Ships infected with yellow fever are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked, protected by netting against the access of mosquitoes and transferred to the place of isolation in an ambulance or a litter similarly screened.
3. Other persons should also be disembarked if possible, and subjected to an observation of six days, dating from the day of arrival.
4. In the place set apart for observation, there shall be screened apartments or cages where anyone presenting an elevation of temperature above 37.6 degrees Centigrade shall be screened until he may be carried in the manner indicated above to the place of isolation.

5. The ship shall be moored at least two hundred meters from the inhabited shore.

6. The ship shall be fumigated for the destruction of mosquitoes before the discharge of cargo, if possible. If a fumigation be not possible before the discharge of the cargo, the health authorities shall order either:

(a) The employment of immune persons for discharging the cargo, or

(b) If non-immunes be employed they shall be kept under observation during the discharging of cargo and for six days, to date from the last day of exposure on board.

Article 47. Ships suspected of yellow fever are to be subjected to the measures which are indicated in Nos. 1, 3 and 5 of the preceding article; and, if not fumigated, the cargo shall be discharged as directed under subparagraph (a) or (b) of the same article.

Article 48. Ships *indemne* from yellow fever, coming from an infected port, after the medical visit (inspection), shall be admitted to free pratique, provided the duration of the trip has exceeded six days.

If the trip be shorter, the ship shall be considered as suspected until the completion of a period of six days, dating from the day of departure.

If a case of yellow fever develop during the period of observation, the ship shall be considered as infected.

Article 49. All persons who can prove their immunity to yellow fever, to the satisfaction of the health authorities, shall be permitted to land at once.

Article 50. It is agreed that in the event of a difference of interpretation of the English and Spanish texts, the interpretation of the English text shall prevail.

#### TRANSITORY DISPOSITION.

The governments which may not have signed the present convention are to be admitted to adherence thereto on demand; notice of this adherence to be given through diplomatic channels to the government of the United States of America and by the latter to the other signatory governments.

Made and signed in the City of Washington on the 14th day of the month of October nineteen hundred and five, in two copies, in English and Spanish respectively, which shall be deposited in the State Department of the Government of the United States of America, in order that certified copies thereof, in both English and Spanish, may be made to transmit them through diplomatic channels to each one of the signatory countries.

Dr. Eduardo Moore, Juan J. Ulloa, Juan Guiteras, E. B. Barnet, Emilio C. Joubert, M. H. Alcivar, Walter Wyman, H. D. Geddings, John S. Fulton, Walter D. McCaw, J. D. Gatewood, H. L. E. Johnson, M.D., Joaquin Yela, E. Licéaga, J. L. Medina, M.D., Daniel Ed. Laverria, N. Veloz Goiticoa.

#### MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Thirty-first Annual Meeting, held at Indianapolis, Oct. 10-12, 1905.

(Continued from page 1354.)

#### General Blood Poisoning Emanating from the Nose and Pharynx.

DR. J. HOLINGER, Chicago, stated that micro-organisms of the nose and pharynx were formerly considered harmless. A great many diseases can be directly traced to them. Fatal cases of blood poisoning occur, but are not very frequent. With the decrease in the number of streptococci in the pharynx all general symptoms not only diminish, but disappear. The connection between acute rheumatism and tonsillitis is well known. The tonsil receives its lymph from the nose and pharynx, and may, therefore, become secondarily inflamed in cases of infections located in the nose and pharynx. There is a difference in the course of the disease, whether the infection dates from the nose and pharynx, or directly from the tonsils. The most striking example is diphtheria. Histories of cases are given by the author where chronic rheumatism of many years' standing, which had been treated with all kinds of medicine, massage and x-ray, disappeared when the suppurative processes in the nose and its sinuses were cured. The mixed infections of tuberculosis of the lung and bones may be avoided, in the opinion of the author, if the pharynx and nose whence they start are treated. As to treatment, very little is accomplished by sprays. Washes with boric acid solution are used in the nose, and in the pharynx paintings with solutions of iodine and iodide of potash and glycerin.

#### Cancer of the Rectum.

DR. E. B. SMITH, Detroit, made a special plea for extirpation in the treatment of cancer of the rectum as being the only procedure that will give hope of a cure. He spoke of colotomy as the operation of necessity rather than of choice, and urged examination in all cases where the rectum is involved, as in cases of hemorrhage, where there are bloody stools, where there is painful defecation, and where there is constipation, and advised a microscopical examination in all cases where the neoplasm is developed. The author shows that the extir-



pation of a part or the whole of the rectum by the Kraske method is the ideal operation, and should be practiced only by those who have had experience in capital operations.

#### Surgery of Visceral Injuries from Violence to the Abdominal Wall.

DR. JOHN YOUNG BROWN, St. Louis, called attention to the mortality in such cases, and emphasized the importance of their early diagnosis and prompt surgical treatment. He reported a series of six cases, in all of which abdominal resection was done. Of the six cases, one recovered and five died. An analysis of cases confirms the importance of early diagnosis and prompt surgical treatment by abdominal section in all cases of abdominal contusion in which there were present the slightest symptoms pertaining to injury to peritoneal viscera.

#### Intraperitoneal Tuberculosis.

DR. F. F. LAWRENCE, Columbus, Ohio, drew the following conclusions: 1. Intraperitoneal tuberculosis is frequently a local disease. 2. It probably occurs much more frequently in the female than in the male. 3. In a large majority of cases it is primarily visceral and the general peritoneum is secondarily involved. 4. The surgical treatment is rational, sometimes agreeably surprising in results, and again bitterly disappointing. 5. In this, as in many other surgical conditions, early diagnosis and early operation will bring more certain results. 6. In this condition the greatest obstacle to overcome is the idea that it is a secondary condition. 7. No case of intraperitoneal tuberculosis should be denied the benefits of operation, no matter how extensive, as long as there is no positive pulmonary or pleuritic involvement, for the reason that some apparently hopeless cases fully recover. 8. When there is a tubercular peritonitis, a sequel of tubercular tubes, ovaries or appendix, the primary focus should always be removed. 9. In these tubercular cases the mesenteric glands have not been found frequently involved, and when they are operation accomplishes very little good. 10. In tubercle of tubes and ovaries the adhesions are usually firm, sometimes, though not usually, very vascular, and not infrequently involve loops of the small intestine; hence the greatest care is necessary to avoid serious injury to the bowel and at the same time separate completely all adherent surfaces and provide complete drainage. 11. Drainage is the great factor in recovery, when properly carried out.

#### Pyloroplasty with the McGraw Ligature.

DR. J. HENRY CARSTENS, Detroit, said that many cases with disturbances of digestion can not be diagnosticated or relieved by medication. These should be subjected to an exploratory celiotomy. Gastroenterologists should not treat patients for months and years if they can not make a positive diagnosis or cure a patient. After reasonable efforts the patient should be sent to the surgeon for relief. The McGraw ligature is a valuable means of relieving stricture at the pylorus and the resulting dilatation of the stomach. This method of operating is easy and quick; the danger is very small, and the operation is preferable to those heretofore used in benign operations of the pylorus. It is a great deal better than gastroenterostomy, as one restores as nearly as possible the normal condition.

#### Ovarian Cystoma.

DR. L. P. LUCKETT, Terre Haute, Ind., reported a case of ovarian cystoma on which he had operated. The tumor originated from the left ovary, was attached by a broad pedicle, which was tied off in sections. The uterus and right ovary were found to be normal. The fluid and tumor were estimated to have weighed between seventy and eighty pounds. The patient made an excellent recovery.

#### Closure of Vaginal Fistulae.

DR. MAURICE J. ROSENTHAL, Fort Wayne, Ind., said that a considerable area of scar tissue and vaginal mucosa may be inverted into the bladder without producing ill effects. Ureteral fistula embedded in scar tissue may be inverted into the bladder and continue to discharge its urine without becoming stenosed. Even large vaginal fistulae, where part of the bladder walls are lost in scar tissue from a previous hysterectomy,

may be successfully operated by denudation and suture through the vagina without disturbing the relations of the bladder or any adhesions of pelvic viscera which may have formed in the scar.

#### Sprained Ankle.

DR. ROBERT CAROTHERS, Cincinnati, drew the following conclusions: 1. No one is exempt from a sprained ankle, although some are more prone to it than others. 2. In severity a sprained ankle will range from a trivial accident to one of extreme severity and everlasting. 3. The outer side more often than the inner side of the ankle is the seat of trouble. 4. The diagnosis, which is ordinarily made with ease, is at times made with difficulty, and occasionally an x-ray examination is required to make the diagnosis certain. 5. The treatment by immobilization with a plaster-of-Paris cast is unsatisfactory and at times injurious. 6. That the treatment instituted by Cotteral, the so-called adhesive plaster strappings, advising and urging the patient to walk on the injured foot, the early removal of these straps, followed by massage, gives the most satisfactory and best results. 7. That the old cases are to be, under anesthesia, converted into acute sprains and treated in the same manner.

#### Shall the Profession or the Laity be Responsible for the Death Rate in Appendicitis.

DR. J. C. O'DAY, Oil City, Pa., said that every physician, when confronted with a case of appendicitis, should frankly tell the patient the nature of his trouble; explain to him, honestly and candidly, the disposition of his disease; that no one can tell what an inflamed appendix will do, and that there is no safety till the offending organ has been removed. If the patient then decides to postpone operation, he, not the surgeon, should be responsible. If this were done, he thinks we would hear no more complaints of, "Why did not the physician advise operation before it was too late?"

#### Sarcoma of the Anterior Segment of the Globe.

DR. O. TYDINGS, Piqua, Ohio, presented a brief history of a case on which he had operated for the removal of a melanoma of the anterior segment of the globe. The diagnosis was confirmed by reliable microscopists and pathologists. Five days after the removal of the tumor the patient disappeared and the speaker did not see him again until the following August. There was no recurrence; the cicatrix is smooth; the lone pigmented spot, not larger than a pin-point, which the author takes to be the remains of an old hernia in the iris, is still present, but absolutely quiescent. The patient's vision, which, when he first saw him, was, right eye 20/40, and when operated 20/200, and left eye, 20/30, is now 20/20 in each eye. So far as the author has been able to examine authorities, the case stands alone.

The following papers were also read: "Bone Tuberculosis, with Report of a Case," by Dr. W. W. Vinnedge, Lafayette, Ind.; "Post-Operative Acute Dilatation of the Stomach, with Report of a Case Following Nephropexy," by Dr. A. E. Halstead, Chicago; "Treatment of Tuberculosis of the Cervical Lymphatics," by Dr. H. C. Sharp, Jeffersonville, Ind.; "Surgical Treatment of Nephritis," by Dr. A. H. Ferguson, Chicago; "Visceral Ptosis: Its Surgery," by Dr. Earl Harlan, Cincinnati; "The After-Treatment of Gastroenterostomy," by Dr. Charles A. L. Reed, Cincinnati; "Extraperitoneal Rupture of Bladder Complicating Fracture of Pelvis," by Dr. J. R. Eastman, Indianapolis; "Cysts of the Mesentery, with Report of a Case," by Dr. L. G. Bowers, Dayton, Ohio; "Perforating Ulcers of the Duodenum, with Report of a Case," by Dr. M. A. Austin, Anderson, Ind.; "Appendicitis," by R. E. Haughton, Richmond, Ind.

The papers mentioned above were read in the surgical section. In the medical section, over which Dr. Frank P. Norbury, Jacksonville, Ill., presided, the following papers were read and discussed:

#### The Present Conception of Bright's Disease.

DR. G. W. McCASKEY, Fort Wayne, Ind., said that the only possible justification for the use of the term is a historical one, and while its meaning must in a sense change with the changing views of pathology, yet the primary groundwork which constitutes the historical basis on which it stands should be kept constantly in view.

He presented a brief inquiry as to the character of the group of morbid states and symptoms originally described by Bright. In spite of the mutations of opinion and classifications, one can not but be impressed by the close resemblance be-



tween the views entertained to-day and those of half a century ago concerning what may be called the gross features of Bright's disease. The author divides the causal conditions into six classes: First, the acute infections; second, chronic infections; third, chemical poisons introduced into the circulation, of which lead may be taken as a type; fourth, the influence of cold; fifth, the products of perverted gastrointestinal function, and especially intestinal putrefaction; and, sixth, the products of perverted metabolism.

#### Treatment of Tuberculous Pleurisy with Effusion.

DR. THEODORE POTTER, Indianapolis, presented the following deductions: 1. The profession has gone too far in accepting the general principle and following the general practice that pleural serous effusions, unless they show a tendency to early absorption, should be removed. 2. Granting that in the majority of such cases pleurisy is the dominant feature and removal of the fluid the proper procedure, and that such removal will probably tend to arrest the pleural tuberculosis, which is usually present, nevertheless the best results ought to be obtained by dealing with each case on its own merits. 3. In cases in which the pleurisy is the sole or dominant feature, the removal of the fluid is the proper treatment; and in proportion to the accuracy of differentiation between the pleural and the pulmonary disease will be the promise of good results by the removal of an effusion. 4. In cases in which the tuberculosis of the lung is evidently or probably the overshadowing feature, a conservative course as regards the removal of a serous effusion is the proper one. In some cases the fluid had best be left to Nature to take care of, with the hope that the compression, immobilization, and physiologic quietude of the tuberculous lung may tend to arrest the disease. In other cases of this type the removal of the fluid should be undertaken only after due consideration.

#### Tuberculosis in General Practice.

DR. HUGH A. COWING, Muncie, Ind., said that the general practitioner should exercise great care in physical examination. He should strive to make an early diagnosis. He should carry a life-saving knowledge into the tuberculous home; improve its hygiene, and teach sanitation. He should employ the pure air treatment, the method varying according to the individual case. He should co-operate with health boards and report cases. He should estimate the cost before sending a patient to a health resort. He should study health resorts and sanatoriums, and visit them, if possible. He should oppose quack consumption cures, and quack doctors who "cure consumption." He should influence the press for sanitation. He should fight patent medicines. He should expose christian science and kindred fads that rob the consumptive of his chance for life. He should endeavor to seek legislation for sanitary advancement. He should help to popularize the consumptive sanatorium health farm. Membership in a society for the prevention of tuberculosis will make the physician's work more effective.

#### Management of Neurasthenics.

DR. H. A. RODEBAUGH, Columbus, Ohio, said that an individual becomes neurasthenic only after having suffered from some of the psycho-neuroses, the latter having been caused by traumatism, by disturbed metabolism, or by peripheral nerve irritation. Heredity, occupation or environment can hardly be considered etiologic factors without further specification. Neurasthenia should be considered a mental rather than a physical disease. Mental symptoms often persist after the removal of all physical causes, and can only be relieved by psychic treatment. Mental hygiene is both preventive and curative. The neurasthenic should be taught that a healthy mental attitude conduces to bodily health.

#### Autointoxication.

DR. D. L. FIELD, Jeffersonville, Ind., said that the part played by the intestinal emunctories in the elimination of certain poisonous substances is attested by the commonly fetid stools of persons who frequent postmortem examinations. The fetid character recalled the putrid odor of emanations from the cadaver. If poisonous products have been absorbed, an effort should be made to destroy them. The liver has the power of

arresting poisons. One should, therefore, stimulate its action by proper therapeutic measures. If the poisons have escaped the liver they should be eliminated by the skin, the lungs, the intestines and the kidneys. If all these attempts fail one should have recourse to certain antidotes which tend to counteract the physiologic effects of the poisons which menace the system. As a striking example, he mentions the antagonistic properties of poisons in atropin and pilocarpin. The strength of the patient should not be neglected, so that he may have time to eliminate the poisons.

#### Pathology of Epilepsy.

DR. MARC RAY HUGHES, St. Louis, shows that each epileptic stage has a distinct pathology, and the entire category for classification of epilepsy, including the psychical varieties, has one common pathology or gross structural change, and that this structural change, whether idiopathic or organic, has to do largely with the movements of the centrifugal and centripetal mental forces as they are found in the psychical equivalent of epilepsy—dual consciousness, obliviousness and allied states of mental eclampsia.

#### History and Treatment of Epilepsy.

DR. JOHN W. SELMAN, Greenfield, Ind., said that epilepsy and other diseases may exist together, and for this reason the prognosis and diagnosis are to be carefully reached and given. Jan. 2, 1905, a man, 28 years old, was brought to him, who was having epileptic seizures five and six times a week. There was no aura. Like a flash he was in hard convulsions. The general appearance of the patient indicated great anemia, malnutrition, with diarrhea. The author used subcutaneous injections of normal saline solution, with the bitter tonics and arsenic, and at the expiration of ten days a great change in his condition was noticeable, and in three months he returned home apparently well. The treatment should consist in the removal of any exciting cause, in the checking of the convulsive tendency, and in the prevention of any further attacks. The treatment is medicinal or operative, according to the causal factors.

#### The Cigarette; Its Relation to Mental and Nervous Diseases.

DR. W. B. FLETCHER, Indianapolis, quoted extensively from articles by physicians and prominent laymen on the cigarette habit, and said that he has sometimes asked himself if the members of the medical profession are not largely responsible for the widespread prejudice against the cigarette. It is so much easier to agree with the grief-stricken mother in assigning the cause of the loved one's downfall to the innocent habit of cigarette smoking, than to tell her the real cause which examination has revealed, or which has been imparted under the seal of professional confidence. In the past twenty-two years he has examined over 1,200 cases of nervous disease and insanity where the cause of the malady was given as the cigarette habit. In not one case has he reason to believe that tobacco had anything to do with the causation of the disease. They were all young men, and some of them were insane without doubt. Some of them smoked cigarettes to excess, but their insanity is only a cause of their excess, and not the excess the cause of the insanity. Many of them were simple cases of hebephrenia, with a cigarette attachment, so to speak. One boy, 16 years of age, and at the time in acute mania, had been severely punished by his father to "beat out the cigarette habit." After three months he recovered and proved to be an unusually bright and truthful boy. He acknowledged that he had smoked three cigarettes in his life, just before his mind gave way from overwork in the harvest field. Some of the cases were tuberculosis of the brain, but Dr. Fletcher thinks he is safe in saying that fully 90 per cent. were young fellows reared in idleness, who had acquired other habits which were reducing their vitality and sapping their brain, and the cigarette was used as a cover by the patients, parents and friends, or as an excuse to hide their shame.

#### The Tonic Alterative Action of Copper and Arsenic in Primary and Second Spanemic States.

DR. GEORGE F. BUTLER, Chicago, said that arsenic has a very decided action on tissue change and markedly affects the glandular, nervous, respiratory and cutaneous systems. Cop-



per is reputed to be a violent poison, yet, except so far as its toxic effects as a foreign body in the eye are concerned, this repute is decidedly undeserved. Copper is recommended as an alterative tonic useful in epilepsy, chorea and other spasmodic conditions, especially those connected with debility, by the older authors, and later therapeutists sustain this old repute of copper. Several authorities were quoted by the essayist to the effect that this drug, in small doses, stimulates both the heart and the capillary circulation, and is a general nerve tonic. As to the preparation to be employed, all agree that while copper sulphate is of value, it has at times unexpected dangerous untoward effects when the point of saturation is reached. These effects, through the influence of the drug on the vascular system, often take the direction of cardiac neuralgias and pseudo-anginas. The double salts of copper in small doses exert a cardiac action similar to that of digitalin, strophanthus, helleborein, etc. Hare prefers copper arsenite. He has found that under its use digestion and nutrition improve. It is superior to Fowler's solution in chorea and similar neuroses. In toxic conditions, like secondary malarious manifestations, with the resultant pallor, copper and arsenic are of decided value. Cases in which the periodic tendency has disappeared improve decidedly under copper and arsenic, whereas quinin and iron are worse than useless. The influence of arsenic is very marked on chronic rheumatism and so-called rheumatic gout, neuralgias of various sorts, in tic, and hemicrania, as well as in angina pectoris, chorea, epilepsy and asthma. In certain of the gouty bronchites, at the onset of phthisis, in imperfectly cleared-up pneumonic lung consolidation, arsenic acts sometimes with remarkable efficiency. The influence of both drugs on the liver, whose double functions are so necessary to the tissue changes of the system, show that both play a part in assisting assimilation and at the same time destroying waste products.

#### The Claims of the Adolescent.

DR. FRANK P. NORBURY, Jacksonville, Ill., stated that the claims of the adolescent for recognition by the medical profession, are genuine, not hypothetical, and involve three important considerations: 1. Physiologic—a study of growth, development, sex differentiation. 2. Psychologic—normal and morbid, involving honest endeavor of the physician to see the real needs of the individual. 3. Pedagogic—training and treatment to go together. All these considerations show that a demand exists for qualified men to consider earnestly the problems of mind and body of this period.

The following papers were likewise read: "Heads and Tales," by Dr. T. B. Greenley, Meadow Lawn, Ky.; "Simple Eye Conditions that Should Be Familiar to Every Physician," by Dr. Mark P. Stevenson, Akron, Ohio; "Some Interesting Problems in Urinary Diagnosis," by Dr. Arthur R. Elliott, Chicago; "Hepatic Uremia and Its Treatment," by Dr. Alfred C. Croftan, Chicago; "Enterotoxism (Autointoxication) from Meat," by Dr. Fenton B. Turck, Chicago; "The Leucocytes in Pertussis," by Dr. F. S. Churchill, Chicago; "Poliomyelitis," by Dr. Hugh T. Patrick, Chicago; "Demonstration of Sleep Inducing Method," by Dr. J. B. Learned, Northampton, Mass.; "Some Rare Sequelæ of Syphilis," by Dr. Henry J. Scherck, St. Louis; "Combined Method of Treatment in the Arrest and Cure of Tuberculosis," by Dr. H. B. Weaver, Asheville, N. C.; "Plea for Moral Restraint of Students in Medical Colleges," by Dr. J. M. Batten, Downingtown, Pa.

#### MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

*Annual Meeting, held in Scranton, Sept. 26-28, 1905.)*

*(Continued from page 1351.)*

#### Ectopic Gestation.

DR. CHARLES P. NOBLE, Philadelphia, stated that during the past 16 years he has operated on 91 patients; 89 by abdominal section and 4 by the vaginal route, two of the latter subsequently requiring abdominal section. In 44 of these cases the pregnancy was in the left tube; in 40 in the right; in 7 the report did not show which tube was involved. The causes are usually mechanical, due either to infection or congenital defects of the tube. The ideal time for operation is before rupture, and should consist of the removal of the involved tube with or without the ovary. Early diagnosis and prompt operative interference were urged as important factors. Careful consideration of the history greatly facilitates the diagnosis.

#### DISCUSSION.

DR. GEORGE D. NUTT, Williamsport, reported two cases of

rupture occurring in the broad ligament and also a case in which a rupture of the right tube containing a quantity of blood had been completely walled off from the abdominal cavity, the menstrual periods being regular for seven months prior to the operation.

DR. J. C. O'DAY, Oil City, mentioned as diagnostic symptoms a history of sterility without apparent cause, with sudden cessation of the menstrual periods and pelvic pain. Among the causative factors were mentioned gonorrhea, torsion of the tubes and other mechanical factors, he reported a case in which an operation for a cystic ovary revealed a ruptured extrauterine pregnancy in the left tube which was completely walled off.

DR. FRANKLIN F. ARNDT, Scranton, recommended as a diagnostic aid curettage and examination of the scrapings for decidual cells.

DR. NOBLE, in closing referred to cases in which the pain was in the epigastrium and temperature above normal even after considerable hemorrhage had taken place. He felt that spontaneous recovery undoubtedly takes place in a number of cases, but, of course, it is not within the power of the physician to tell just which these cases will be; hence, operative interference must be resorted to in all cases. Where there is a history of missed period, pelvic pain and the finding of a mass, a diagnosis of extrauterine pregnancy will in 99 cases out of 100 be correct.

#### The Restitution to Normal After Childbirth.

DR. BARTON COOKE HIRST, Philadelphia, stated that injuries of the genital canal and backward displacement of the uterus constituted more than one-third of over 6,000 cases of diseases of women that had come under his observation, and, if to this number are added the puerperal infections, pelvic inflammations, abortion, subinvolution, endometritis and other pathologic consequences of parturition, they would constitute far the larger proportion of cases. Among the remainder would be a limited number of neoplasms, genital tuberculosis and gonorrhea. He urged the establishment of hospitals in connection with medical colleges, in order that the students might be taught the practical as well as the theoretical side of obstetrics. The patient should be carefully watched during the period of gestation and parturition, and a sufficient number of examinations made afterward to insure the physician that all the organs have returned to normal.

DR. GEORGE M. BOYD, Philadelphia, stated that, except in cases of excessive bleeding and injury to the broad ligaments, the cervix should not be repaired immediately after childbirth, but the reverse is true in regard to injuries to the perineum, as better results are secured from immediate repair, except where the patient is in a very exhausted condition. He urged careful watching over the patient during pregnancy and careful examination after childbirth to satisfy the attendant that the genital tract had returned to normal.

#### Uterine Curettage.

DR. E. E. MONTGOMERY, Philadelphia, stated that the indications for the use of the curette are chronic endometritis; polypoid or mucous growths projecting from the mucous surface of the uterine cavity; retrodisplacements if followed by measures to restore the normal position; pelvic inflammation, if associated with measures to correct the intraperitoneal disorders; carcinoma for the purpose of securing scrapings for study, and the retention of products of embryonic life. The conditions cited as contraindications were: acute endometritis, intrauterine myomata, or any other cases in the absence of intrauterine inflammation. Aseptic precautions should be observed in the preparation of the operator, the patient and the instruments. Pratt's dilators and metal bongs were recommended. The operation should be performed only by one skilled in the work, and drainage is essential.

#### Significance and Management of Chronic Uterine Hemorrhage.

DR. GEORGE ERETY SHOEMAKER, Philadelphia, stated that the determination of whether or not the flow is normal can only be made by comparison with the other periods of the same individual during a time when she was in a healthy condition. He cited, among the causes for hemorrhage, passive congestion of the pelvic vessels, pelvic disease outside of the uterus,



prolapsed and cystic ovaries, chronic adherent inflammatory disease, disorders of pregnancy, partial placenta previa, threatened abortion, and extrauterine pregnancy. He deprecated the idea that preceding the menopause there was likely to be slight hemorrhage, and urged careful examination and prompt treatment of all cases.

## DISCUSSION.

DR. RICHARD H. GIBBONS, New York, reported a case in which, after he had done a curettement and employed a bichlorid solution of 1 to 3000, he opened the abdominal cavity to complete the operation and found the intestines blistered, which could only be explained by the escape of fluid into the abdominal cavity. He considers the curette a dangerous instrument, except in experienced hands, and reported cases illustrative of this point.

DR. CHARLES P. NOBLE, Philadelphia, emphasized the importance of educating the laity to know that hemorrhage preceding the menopause is not a natural factor and calls for thorough examination, which he believed would be valuable in reducing malignant disease. He called attention to the necessity for accurate diagnosis before the employment of the curette and deprecated its use to assist in diagnosis, except to secure scrapings for examination in malignant disease.

DR. GEORGE M. BOYD, Philadelphia, deprecated the use of the curette following miscarriage or abortion. He believes that the finger is better able to empty the uterus. In an experience of 15 years at the Philadelphia Lying-in Charity, covering over 10,000 cases, he never found it necessary for that purpose.

DR. J. M. BALDY, Philadelphia, believed that the curette was a valuable instrument in properly selected cases, and felt that the best method of dilatation was by means of the forceps, as it was thus necessary to make but one insertion, minimizing the danger of injury to the genital tract.

## The Technic Employed in One Hundred Laparotomies.

DR. L. J. HAMMOND, Philadelphia, reported 100 cases, 36 with localized pus and 64 in which pus was absent, consisting of appendicitis, cholelithiasis, etc., with but four fatalities, one of which was drained. He expressed the opinion that drainage should only be instituted when there is some positive indication for it, although in cases of disease of the gall bladder drainage should always be employed.

DR. J. G. CLARKE, Philadelphia, stated that as the number of operations became greater the number of times which drainage was employed decreased. He believes that drainage should be the exception rather than the rule.

DR. J. MONTGOMERY BALDY, Philadelphia, believes that the less the abdominal contents are handled the better, and that the more experienced the operator became the less he would employ drainage.

DR. ERNEST LAPLACE felt that drainage should not be employed unnecessarily, but in cases of doubt it is better to drain.

## Management of Pus Cases in Abdominal Surgery.

DR. REED BURNS, Scranton, stated that in empyema of the gall bladder the best results followed cholecystectomy, and in cases of pyosalpinx, suppurating ovaries and tubes, ovarian abscesses, suppurating cysts and acute salpingitis, operative procedure is the method of choice. In appendiceal abscess he recommended that the pus be evacuated before opening the abdomen. Before closing, the wound should be flushed and drainage established if necessary.

## DISCUSSION.

DR. W. L. ESTES, South Bethlehem, felt that the reason drainage did not produce the results expected was because of improper method. In some cases an important factor, particularly with women, is the raising of the head of the bed.

DR. J. C. O'DAY, Oil City, said that the gall bladder should be left in and drained whenever possible owing to the danger of fibrous degeneration and closure of the common duct.

DR. WILLIAM L. RODMAN, Philadelphia, did not favor the flushing of the abdominal cavity when the pus was confined to a limited and circumscribed area. Cholecystectomy should be confined to cases of gangrene or other disease of the gall bladder.

DR. RICHARD H. GIBBONS, New York, urged the necessity for immediate operation in all cases of appendicitis and stated

that the appendix should be taken out whenever a laparotomy is done. In regard to the gall bladder it had better not be removed unless malignant degeneration is present.

DR. CHARLES P. NOBLE, Philadelphia, said that drainage should be employed only when especially indicated. It is better to remove the source of the infection and then pack with sterile gauze than to flush out the abdomen in cases of free pus and general peritonitis.

## Cancer of the Head and Neck.

DR. GEORGE W. CRILE, Cincinnati, Ohio, presented a detailed report of 128 operations on 110 cases. He believed that the same method of procedure should be instituted in these cases as is followed in removal of cancer in other portions of the body, sufficient tissue being removed to insure the destruction of all the infected glands.

DR. R. H. M. DAWBARN, New York, recommended complete extirpation of the growth, even removing a portion of the deep jugular vein if involved, and, in order to avoid tying vessels as much as possible, suggested the cording, first, of the lower extremities for ten minutes and then the upper extremities. For the purpose of keeping infection from the lungs, the foot of the bed should be raised and the patient not allowed to sit up until he can do so and drink a glass of water without coughing. If the patient becomes exceedingly weak during the operation, it may be necessary to discontinue it temporarily for a few days or a week, to be finished as soon as the physical condition of the patient will permit.

## A New Intestinal Bobbin.

DR. JOHN G. CLARKE, Philadelphia, reported his experiments with this device on dogs and illustrated its practical application on an imitation intestine. He called attention to the ease with which the parts could be separated after the suture was made, and claimed as one of the most important points in favor of the bobbin the shortening of the time required for the operation.

## DISCUSSION.

DR. WILLIAM L. RODMAN, Philadelphia, said that whenever possible mechanical devices should be done away with, but felt that the bobbin presented was superior to the Murphy button, as it was less likely to cause intestinal obstruction. He believed that it would be of value in end-to-end anastomosis.

DR. R. H. M. DAWBARN, New York, also considered the device superior to the Murphy button and expressed his intention of trying it in posterior gastroenterostomies, which he felt to be about the only cases in which the use of the mechanical devices is justifiable.

DR. REED BURNS, Scranton, prefers the suture, except in cases of end-to-end anastomosis, in which he has found the Murphy button quite satisfactory.

DR. J. C. O'DAY, Oil City, felt placing the ends of the intestine in perfect apposition accomplished the desired result, no matter what means might be used to attain that end. While not favoring the free use of mechanical devices, he believed there were cases in which nothing but the Murphy button would give satisfactory results.

DR. EDWARD MARTIN, Philadelphia, attributed the preferences for the different mechanical devices in large measure to the experience of the individual operators, but believed that sutures would continue to be the most generally used.

## Wandering Gallstones.

DR. WILLIAM L. ESTES, South Bethlehem, stated that cases of indubitable perforation of the gall bladder are comparatively rare. If the ulceration is slow, and the patient survives the first septicemic condition, the stones will burrow in the direction of the least resistance and may be found in almost any part of the posterior portion of the abdomen. Prominent symptoms are severe pain, tumor, disturbance of gastric and intestinal function, jaundice, present only in the early stages or absent entirely, with general symptoms of septicemia.

## Surgery of the Gall Bladder and Ducts.

DR. J. MONTGOMERY BALDY, Philadelphia, stated that in many instances too radical treatment has been instituted. He reported, as illustrative of this point, a case in which the gall bladder and part of the cystic duct were removed, after which



the patient's condition cleared up and remained so for about a year, when she again returned to the hospital with the same symptoms as before. Another operation was done and intestinal adhesions broken up. Five months later she again returned suffering from jaundice and the other symptoms. After rest in bed for a couple of weeks, without operation, the symptoms disappeared. He believes that the gall bladder is too frequently removed on slight symptoms.

DR. WALTER S. STEWART, Wilkesbarre, urged the removal of gallstones from the bladder and the establishment of drainage. He reported a case in which, while operating for ventral hernia, he incidentally examined the gall bladder and common duct and found stones in both. In another case, diagnosed as appendicitis, the pus cavity was merely drained, and afterward the patient suffered from jaundice a number of times, and it was decided that it was due to gallstones.

DR. CHAS. P. NOBLE, Philadelphia, reported two cases of wandering gallstones, one of which gave a history of gallstone colic, rendering the diagnosis easy. In the other case, on operation, the stone was found between the stomach and gall bladder.

#### Decompressive Operation in Inoperable Brain Tumors.

DR. HARVEY W. CUSHING, Baltimore, Md., referred to the various methods employed for accomplishing this result and stated that the bone should not be removed entirely, as, if it was, in a short time there would be a protrusion through the opening which frequently resulted in paralysis of a more or less extensive type. The chief end to be attained is to relieve the pressure and still leave some sort of a covering to keep the brain within the cranium. The most favorable position for the operation is the intramuscular temporal region.

DR. R. M. DAWBARN, New York, believes that it is best not to remove the bone entirely, but to prevent the edges growing together by placing a piece of non-irritating tissue between them. Where he finds it necessary to remove the bone, he covers the opening with a specially prepared celluloid, which will not be absorbed, is a non-irritant and forms a protection against trauma.

DR. SAMUEL KAY, Scranton, presented a case of supposed inoperable tumor of the brain occurring in a child of 7 years of age. There was extreme exophthalmos, polyuria and other gross pathologic changes, all of which had appeared within three years. Some months ago the quantity of urine passed in 24 hours was 27 quarts. At present it is about 23 quarts, with a specific gravity of 1000 to 1001. There is no specific history, and the child was perfectly well until 4 years of age. Now there can be felt an opening on each side of the skull, on the right about 6 cm. by 9 cm. and on the left about 5 cm. by 7 cm.

DR. CUSHING stated that it would be impossible to diagnose the condition of the case exhibited without having more of the facts and studying it more closely. Although he felt it quite probable that it was a tumor of the auditory centers with resultant nutritional changes and pronounced exophthalmos. He particularly urged the value of decompression as a palliative measure, but did not favor the insertion of celluloid or any other foreign substance.

#### Direct Fixation of Fractures.

DR. JOHN B. ROBERTS, Philadelphia, while believing that in ordinary instances outward appliances were sufficient, referred particularly to the extraordinary cases and discussed in detail the various methods employed for this purpose, including wires, catgut, bone ferrules, metallic plates, etc. He stated that for transcutaneous fixation he had at first used ordinary wire nails, but afterward devised a surgical nail with a sharp point. For the open fractures or closed fractures which have been explored better results will ensue from the use of staples or plates.

DR. GEORGE W. GUTHRIE, Wilkesbarre, stated that his experience with direct fixation had been chiefly in cases of delayed union, and that he preferred an end-to-end fixation and the insertion of a silver wire which could be allowed to remain.

DR. CHAS. E. THOMPSON, Scranton, reported several cases of direct fixation and referred particularly to one in which a fracture of the femur was united by means of a wire nail and the man became able to walk around. It was supposed that

union had taken place, but at his death, eighteen months later from another cause, autopsy revealed the fracture ununited.

DR. DEFOREST WILLARD, Philadelphia, believes that direct fixation should be employed in all cases where it is necessary in order to bring the fragments of the bone into direct apposition.

DR. JOHN S. NILES, Carbondale, referred to the fact that in the mining regions many of the cases are not seen until several hours after the injury, when they were in a very unsanitary condition. The surroundings are equally unsanitary, and in only rare instances can operation be performed under aseptic conditions.

DR. R. H. M. DAWBARN, New York, stated that in the cases referred to by the last speaker he would wait for twenty-four to forty-eight hours before effecting a union, in the meantime disinfecting the wound by means of bichlorid of mercury, etc.

DR. ROBERTS suggested that direct fixation immediately following an injury might in some instances prevent bony union by causing bone necrosis.

#### How May the Scientific Meetings of the County Societies be Made More Profitable?

DR. THEODORE DILLER, Pittsburg, urged that the proceedings be such that they incite every member to active interest; the meetings should be held at least once a month; there should be a special committee on scientific program; three or four papers, of 10 to 20 minutes each, are best for each meeting, and the officers should always be ready with substitutes, so that there may be no failure of a program. The subjects should be varied, the medical topics being discussed more frequently than the surgical. Symposia are of value occasionally, as are also presentations of cases and specimens. He urged more frequent meetings, stating that there are only two county societies that hold bi-weekly meetings and only twenty hold monthly meetings.

DR. FRANKLIN F. ARNDT, Scranton, stated that the membership of the Lackawanna County Medical Society had increased during the last two years from 74 to 130, and that they are now making an effort to conduct their meetings along the line of the suggestions made by Dr. McCormack. Their scientific papers are provided for by a committee of 24 members, two of whom are responsible for the papers for each meeting.

DR. CHAS. A. E. CODMAN, Philadelphia, referred to the inauguration of the branch system in that city, and stated that, as each of the five branches held one meeting a month and the central society two meetings a month, it amounted to practically seven meetings a month for that society.

#### The Question of Lowered Gastric Secretion.

DR. CHAS. G. STOCKTON, Buffalo, stated that he had been prompted to bring this matter before the society by the increased number of gastroenterostomies and the belief of some that the stomach as a digestive organ could be dispensed with, the food being digested in the intestinal canal, in which, however, he did not agree. He stated that there is an important relation existing between the gastric secretion and the motor functions of the stomach, and also between the gastric secretion and the secretions of the pancreas, liver and intestines. Lowered gastric secretion, he said, is the expression of the following pathologic processes: 1. Acute and chronic inflammatory states of the gastric mucosa. 2. Atrophy of the gastric mucosa. 3. General or systemic functional depression. 4. Gastric neurosis. 5. Congenital peculiarity. He discussed in detail the effect of this condition in malignant disease, anemia, etc. Referring to treatment, he mentioned careful regulation of the diet and regular feeding. He stated that it is better to perform gastroenterostomy than to subject the patient to continued food stagnation, but believed gastric secretion would more nearly return to normal after pyloroplasty.

#### Surgical Treatment of Cardiospasm.

DR. EDWARD MARTIN, Philadelphia, discussed the various causes of the condition and stated that it was more common than was formerly believed. Among the common symptoms is stoppage of food just below the ensiform cartilage. Great care must be observed to distinguish it from obstruction or compression stenosis, the history being of great importance in diagnosis. The palliative treatment consists of keeping up



nourishment by means of a stomach tube. The operative treatment consists in divulsion of the sphincter. A case was reported in which palliative treatment had been carried on for some months without any effect, when an operation was done, and the patient made a good recovery.

#### Gastroenterostomy; Indications and Technic.

DR. WILLIAM L. RODMAN, Philadelphia, defined the operation as being the means of opening the connection between the stomach and some part of the intestines so as to bring about emptying of the stomach, speaking particularly on the subject of gastrojejunostomy, which he stated was practically the only operation performed at the present time. He stated that the anterior method, while easier to perform than the posterior, had certain objectionable features, prominent among which was the length of the loop and the consequent liability of the occurrence of the vicious circle.

#### DISCUSSION.

DR. JAMES TYSON, Philadelphia, stated that his experience with this operation had been limited to two cases. The first was a woman, aged 50, who had been suffering for three days prior to the operation from a very severe hemorrhage supposed to be due to gastric ulcer. After three years she had another series of gastric hemorrhages of the most profuse type. A gastroenterostomy was done. Forty-eight hours after the operation she became delirious and died within twenty-four hours. The second case also showed symptoms of gastric ulcer, for which gastroenterostomy was performed, which was followed by the vicious circle. A second operation was done, which was followed by recovery. These two cases, he felt, illustrated the justification of operative interference in cases of gastric ulcer.

DR. JOHN B. ROBERTS, Philadelphia, felt that there was no doubt that the earlier these cases came to the surgeon the more favorable would be the prognosis. By educating the general practitioner to more accurate and earlier diagnosis the mortality will be decreased.

The following papers were also read: "Essentials of Successful Radium Therapy," by Chas. L. Leonard, Philadelphia; "Adjustment of Radiation for Various Physiological Effects," by Russell H. Boggs, Pittsburg; "Three Cases of Meningocele that Recovered," by G. W. Guthrie, Willkesbarre; "Treatment of Empyema, with Special Reference to Irrigation of the Pleural Cavities," by P. Y. Elsenburg, Norristown; "Neglected Incomplete Rupture of Perineum and Its Cure," by J. C. DaCosta, Philadelphia; "Appendicitis," by Chas. H. Ott, Sayre; "Benign Stenosis of Pylorus and Duodenum Resulting from Spasm and Abdominal Adhesions," by Albert Bernheim, Philadelphia; "Symptoms and Diagnosis of Cancer of Stomach," by J. J. Gilbride, Philadelphia.

#### NORTH BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Regular Meeting, held Sept. 19, 1905.*

The President, DR. A. BERN HIRSH, in the Chair.

#### Important Changes in the Pharmacopeia.

DR. E. Q. THORNTON detailed changes in names, strength, dose, etc.

#### The Medical Chemistry of the Pharmacopeia.

DR. HENRY LEFFMANN discussed the use of the Pharmacopeia to the physician, to the analytical chemist and to the druggist, and felt that one effect of giving the dose of the various remedies would be to encourage the putting up of medicines by druggists without a physician's prescription. One point he viewed with disfavor was the adoption of an atomic body based on the hydrogen one system, instead of the oxygen 16 system, which he viewed as particularly unfortunate because of the fact that the oxygen 16 system was the one on which all the statistics of the Bureau of Agriculture were furnished. Another point which he viewed with disfavor was the introduction of a large number of manufactured substances, or substances made by the combination of other drugs. He objected to the use of the genitive case for the names of chemical solutions, such as carbonate of soda, and traced the origin of these terms from the French language in the latter part of the eighteenth century. He referred to the unnecessary complications caused by the distinction between ordinary water and distilled water and the test for nitrites in distilled water, which

he said was of such a delicate nature that it was not practicable, particularly with the general practitioner. He particularly deprecated the introduction of the liquor antisepticus and headache powders, but commended the changes from hydrochlorate to hydrochlorid, and the changes from naphthol and naphthalin to betanaphthol and naphthalene.

#### DISCUSSION.

DR. HENRY S. WIEDER referred to the difficulty of the physician becoming associated with the changes in strength, etc., by the new Pharmacopeia, and asked what method was adopted for informing them in this direction.

DR. FRANK C. HAMMOND referred to a case in which he had ordered tincture of lobelia, writing his prescription in accordance with the new edition, which produced severe and persistent vomiting, and on inquiry, he learned that the druggist had filled it according to the old Pharmacopeia.

DR. W. HERSHEY THOMAS asked which method would be pursued by the druggist in filling prescriptions given before the new Pharmacopeia was adopted.

DR. ELLIS E. GIVEN stated that he had been informed by a druggist that he had filled all prescriptions dated before September 1, according to the old Pharmacopeia, including renewals put up after that date, and that all prescriptions subsequent to that would be put up under the new Pharmacopeia.

DR. A. BERN HIRSH stated that he had been informed by a druggist in his vicinity that he intended to use the system outlined in the 1890 Pharmacopeia for some time to come. He felt that the change had been sprung on the profession too suddenly and that mention should have been made of it, and notice given through the prominent medical journals in order to permit the physician to familiarize himself therewith.

DR. HENRY LEFFMANN, in speaking of the criminal liability of druggists not compounding prescriptions according to the U. S. Pharmacopeia, referred to a decision of the Supreme Court of Ohio in a prosecution brought after the 1890 revision of the Pharmacopeia had come out in 1893. It was decided that an act of the legislature could have no reference to an edition of the Pharmacopeia published after the act was passed, and therefore the conviction could not be sustained.

DR. E. Q. THORNTON stated that he felt the reason that the Pharmacopeia was so little representative of the medical profession was because so few of the physicians appointed attended the convention for revision. In regard to the changes he stated that it must be remembered that it becomes necessary to throw out obsolete drugs and the only way he knew for physicians to become familiar with the Pharmacopeia was to have it in their libraries. He stated that Bulletin No. 23, recently issued by the Treasury Department, Marine Hospital Service of the United States, entitled "Changes in the Pharmacopeia," is of much value. The mere fact that a drug is mentioned in the Pharmacopeia, he said, does not necessarily signify, either that it is of value, or that it is endorsed by those engaged in the preparation of the work, but that there is a demand for it.

DR. A. BERN HIRSH suggested the advisability of separating the drugs from the combinations and inserting them under separate headings. He also felt that in future revisions it would be best to have at least one-half of the committee consist of active practitioners.

### Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Gastric Ulcer.

*Merck's Archives* quotes from Friedenwald's article on the medical treatment of this disease. The patient should be put at rest in bed for from two to five weeks, depending on the severity of the symptoms. The patient should also be kept strictly on a liquid diet mainly of milk. The rest in bed and



rigid diet assist in the healing of the ulcer, guard against perforation and hemorrhage and, because of the lessened amount of nourishment required, the diseased stomach is not too severely taxed. The author then describes the diet and other treatment in detail: First, milk with lime water, gradually reaching from one to two quarts in twenty-four hours; then strained barley or oatmeal broth clear, or with broken-up egg; then a soft diet, such as rice cooked in milk, milk toast, or soft boiled eggs. At the beginning of the fourth week solid food may be given in the form of raw scraped beef, stewed chicken, boiled sweetbreads, baked potatoes, etc. Hot poultices are applied to the abdomen for several weeks during the early part of the treatment and from 200 to 300 c.c. of hot Carlsbad water are taken morning and evening. In the severe types of ulcer which are accompanied by excessive nausea, vomiting especially of blood, and pain, no nourishment should be given by mouth for from five to ten days. During this time the patient is fed by nutrient enemata. Bits of crushed ice may be allowed to aid in allaying the thirst. According to the recent investigation of Boas in cases of ulcer, small, invisible hemorrhages frequently occur, which can be detected only by special chemical examinations (the guaiac or aloin tests) of the fecal discharge. By means of these examinations for "occult hemorrhages" one is enabled to establish the individual term of treatment, dismissing the patient only when repeated tests fail to disclose further occult hemorrhages. An exclusive milk diet is objectionable because it does not successfully combat the anemia. For this reason Fütterer recommends the juice expressed from five pounds of beef to be taken daily to combat this condition. Lenhartz, too, has recently cautioned against the strict abstinence diet in the treatment of ulcer, even in those instances in which there is hemorrhage. He bases his conclusions on the fact that since ulcer of the stomach is frequently accompanied by superacidity and also by a generally enfeebled condition, it is best to give proteid food early to overcome the acidity as well as to build up the system. He gives eggs and milk ice-cold and in teaspoonful doses, raw scraped beef, zwieback, raw ham, butter, sugar, milk cooked with rice. In the mild cases of ulcer of the stomach the author recommends an ambulatory form of treatment. The patient is permitted to take only liquid or semisolid food and is then given one of the three following methods of treatment:

1. Nitrate of silver is prescribed in a solution of 1/6 to 1/3 gr. (.01-.02) doses for a period of three weeks.

2. Bismuth subnitrate may be administered in large doses (one teaspoonful) three times a day. Fleiner recommends giving it suspended in water, after previous lavage of the stomach. After the stomach has been thoroughly cleansed, from 10 to 20 gm. (3iiss to 3v) of bismuth subnitrate, suspended in from 100 to 200 c.c. (3iiss to 3vii) of water, are passed into the stomach through the tube, after which the patient is required to lie on his right side for half an hour. In those instances in which there is any contraindication to the use of the tube Fleiner advises the administration of 10 gm. (3iiv¼) of bismuth subnitrate suspended in a glass of water in the morning before breakfast.

3. The oil cure has been recently recommended by Cohnheim in the treatment of ulcer of the stomach. Olive oil is taken three times daily from half to one hour before meals, in wine-glassful doses in the morning, and in dessertspoonful doses at noon and in the evening. In very mild cases an emulsion of sweet almonds may be substituted for the oil. The oil fulfills several indications. It forms a coating over the stomach and thus assists in overcoming pylorospasm, and by relieving friction it overcomes pain; it checks the excessive secretion of acid, and improves the general nutrition. The treatment of a number of special symptoms is referred to.

#### SPECIAL SYMPTOMS.

**Hemorrhage.**—In all cases of hemorrhage, absolute rest in bed must be insisted on; an icebag should be placed on the epigastrium and a hypodermic injection of morphin administered. Hypodermic injections of ergot or gelatin—100 gm. (3xxvi) of a 2 per cent. watery solution may be used. Recently Einhorn has recommended the hypodermic injection of

a syringe of adrenalin chlorid, 1 to 2,000 twice daily, or the internal administration of 15 drops of the same solution three times daily. In cases of great weakness or actual collapse from hemorrhage, saline infusions must be resorted to.

**Acidity.**—For the relief of the acidity, which is a usual accompaniment of ulcer of the stomach, it is frequently necessary to administer alkalies alone or combined with belladonna or codein.

**Constipation.**—This symptom may be relieved by the use of enemata or by the internal administration of oil or Carlsbad water.

When is an ulcer healed? may be answered in the affirmative when there is an entire absence of pain after taking solid food; when there is no longer pain on pressure in the epigastric region, and, finally, when repeated tests fail to reveal further "occult hemorrhages" in the fecal discharge.

#### INDICATION FOR SURGICAL TREATMENT.

1. Perigastric adhesions accompanied by tumor formation.
2. Hemorrhages which are very profuse, occurring at short intervals, or even small frequent hemorrhages which are not relieved by medical means.
3. Persistent nausea and vomiting, which is not relieved by the rest treatment or by a strict abstinence cure.
4. Ulcer of the stomach, recurring at shorter or longer intervals, notwithstanding a proper rest or abstinence cure.

#### Dyspepsia.

Hutchison, in the *Practitioner*, states that in acute catarrh of the stomach the principal thing is to give the inflamed organ rest. No food should be given when vomiting exists. Thirst is relieved by sips of hot water or by pieces of ice held in the mouth. Stimulation may be necessary if depression is present. Champagne is one of the best forms in which to administer it. Rectal feeding is resorted to only in cases of persistent vomiting. A return to the ordinary diet is made after the symptoms subside. In the chronic form of gastritis it is necessary to avoid irritation of the mucous membrane of the stomach either mechanically or chemically. All crude and coarse articles, therefore, must be forbidden, such as the stones or skins of fruits, whole meal bread or oatmeal and tough meats. Mustard, spices, pepper and condiments of all sorts fall under the head of chemical irritants and are, therefore, injurious, and so is alcohol, especially in its most concentrated forms. Sugar, especially cane sugar, is also harmful, as it is a potent excitant of mucous secretion. Most fatty substances, especially cooked fats, are injurious, but butter and bacon fat can usually be eaten in moderation. Care should be taken that the food is finely divided, eaten slowly, and but little consumed at a time. The following schedule would represent a diet suitable for an average case:

**Breakfast.**—Lightly cooked eggs, white fish (boiled), but not mackerel or herring, a little crisp bacon (not too fat), fowl or game, hard, dry toast, with a little butter (no marmalade), a small cup of tea, with milk but no sugar.

**Luncheon.**—Lean mutton, roast beef or white fish, etc., as at breakfast; a spoonful of mashed potato, with a little spinach or cauliflower; dry toast or a rusk or two; custard pudding or sweetened jelly, and a glass of alkaline mineral water.

**Dinner.**—A very little clear soup free from fat, white fish (boiled), without sauce; meat as at luncheon, or a little sweetbread; vegetables, as at luncheon; custard, jelly, or stewed fruit (free from skins and stones), or a little plain milk pudding; dry toast; no savory or dessert; a glass of mineral water; no coffee.

#### Pepsin.

Chase, in the *Boston Medical and Surgical Journal*, discusses the therapeutic value and the indications for the use of pepsin in diseases of the stomach. The important question is, In what disease of the stomach is pepsin indicated? In answer to this, the author states: "In all gastric affections, regardless of their cause, in which free HCl is present, pepsin is not indicated, because after proper acidulation of the gastric juice it becomes active, showing that pepsin is still present. These two classes of gastric disorders comprise over 90 per cent. of all stomach affections, and in their treatment pep-



sin is never indicated. In all cases of atrophic gastritis and achylia gastrica and in some cases of cancer of the stomach, both HCl and pepsin are lacking. As a result there is a true indigestion of certain foods in the stomach." Pepsin is active only in the presence of a certain amount of HCl. Chemical examination of the gastric juice is necessary in order to determine accurately any deficit of HCl. The theory has been accepted that HCl and pepsin given by mouth would take the place of those agents when they are lacking in gastric juice. In practice it has been found they do not. Of the use of pepsin the author quotes the following opinions:

*Einhorn*: "Pepsin used to be and is yet frequently given in combination with HCl. Most writers, however, concur in the absolute inefficacy of this drug, and for two reasons: 1. In the most instances, even of the diminished secretion, there is yet an abundant quantity of pepsin present. 2. Most pepsins in the market do not, by any means, show as strong digestive properties as the true pepsin of the stomach. Of late years I have entirely abandoned the use of pepsin."

*Ewald*: "Pepsin was for a long time regularly prescribed with HCl with the pernicious idea that if it did not help it certainly did no harm. Its use should be restricted to those cases in which an absence can be proven."

*Riegel*: "In general, the administration of pepsin is rarely indicated. The digestion of albumin is rarely improved by the administration of the hydrochloric acid, even if large doses are given together with pepsin. This is due to the fact that the quantity of HCl that we can administer is very much smaller than the quantity needed to make up the deficit of HCl in the gastric juice."

Chase believes that the best therapy is obtained by a stimulation of the function of the stomach rather than by a useless or even successful attempt at their substitution.

## Medicolegal

**Restriction on Sale of Cocain.**—Chapter 203 of the Laws of Nebraska of 1905 provides that no apothecary, druggist or other person shall be permitted to sell or give away any quantity of cocain, except on the prescription of a physician, said prescription not to be refilled, provided that nothing in this act shall prohibit sale from manufacturers or wholesale dealers to retail druggists, physicians or dentists, nor the use and prescription of this drug by dentists in the practice of their profession. Every person offending against the provisions of this act shall be fined not less than \$20 nor more than \$100.

**Physicians and Internal Revenue Special Tax.**—"Can a physician, not having a revenue license, and furnishing his own medicines, prescribe alcohol or whisky for his patients, without violating the internal-revenue laws?" The answer of the United States Commissioner of Internal Revenue to this question is, as per ruling of Oct. 13, 1905: He can not prescribe and furnish to his patients alcohol or whisky, or any other alcoholic liquor not compounded into a medicine by admixture with drugs or medicinal substances, without involving himself in special-tax liability under the internal-revenue laws, even though he thus sells such liquor for use as medicine only.

**Restrictions on Marriage.**—Chapter 126 of the Laws of Indiana of 1905 provides that no license to marry shall be issued where either of the contracting parties is an imbecile, epileptic, of unsound mind or under guardianship as a person of unsound mind, nor to any male person who is or has been within five years an inmate of any county asylum or home for indigent persons, unless it satisfactorily appears that the cause of such condition has been removed and that such male applicant is able to support a family and likely to so continue, nor shall any license issue when either of the contracting parties is afflicted with a transmissible disease, or at the time of making application is under the influence of an intoxicating liquor or narcotic drug. If persons resident of the state, with intent to evade these provisions, go into another state and there have their marriage solemnized with the intent of afterward returning and residing in Indiana, and do so return and reside in Indiana, such marriage shall be void and

such parties shall be subject to all the penalties provided for in this act.

**State Laboratory of Hygiene—Adulteration Formulas.**—Chapter 38 of the Laws of Indiana of 1905 provides for the establishment of a state laboratory of hygiene as a department of the state board of health. It shall be at Indianapolis and shall be used for making analyses of foods and drugs for the purpose of enforcing the pure-food and drug laws, for making sanitary analyses, pathologic examinations and studies in hygiene and preventive medicine, to aid in the enforcement of the health laws. All work done in it shall be done exclusively for the public benefit, and no fees shall be charged. For the conduct of the state laboratory of hygiene the state board of health shall appoint a superintendent other than the secretary of such board of health, and such superintendent shall have charge of and superintend and manage such laboratory. He shall be learned and skilled in bacteriology and pathology, and shall receive a salary of not to exceed \$2,000 per annum. The state board of health shall also employ a skilled chemist, whose salary shall not exceed \$1,500, and both appointees shall be temperate, healthy, well recommended and of good moral character. Another provision of this act is that any person who shall sell, offer for sale or give away, barter or trade any receipt or formula for the adulteration or imitation of food, or teach or offer to teach any method or means of adulterating any article of food or means of producing or manufacturing any imitation of any article of food within the state of Indiana shall be guilty of a misdemeanor, and on conviction thereof shall be fined any sum not exceeding \$1,000, to which may be added imprisonment in the county jail not exceeding six months.

**Registration of Vital Statistics.**—Chapter 98 of the Laws of Nebraska of 1905 provides for a state registration of vital statistics. It provides that the undertaker or person in charge of the funeral of any person dying in the state shall cause a certificate of death to be filled out with all the particulars contained in the standard blank adopted by the United States Census Bureau, including a statement of the cause of death, made by a person holding a valid license as provided in Section 7, Article 1, Chapter 55, of the compiled statutes of the state for 1903, who was last in attendance on the deceased; or, in his absence or default, by the local health officer or coroner. Said certificate shall show clearly the course of disease or sequence of causes ending in death. A certificate of the standard form adopted by the United States Census Bureau shall be made out by the physician or other person attending the birth of every child born in the state, or, in default of such person, by the parent, etc., and filed with the local or subregistrar within three days from and after such birth. In case a child is born dead, both birth and death shall be reported, and the month of uterogestation shall be stated as nearly as possible by the attendant. The state registrar shall supply all necessary blanks, forms and instructions to the local registrars, and through them to physicians, etc. Any physician or other person violating the provisions of this act, or failing properly to register a birth or death as herein required, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than \$10 nor more than \$100, or be imprisoned for not more than 60 days, or be subject to both fine and imprisonment.

**Dipsomaniacs and Persons Addicted to Narcotics.**—Chapter 82 of the Laws of Nebraska of 1905 provides that dipsomaniacs, inebriates and persons addicted to the excessive use of morphin, cocain or other narcotic drugs shall be admitted, detained, cared for and treated in the Nebraska Hospital for the Insane. If, on investigation, the commissioners of insanity shall find the information filed to be true, they shall impose a sentence of detention in the hospital until the patient is cured, not exceeding three years. The patients shall be placed in a separate ward at the hospital, and shall be given such method of treatment as is deemed best to eliminate the effects of alcohol or narcotic drugs and to build up the system physically and mentally and which will tend to strengthen the moral character of the patient and enable him or her to resist the temptation to use alcoholic or narcotic drugs. Any patient whom the superintendent of the asylum believes to be cured may be



paroled, conditioned on the patient's signing a written pledge agreeing to refrain from the use of all intoxicating liquors as a beverage and from the use of morphin, cocain and narcotic drugs during the term of his commitment and shall avoid frequenting places and the association with people tending to lead him to the use of the same. And such paroled patient must make written reports to the superintendent on the first day of each month, on blanks to be furnished for the purpose, to the effect that he has not during the past month, in any respect, violated any of the terms of his parole, which report must be investigated and approved by the clerk of the commissioners of insanity of the county in which the patient resides, who may demand from such patient satisfactory evidence as to the truth of his report. If, at any time, a patient on parole shall fail to make said report, or shall fail, in any respect, to fulfill all of the conditions on which said parole was granted, he may, without any further proceeding whatever, and on the written order of the superintendent of said hospital, be taken and returned to said hospital, there to be detained and treated as provided herein.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia, Pa.

October 21.

- 1 \*General Considerations on the Pathology of Smallpox. W. T. Councilman, Boston.
- 2 Amputation at Hip Joint; Report of Four Cases by Wyeth's Method. J. S. Horsley, Richmond, Va.
- 3 \*Scheme for the Sanitary Control of the Municipal Milk Supply. G. W. Goler, Rochester, N. Y.
- 4 \*Review of a Year's Work in Appendicitis. A. H. Traver, Albany, N. Y.
- 5 \*Disorders of Sleep. J. S. Christison, Chicago.
- 6 \*Limitation of the Principle of Privileged Communications. A. L. Benedict, Buffalo.

1.—See abstract in THE JOURNAL, Oct. 14, 1905, page 1190.

3. **Scheme for the Sanitary Control of the Municipal Milk Supply.**—Goler advises the establishment of a bureau of milk inspection, of which the chief sanitary officer is the head, and through whom licenses are issued for the vending of milk in the city. Boards of physicians and scientists appointed by medical societies should compile rules for the production and distribution of milk of higher nutritive value and lower bacterial content than ordinarily good city milk. Directly, or through the inspectors of the bureau of milk inspection, or through inspectors appointed by the commission itself, they should insure: (1) Character of stable and feed of cattle, health of milkers and care of utensils. (2) A negative tuberculin test. (3) A bacterial standard, not greater than 10,000 bacteria per cubic centimeter. (4) A nutritive value of 12.5 per cent. of solids, of which 4 per cent. must be fats. The necessity for the organization of the milk work for a municipality under one executive head having the license power can not be too strongly emphasized, for by this means only may the producer and the vendor be under sanitary control. When such laws are enacted for any municipality as will make it an offense punishable by fine or imprisonment to bring milk into the city that has not had the seal of sanitary approval set on it, and everything with which it comes in contact, our children and ourselves will no more be exposed to the dangers that arise from dirty, disease-bearing milk.

4. **Year's Work in Appendicitis.**—Traver reviews the cases of appendicitis under his care during the past year, and from a study of these concludes: (1) Chronic cases demand operation because an appendix once diseased does not return to its normal condition. (2) In acute cases, an early operation is demanded, as no physician or surgeon can tell how a case will terminate, and after pus is formed the golden time for an operation is already passed. (3) Cases complicated with general peritonitis give a high mortality under any treatment.

5. **Insomnia.**—Christison discusses the jerkings, shocks and hallucinations apt to occur in the initial stage of sleep; hallucinations of vision and hearing, the frequent prodrome of insanity; numbness, nightmare, convulsions, somnambulism and

choreic jerkings which are apt to occur during sleep or on waking.

6. **Limitation of the Principle of Privileged Communications.**—According to Benedict, the adoption, as a rule of ethics, of the principle that all professional communications should be absolutely privileged goes further than the underlying principle of protection of weak and erring humanity, and may extend so far as to involve the physician as *particeps criminis*, in a social if not a legal sense. The underlying consideration on which professional secrecy is based is not that the physician belongs, body and soul, to every sick or injured man who appeals to him for assistance, but that the physician should be a negative quantity, so far as the social or legal punishment of sin or discredit is concerned. When a patient, after being warned and expostulated with, deliberately decides to transmit disease, to defraud a victim, to endanger lives, professional secrecy should no more be required of the physician than is the concealment of a case of quarantinable disease for the sake of the selfish interests of the patient.

#### Medical Record, New York.

October 21.

- 7 \*A Plea for Local Anesthesia in the Radical Cure of Inguinal Hernia. J. A. Bodine, New York.
- 8 \*Etiology of Tabes; Its Social, Legal and Therapeutic Consequences. F. Von Raitz, New York.
- 9 \*Eye Defects Associated with the Development of Puberty. K. K. Wheelock, Ft. Wayne, Ind.
- 10 \*Diagnosis in Carcinoma of the Stomach. E. F. McIntosh, New Haven, Conn.
- 11 The Whitman Method of Treatment of Fracture of Neck of Femur. F. E. Aschcroft, Deadwood, S. D.

7. **Local Anesthesia in Radical Cure of Inguinal Hernia.**—Bodine has operated on 284 patients, with 300 hernias, under local anesthesia, without a death or suppurating wound. By means of Schleich's infiltration method the amount of cocain is reduced to a minimum and limited to a small area, producing acute local anemia, effectually retaining the fluid in one spot. Cocainization of a sensory nerve trunk, abolishing pain sensation in the region supplied by it, renders it possible to operate for hernia by its use. The operative area is superficial, and the region restricted by the anatomy of the parts. In strangulated hernia, local anesthesia does not increase the shock, while general anesthesia is often too great a load to be borne. The local anesthetic permits of the application of hot towels to a possibly gangrenous intestine for some time, in order to determine whether it will react. The operation does not give rise to the danger of injury to the nerve fibers. The danger to a line of deep sutures from vomiting is done away with. There is no danger of cocain poisoning with the small dose necessary—that is, one-half grain injected intermittently throughout an hour. Morphin given after the operation would act as an antidote were poisoning possible. The operation is more thorough because of the absence of haste and the lack of need to save the patient pain. There are no evidences of pain during the operation. The cocain solution should be made fresh. The solution is 0.2 per cent. for infiltration of skin and nerve trunks, and for subdermic infiltration half this strength is used. The line of skin incision should be infiltrated throughout its extent sufficiently tightly to maintain the local anesthesia for an hour. The aponeurosis of the external oblique requires no infiltration. It should be incised over the situation of the underlying ring; the ilioinguinal nerve will be exposed by retracting the flaps, and its trunk is then cocainized by a few drops of the solution. The incision may be carried painlessly into the external ring, and the flaps reflected to expose Poupart's ligament and the conjoined tendon. The iliohypogastric, if found, may be cocainized. The margins of the internal ring are infiltrated. A line of infiltration along the long axis of hernial protrusion permits a clear cut through the hernial sac and coverings. The neck of the sac is infiltrated, dissected away from the underlying cord, ligated, and amputated. The genitoocrural nerve is cocainized. The sac is dissected away from the cord, and the operation is completed. Operation on the female is easier than on the male, because the round ligament is less sensitive than the cord.

8. **Etiology of Tabes.**—Von Raitz attacks the view that tabes is caused by syphilis, and points out the injustice from social, legal and therapeutic standpoints that is caused to



patients by this assumption. He says that those who accept syphilis as the cause of tabes have no difficulty in finding syphilitic evidence in everybody who has tabes. If a patient admits having had syphilis, no further proof is necessary; if syphilis is denied, every disturbance at the genitals, no matter whether it be a specific or a simple urethritis, a vulvar abscess or abrasion, a chancroid or a simple sore, is sufficient evidence of syphilis. If disturbances at the genitals are denied, then any eruption on any part of the body furnishes the proof. And if everything is denied, then the "benefit of the doubt" is used to establish syphilis, and so the hundred per cent. is accounted for and tabes stands as a postsyphilitic disease. He then contrasts the pathology of syphilis and that of tabes, to show that the lesions of the nervous system in the two conditions have nothing in common, the degenerations of the latter disease being foreign to the former. It is also absurd to believe the syphilitic virus can remain dormant, and, furthermore, if tabes were a postsyphilitic disease antisiphilitic treatment would have a curative effect, but it has been found that the reverse is the case. Von Raitz believes that tabes is the result of various etiologic factors, prominent among which are sexual excess, toxins of various sorts, injury to the cord by falls, twists, etc., and the use of mercury.

**9. Eye Defects Associated with Puberty.**—Wheelock describes seven cases of defective vision occurring in boys and girls shortly before the age of puberty. They are characterized by great loss of vision, marked limitation of the visual field, and an eye ground varying from the normal to frayed blood vessels with a "shot silk" fundus, while the general health of the patient remains good. These phenomena he believes are due to change in the nerves and blood streams incidental to the development of the reproductive organs, as treatment is of little avail and recovery is not complete until menstruation has been established in girls and the seminal function in boys. Points Wheelock particularly emphasizes are: The existence of defective vision for distance and reading, limitation of the field for form and color, the age of the patients from 8 to 10 years, the absence of chlorosis or hysteria, the existence of a leucocytosis, and the recovery of normal sight both for reading and distance with much contracted field. The treatment involves restoration of hemoglobin and nerve force by iron, strychnin and manganese. The author suggests that there may be some connection between this condition and chorea.

**10. Diagnosis of Carcinoma of Stomach.**—McIntosh, in discussing the difficulties attending the early diagnosis of carcinoma of the stomach, in order to show the unreliability of symptoms, cites two cases in which complete recovery under non-surgical treatment followed in spite of the fact that several consultants had expressed the opinion that malignant disease was present. He says that the life of a gastric carcinoma may be divided into three periods: 1, From inception to the appearance of an exudate; 2, from the beginning of the exudate to the breaking down of the neoplasm; 3, from the breaking down of the neoplasm to death. Measures intended to enable the diagnosis to be made during the first period are impracticable, but the earlier in the second stage the nature of the disease is recognized the better are the patient's chances of cure. McIntosh describes the tests for detecting occult blood in the stools, and mentions such newer methods as Salomon's albumin test, Gluzinski's test, and the estimation of fatty acids in the urine. If HCl is absent, lactic acid is present, and there is inability to digest albuminous food, a diagnosis may be made even if no tumor can be felt. The diagnosis should be made from several examinations rather than from a single one, and this is especially true of chemical examinations of the stomach contents. For example, in stenosis of the pylorus due to a cicatrix from a former ulcer there may be the following symptoms: Cachexia, emaciation, ectasia, a decided tumor, and quite likely hematemesis. These are very suggestive of carcinoma, but the examination of the stomach contents reveals a large amount of free hydrochloric acid and no lactic acid. In this class of cases an examination should be made every week to ascertain if there is any change in the constituents of the stomach contents; the whole matter

will hinge on this very point, and if there is no substantial change the diagnosis is pyloric stenosis, but of a benign nature. If there is progressive decrease in the HCl and development of lactic acid, with weakened albumin digestion, it is carcinoma. A reliable diagnosis can never be made from one symptom.

#### St. Louis Medical Review.

October 21.

12 \*The Cradle. J. Zahorsky, St. Louis.

13 \*Retroperitoneal Teratoma. C. M. Nicholson, St. Louis.

12. **The Cradle.**—Zahorsky protests vigorously against the fashion of using no cradle for pacifying children. He considers the cradle a hundred times less objectionable than the modern devices which have been forced in place of it, such as the rubber pacifier, soothing syrups, etc. He urges that the cradle be returned to the nursery, especially in those homes where no nurse or nursery maid attends the baby. He considers the cradle one of the best therapeutic agents for a nervous baby or a sick one. It is easier on the mother and it is far preferable to the pacifier or paregoric. The irritability and peevishness in infants vary to such an extent that ordinary rules in regard to hygiene and management must often be very much modified. Here is where the cradle can be used to advantage. Zahorsky says that the signs of the times are that the cradle will again come into fashion; meanwhile the physician will do well to remember this well tried soothing agent for peevish children when ordinary means fail.

13.—See abstract in THE JOURNAL, Oct. 28, 1905, page 1352.

#### Boston Medical and Surgical Journal.

October 19.

14 Two Cases of Bilateral Birth Paralysis of the Lower-Arm Type. J. J. Thomas, Boston.

15 Consumption in a Massachusetts Town. E. P. Joslin, Boston.

16 Sugar in the Cerebrospinal Fluid of Diabetics. N. B. Foster, New York.

17 \*Diagnosis of Cancer and Ulcer of the Stomach by the Use of Expert Methods of Clinical Procedure. H. F. Hewes, Boston.

17. **Laboratory Diagnosis of Gastric Ulcer.**—Hewes examined 160 cases of stomach disorder by the methods outlined by him in a previous paper. Of this number anatomic or pathologic diagnosis was obtained in 37. In these 37 cases the corresponding records of the clinical diagnosis made previous to operation and of the anatomic diagnosis or pathologic made at operation or postmortem were as follows: In 18 cases clinical and pathologic diagnoses of cancer were made in all. In 12 cases diagnosed clinically as ulcer, the pathologic diagnosis was ulcer in 11 cases and cancer in 1 case. In 1 case a clinical diagnosis was made of gastrectasis, probable cause cancer or ulcer; a pathologic diagnosis was made of adhesions about the pylorus from the gall bladder. In 1 case the cause of the symptoms was unknown; the stomach contents were normal. The pathologic findings were chronic appendicitis with enlarged mesenteric glands; the stomach was normal. In 3 cases a clinical diagnosis of neurosis was made, there seemed no cause for operation. Pathologically no lesion of the stomach was found. One patient with hypacidity was operated on for ventral hernia and explored for possible cancer; the stomach contents were normal except for hypacidity; pathologically the stomach was found intact. That is, in 31 cases of stomach disorder in which the clinical findings pointed to the existence of cancer or ulcer of the stomach and in which such a diagnosis was definitely made from the findings, one of the two lesions was found present in all, and the diagnosis of the type of lesion was correct in all but 1 case; in 3 cases in which no cause for operation was found by clinical findings, no cause was present on operation; in 2 patients in whom the clinical findings failed to show definitely evidences of an organic lesion, but who were operated on for other reasons, no lesions of the stomach were found. Hewes says that the accuracy of the indications gained by these clinical methods of examination is still more marked if we study the testimony of the records in regard to the diagnosis of the location of the diseased conditions. These records show: In 9 cases there was a clinical diagnosis of cancer at the pylorus. The pathologic finding in these 9 cases was cancer at the pylorus in all. In 9 cases a clinical diagnosis of ulcer involving or occluding the pylorus was made; the



pathologic diagnosis in these cases was ulcer at the pylorus in 8 cases, and of cancer at the pylorus in 1 case.

### New York Medical Journal.

October 21.

- 18 The Sanatorium for Tuberculous Patients and Its Medical and Social Mission. S. A. Knopf, New York.
- 19 Hodgkin's Disease with a Milky Non-Fatty Pleural Effusion. D. L. Edsall, Philadelphia.
- 20 \*Expulsion Method of Obtaining Stomach Contents for Diagnostic Purposes. F. B. Turck, Chicago.
- 21 Acromegaly Associated with Symptoms of Myxedema. C. L. Greene, St. Paul.
- 22 \*New and Simple Method of Performing Rectal Valvotomy. L. J. Hirschman, Detroit.
- 23 Epileptogenic Myopathic Kyphoscoliosis, a Rare Condition of Muscular Deformity Due to Epilepsy. W. P. Spratling, Sonyea, N. Y.
- 24 Case of Congenital Varix of the Superficial Epigastric Vein and Its Anastomoses. A. H. Roth, Erie, Pa., and A. Guide, Chelsea, Mich.
- 25 \*A Protective X-Ray Tube. L. M. Liebermann, New York.

**20. Expulsion Method of Obtaining Stomach Contents.**—Turck believes that he has overcome the difficulties ordinarily encountered in attempting to gain the stomach contents, by the adoption of the so-called expulsion method which he has used for many years and has found to be of great practical value. A double stomach tube of special design is introduced, and by means of compressed air introduced through one compartment of the double tube the stomach is inflated and the contents are forced out through the other compartment of the tube, which is the larger, and extends deeper into the stomach. By a careful and judicious manipulation of the tube the entire stomach contents can be obtained. The aspirating bottle, designed by Turck, has the advantage of being a graduated receptacle which is ready for transportation to the laboratory. It consists of a wide-mouthed bottle, holding 300 c.c., graduated, closed with a rubber stopper with two openings, through which bent glass tubes are passed, one tube attached to an aspirating bulb and the other connected with the stomach tube. Turck employs a double tube, one small caliber tube for the inflow attached parallel to a large size tube for the outflow. This arrangement more readily conforms to the shape of the esophageal opening, which is oval, flattened in the antero-posterior diameter. The end of the smaller inlet tube reaches to the upper portion of the stomach just beyond the cardiac orifice, and is perforated with small needle-like openings or a single large opening, while the larger or outlet tube extends to the greater curvature or floor of the stomach, with large end and side openings to allow free flow of the stomach contents. When the tube is inserted into the stomach the small caliber tube is connected with a large hand compressing air bulb and air is pumped into the stomach. The tube is introduced into the patient's stomach in the usual way, requiring less difficulty rapidly to reach the stomach owing to a small wedge of solid rubber where the two tubes are united parallel to each other, which prevents kinking and delays in introducing the tube. This is very essential in nervous patients for obvious reasons. The tube being connected with the air apparatus, the air is allowed to enter the stomach, distending it. The rugæ are stretched out and a smooth surface results, and at the same time the stomach, on inflation, rotates anteriorly and upward, thus bringing the contents in contact with the end of the stomach tube, when, the air being allowed to escape, the stomach contents are carried with it into a convenient receptacle. A practical receptacle for office treatment is a bottle with a rubber stopper perforated by two holes, through which pass glass tubes. One tube is connected with the stomach tube and the other is left open to allow the escape of air from the bottle. The method can be carried out in from ten to thirty seconds. Some of the advantages enumerated by Turck are the following: The folds of the stomach mucosa are prevented from occluding the openings of the outlet tube. The air expels the contents in any desired amount, with great facility and with little distress for the patient. There is little danger of injuring the mucous membrane. It is impossible to over-distend the stomach, which can be emptied thoroughly, and the method does not prevent the use of the expression or the aspiration method in combination. The degree of force with which the air returns furnishes data of the character or tone of the muscles. The amount of air introduced under a given

pressure gives an idea of capacity. By connecting with a manometer, the degree of pressure can be ascertained and the tone of the stomach wall estimated. Diagnosis between stenosis of the pylorus and atony of the stomach wall is facilitated. Patulous cardia and pylorus can be diagnosed. When the stomach is dilated and filled with food and liquid, exciting peristalsis by introducing air and allowing it to escape again, after a brief period of waiting, may cause the stomach to empty itself, showing that retention is due to atony and not to stenosis of the pylorus. The introduction of nebulized oil, and the degree of force with which it escapes, gives valuable data of the character of the muscle walls and at the same time applies mild disinfection and stimulation to the gastric mucosa. This method combines the advantage of promptly securing the stomach contents and of inflating the stomach for outlining the organ by percussion.

**22. New Rectal Valvotomy.**—Hirschman has devised a simple technic which has proved most satisfactory in his hands. The patient is put in the knee-shoulder position, and a large operating size proctoscope is inserted after the sphincter has been prepared for it, either by gradual dilatation or by immediate divulsion following local anesthesia of the part. The ligature carrier devised by Hirschman is threaded through the eye at the curve with a rubber ligature (size 5 to 8, French scale); the ligature passes inside of the curve of the needle and should project about half an inch from the point. The needle, which is nine inches long and has a handle bent at an angle so as not to obstruct the view, is then passed up around and hooked through the highest offending valve until the point is projected and the ligature can be clearly seen. This end is then grasped by means of a long forceps and the ligature is pulled through until it is outside the proctoscope. The needle is then passed back and around the edge of the valve and is brought down also outside the proctoscope, and is then taken off the ligature. The ligature is now in place. Over the ends is slipped a lead fastener or large perforated shot, the ligature being put on the extreme stretch, the shot is grasped and pushed up to the valve tightly by means of long compression forceps and is firmly compressed. This puckers the valve and constricts it in such a way that circulation is shut off and the ligature sloughs through in from two to eight days. After the ligature has cut through, the edges retract so that a large V-shaped opening is left, which gradually retracts still further. The advantages of the method are said to be, the fact that it can be done without any anesthesia whatever; it can be done quickly, the whole operation not requiring more than ten minutes for three valves; it requires few instruments or appliances; the patient is not confined to bed; there is absolutely no hemorrhage; no stitches are required; the rubber ligature, being soft and non-irritating, does not scratch or bruise the bowel *in situ* or during its expulsion, and there is no danger of its doing damage if it should by any possibility be carried up higher into the bowel.

**25. Protective X-Ray Tube.**—The device employed by Liebermann consists of a form of tube in which the anode disc is placed within the tubular neck, or extension, which latter is covered with a lead flux glass cylinder of sufficient thickness to prevent all leakage of ionizing rays, and in which is provided an opening for the passage of such rays. In connection with this ingeniously contrived tube a set of lead glass specula—of two sizes—serve to localize completely the volume of escaping x-rays, and thus render the interposition of lead foil protective entirely unnecessary. This lead glass speculum serves as a collector and director of the ionizing rays excited within the tube, acting at the same time as a tubular diaphragm.

### Medical News, New York.

October 21.

- 26 \*Pericardial Effusions. F. A. Jones, Memphis, Tenn.
- 27 \*Antitoxin for Poisonous Mushroom Intoxication; A Preliminary Communication. W. W. Ford, Baltimore, Md.
- 28 Diagnosis and Treatment of Anemia. H. Brooks, New York.
- 29 Different Conditions in Tuberculous Kidney and Their Treatment. C. L. Gibson, New York.
- 30 \*Bacterial Treatment of Sewage and Its Adaptability to Small Communities. R. F. Palmer, Roosevelt, Arizona.
- 31 \*Study of the Results of Abdominal Hysterectomy for Fibroids of the Uterus, with and without Drainage. J. Brettauer, New York.



**26. Pericardial Effusions.**—Jones discusses the clinical history of this affection and emphasizes the importance, as a diagnostic aid, of eliciting flatness on percussion in the fifth interspace to the right of the sternum. He cautions against confusing a flat note on percussion with the dull note. In all cases of suspected pericarditis the physician should watch carefully with reference to the developing effusions.

**27. Antitoxin for Mushroom Poisoning.**—Ford has prepared an antitoxin from the various varieties of poisonous mushrooms. His method is as follows: The fungi are dried in the sun and an extract made later by macerating them in water, expressing them between folds of linen cloth, filtering through ordinary filter paper, then through a Berkefeld filter under pressure. As thus prepared the extract is a thin, dark brown fluid which may be kept almost indefinitely without losing its toxic properties. The toxic principle contained in this extract, known since Kobert's time as phallin, is strongly hemolytic. When brought to isotonic solution by the addition of requisite amounts of NaCl it quickly dissolves the erythrocytes of man, cattle, swine, sheep, goats, rabbits, dogs, guinea-pigs, hens and pigeons. Heated to 65 C. it loses this property completely, and the capacity of dissolving the corpuscles is not restored by the addition of serum, lecithin, cholesterol, milk, or any other substance which has thus far been tried. The hemolytic principle thus belongs to the category of bacterial hemolysins, and not to the serum hemolysins. This extract is very poisonous to small animals. Following the injection of fatal quantities subcutaneously, in both rabbits and guinea-pigs, there is an extensive subcutaneous edema with hemorrhages in the lymphatic glands, in the serous membrane, and in the internal organs, especially the liver and kidney. The heart always stops in diastole, and the blood may be fluid if the dose has been large. Death occurs usually within four or five days, although it may occur after the lapse of two or three weeks, owing probably to degenerative changes in the liver and kidney. If rabbits be treated with repeated small doses of phallin subcutaneously, followed by large doses intraperitoneally, it is possible to immunize them against the action of multiple toxic doses. The mortality among animals so treated is very great, but successful results have been thus far obtained with five or six rabbits. These animals were eventually able to withstand the injection of about five times a fatal dose and their blood serum exhibited definite antihemolytic and antitoxic properties. The strongest serum thus obtained will neutralize the hemolytic principle of phallin in a dilution of 1 to 10,000, using as an index of hemolysis the quantity of phallin just sufficient to dissolve 1 c.c. of a 5 per cent. solution of rabbit's blood. The same serum possesses antitoxic properties in a dilution of 1 to 10, 0.5 c.c. completely neutralizing five times the fatal dose for rabbits.

**30. Disposition of Sewage in Small Communities.**—Palmer describes the system of sewage in operation at the geological survey camp at Roosevelt, Ariz. It consists of a septic tank, followed by a continuous trickling filter. Approximately 3,000 gallons of sewage pass through the tank and filter in twenty-four hours. The tank is of concrete floor and sides with a board roof covered with earth. It is 40 feet long, 8 feet wide and 3 feet deep, and divided into three compartments by two walls. It has a capacity of about 3,600 gallons, so that the sewage remains in the tank between twenty-four and thirty hours. The inlet to the first compartment is by a six-inch pipe, connected with the main sewer, one foot below the surface of the fluid when the tank is full. This compartment is the grit chamber and measures 5x8 feet and is 6 feet in depth. From here the sewage passes through an opening in the dividing wall one foot beneath the surface into the septic chamber 8x30 feet and 3 feet deep. In this compartment are a number of partitions extending alternately from either side of the tank and extending nearly across. These partitions retard the flow of sewage and permit of greater fermentation. The sewage now passes through another opening one foot from the surface into a small compartment, from which the effluent overflows at the top into a four-inch iron pipe, and is conducted by it to the distributor. The distributor consists of a box 4 inches square and 3 feet long,

with eight cross sticks passing through. These cross sticks are grooved on top, and, as the effluent rises in the box to the level of the grooves, it passes out and flows over the sides of the cross sticks and drips on the surface of the filter. The filter is a wood frame 1 yard square and 10 feet high, placed on a slanting concrete floor. The sides of the frame are latticed so as to give plenty of air. The filling material is of small boulders between two and three inches in diameter. On the floor is a collecting drain which leads by a short outflow pipe to the power canal.

**31. Drainage in Abdominal Hysterectomy for Fibroids.**—The study of the value of drainage in abdominal hysterectomy for uterine fibroids was undertaken by Brettauer with a view to ascertaining the difference in the immediate results of abdominal hysterectomy on the comfort, rapidity of convalescence, and general condition of the patient, in those cases in which drainage through the vagina was instituted, and in those in which it was omitted. Of the 54 operations discussed, 32 were performed with gauze drainage through the cervix and 22 without. Brettauer found that there is not the slightest difference in the immediate postoperative course whether drainage is practiced or not, although he considers it preferable to sew up the abdomen in all cases so as to assure a more perfect hemostasis.

Lancet-Clinic, Cincinnati, Ohio.

October 21.

32 School Life in Relation to Health. P. Zenner, Cincinnati.

33 \*Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen. J. Y. Brown, St. Louis.

33.—See abstract in THE JOURNAL, Nov. 28, 1903, page 1371.

California State Journal of Medicine, San Francisco.

October.

34 President's Address, Pacific Association of Railway Surgeons. N. H. Morrison, Los Angeles.

35 Early Operation of Gallstone Disease. E. Rixford, San Francisco.

36 Surgical Treatment of Pancreatic Complications in Gallstone Disease. A. S. Lobingier, Los Angeles.

37 \*More Simple Technic in Herniotomy. O. O. Witherbee, Los Angeles.

38 Case of Erythema of Multiformis. A. Garceau, San Francisco.

38½ Central Abscess of Otitic Origin. H. Hastings, Los Angeles.

39 Hopes, Disappointments and Successes of the State Board of Health. N. K. Foster, Sacramento.

40 Spastic Paraplegia. A. M. Henderson, Sacramento.

41 Fibromyoma of the Uterus and Bladder, with Calcification and Ossification. W. S. Thorne, San Francisco.

42 Adenoids from the Standpoint of the Parent and the General Practitioner. R. L. Doig, San Diego.

43 Acute Chylous Mesenteric Cyst. H. B. Reynolds, San Francisco.

44 Chronic Suppuration of the Middle Ear in Relation to the Whole Number of Ear Affections, with Special Reference to Operative Cases. C. F. Welty, San Francisco.

45 \*Interdental Splint for Fractures of the Lower Jaw. R. Russ, San Francisco.

46 Misuse of Atropin in Eye Diseases. L. C. Deane, San Francisco.

47 New Birth Certificate Blank; Its Imposition, Necessity and Correction. G. E. Abbott, Pasadena.

48 Case of Atypical Rheumatism. W. C. Voorsanger, San Francisco.

**37. Simple Technic in Herniotomy.**—Witherbee advises leaving the cord alone and sparing the tissues all unnecessary manipulation. He says that it is also unfortunate that in transplanting the cord, it should be allowed to monopolize so large a surface of Poupart's ligament. The latter can be turned to a far better purpose by bringing in contact with it as large an area as possible of the internal oblique. The operator should endeavor in all ways to effect the strongest union between it and the structures opposite. Due precaution should be taken that the sutures do not interrupt the blood supply, else sloughing will occur at the expense of approximation. To overcome this Witherbee uses exclusively the figure-of-eight suture, which, he says, if properly inserted, can not be adjusted with sufficient tension to stop the circulation. It has the additional advantage of being removable, and consequently does not overburden the power of absorption. To insure fixation and at the same time to relieve the skin from undue pressure, a U-shaped plate is employed, to the arms of which are attached the sutures after they emerge from the skin. Four silkworm-gut sutures thus introduced will effectually approximate both layers of Poupart's ligament with the ex-



ternal and internal oblique, the transversalis and rectus, if necessary, and will maintain their approximation for an indefinite period, or until firm union has unquestionably taken place.

45.—See abstract in THE JOURNAL, Sept. 2, 1905, page 739.

#### Virginia Medical Semi-Monthly, Richmond.

September 8.

- 49 \*Quinin in the Treatment of Lobar Pneumonia. E. T. Ramsay, Clark, S. D.
- 50 Removal of a Grain of Corn from the Right Bronchus. J. Dunn, Richmond.
- 51 The Menopause. W. L. Peple, Richmond.
- 52 Ambulant Treatment of Internal Hemorrhoids. C. F. Martin, Philadelphia.
- 53 Typhoid Fever Limited. A. G. Brown, Jr., Richmond.
- 54 Constitutional Treatment of Syphilis. M. C. Sytle, Richmond.
- 55 Principles of Surgery. S. McGuire, Richmond.

49. Quinin in Pneumonia.—Ramsey details his experience with quinin in the treatment of lobar pneumonia. When first called to a case of pneumonia, he orders a warm bath, gives a mild cathartic, and, if the pain is at all distressing, he gives a hypodermic of morphin. If the pain returns it can usually be controlled by applying the ice bag. He has discontinued the use of all external applications, as he has not found them satisfactory. He then orders the administration of 30 grains of quinin, repeated in one hour, and again, in some cases, in two hours, depending on the amount of fever and condition of the patient. With the third dose he gives some form of iron, usually reduced iron, in doses of from 3 to 5 grains, repeated every three or four hours. When nervousness is marked, bromids are given, frequently combined with chloral in 10-grain doses. When the rusty sputum is profuse he gives capsules containing 1 grain of acetate of lead, three or four times a day, for two or three days, and while administering the lead he discontinues the iron. He believes that quinin is the most reliable stimulant we have in this disease.

#### Journal Medical Society of New Jersey, Newark.

October.

- 56 \*Difficulties in Diagnosis of Abdominal Conditions. R. P. Francis, Montclair.
- 57 Are Curds in Infant Stools Ever Caused by Insufficient Proteids? P. A. Potter, East Orange.
- 58 Clinical Study of Chorea. A. A. Strasser, Arlington.
- 59 Mosquito the Only Etiologic Factor in Malaria. J. T. Wyck-off, Leonia.
- 60 Ambulatory Treatment of Pott's Fracture. E. A. Y. Schellenger, Camden.

56. Difficulties in Abdominal Diagnosis.—Francis discusses this question, and as an illustration cites two cases, one which was diagnosed as a case of intestinal adhesions, when there were none, and the other having been diagnosed wrongly a number of times, operation disclosing it to be a case of intestinal adhesions. He concludes that the diagnosis of abdominal conditions depends very largely on the skill and training of the examiner as well as on the physical and other characteristics of the patient. The examination should be systematic and thorough. Inspection, palpation and percussion, with the patient both supine and erect, are the best means of diagnosis. Bimanual examination and particularly examination of the pelvis should never be omitted. A general anesthetic is sometimes, though rarely, needed. It is very important that not only the entire abdomen, but the entire body, should be examined so that the condition of every organ can be noted. Exploratory laparotomy is often warranted in doubtful cases and the decision when to employ it is one of the nicest points in modern surgery.

#### Canadian Journal of Medicine and Surgery, Toronto.

September.

- 61 Plea for a Provisional Minister of Health. C. A. Hodgetts.
- 62 Modified Milk Versus Whey Mixtures. H. T. Machell, Toronto.
- 63 Reply to Address of Welcome Tendered the Newly-Appointed Medical Supplement of Toronto General Hospital. J. N. E. Brown, Toronto.

#### Texas Medical Journal, Austin.

September.

- 64 Evolution of Medicine. M. Duggan, San Antonio.
- 65 Retiring Address. C. M. Harrison, Cooper.
- 66 New Pharmacopela. R. P. Daniel, San Antonio.

#### Northwest Medicine, Seattle, Wash.

September.

- 67 Intraocular Malignant Growths. J. A. Mackinnon and J. W. Bailey, Seattle, Wash.
- 68 Tuberculosis from an Economic Aspect. C. B. Boyle, Bozeman, Mont.

#### Montreal Medical Journal.

September.

- 69 Chorionepithelioma. F. A. L. Lockhart.
- 70 Postdiphtheritic Paralysis. A. T. Mussen.
- 71 Diplobacillary Conjunctivitis of Morax-Axenfeld. J. W. Stirling and S. H. McKee.

#### Journal Missouri State Medical Association, St. Louis.

September.

- 72 Present Status of Orthopedic Surgery. A. J. Steele, St. Louis.
- 73 Permanent Sequelae of Influenza. L. W. Dallas, Hunnewell.
- 74 Newer Methods of Blood Examination for Typhoid, with Demonstration. B. M. Shoemaker, St. Louis.
- 75 Examination of Blood for Malaria, with Demonstrations. G. C. Crandall, St. Louis.
- 76 Study of Digitalis. S. A. Johnson, Nevada.

#### Northwestern Lancet, Minneapolis.

September 15.

- 77 Technic of Medullary Narcosis. A. W. Morton, San Francisco.
- 78 Uses and Abuses of Electrotherapeutics. E. G. Gowans, Salt Lake City, Utah.
- 79 Posterolateral Sclerosis. W. B. Ewing, Salt Lake City.

October 1.

- 80 Pneumonia. H. H. Witherstine, Rochester, Minn.
- 81 Problems for the Country Doctor in Diseases of the Appendix. J. W. George, Aitkin, Minn.
- 82 Unwarranted Encroachments of the General Practitioner on the Field of the Eye, Ear, Nose and Throat Specialist, from the Latter's Standpoint. F. Stauffer, Salt Lake City.
- 83 What the General Practitioner Should Know About the Specialties. L. W. Snow, Salt Lake City.
- 84 Treatment of Primary and Secondary Syphilis. H. S. Scott, Salt Lake City.

#### Wisconsin Medical Journal, Milwaukee.

September.

- 85 Squint. N. M. Black, Milwaukee.
- 86 Urinary Hyperacidity in Infancy. A. W. Myers, Milwaukee.
- 87 Aseptic Obstetrics. J. P. Cox, Spooner, Wis.

#### Journal South Carolina Medical Association, Charleston.

September 21.

- 88 Foreign Bodies in the Larynx, Trachea and Bronchi. H. R. Black, Spartanburg.
- 89 Gastrotomy in Stricture of the Esophagus. M. Simons, Charleston.
- 90 A Plea for State Sanatoria for Tuberculous Patients. J. L. Dawson, Liberty, N. Y.
- 91 Case of Complete Double Congenital Capsular Cataract. J. W. Jervey, Greenville.
- 92 Aneurisms of the Groin. A. J. Buist, Charleston.
- 93 Suppurating Appendicitis. F. L. Potts, Spartanburg.
- 94 Gangrenous Stomatitis. W. A. Smith, Glendale.
- 95 Enterocolitis or Summer Diarrhea of Children. J. L. Jeffries, Spartanburg, S. C.

#### Fort Wayne Medical Journal-Magazine.

September.

- 96 Diagnosis and Treatment of Ruptured Ectopic Gestation. B. Van Sweringen, Ft. Wayne.

#### Iowa Medical Journal, Des Moines.

September 15.

- 97 Eclampsia Gravidarum. F. J. Smith, Des Moines.
- 98 President's Address. A. Babcock, New Hampton.
- 99 Insects, the Rôle they Play in the Transmission of Diseases. H. Albert, Iowa City.

#### Medical Fortnightly, St. Louis.

September 25.

- 100 Solving Problems in Diseases of Children. W. Wormley, Philadelphia.
- 101 Permanent Catheterization in Non-Surgical Cases, with Case of Histories, and Description of Apparatus for Retaining Catheter in Place. C. A. Boice, Washington, Iowa.

#### The Ophthalmic Record, Chicago.

September.

- 102 Muscle Testing in Refraction. F. H. Koyle, Hornellsville, N. Y.
- 103 Three Unusual Clinical Observations; Change in Astigmatism Produced by Chalazion; Contact Keratitis After Cataract Extraction; Inherited and Acquired Syphilis in the Same Subject. H. D. Bruns, New Orleans.
- 104 Tine of a Steel Fork Thrust Through the Left Upper Eyelid, Eyeball and Through the Antrum of Highmore. G. F. Keiper, Chicago.
- 105 Case of Pseudo-Pterygium and Symblepharon. Relieved by the Use of Thiersch Grafts. W. R. Murray, Minneapolis.
- 106 Primary Epithelioma of Cornea. G. T. Brady, San Francisco, Cal.
- 107 Comparative Anatomy of the Eye. J. Law, New York.
- 108 Indirect Injury of the Eyeball. Eberhardt, Michigan City, Ind.
- 109 Mesencephalic Paradoxes. B. G. Wilder, Ithaca, N. Y.

#### Detroit Medical Journal.

September.

- 110 Recipients of the Nobel Prize in Physiology and Medicine. Major Donald Ross, F. W. Mann, Detroit.
- 111 Niels R. Finsen. H. R. Varney, Detroit.
- 112 Ivan Petrovitch Pavlov (Pavloff). H. E. Safford, Detroit.
- 113 Leucocytosis in Purulent Affections. J. Sill, Detroit.
- 114 Duty of the State in the Care of Crippled and Deformed Children. H. W. Orr, Lincoln, Neb.

#### Journal of Medicine and Science, Portland, Maine.

September.

- 115 Sanctimonious Advertising. P. J. Noyes, Lancaster, N. H.



## Southern California Practitioner, Los Angeles, Cal.

September.

- 116 Case of Acromegaly. J. C. King, Banning, Cal.
- 117 Diagnosis of Surgical Lesions of the Kidney. C. D. Lockwood, Pasadena.
- 118 Different Albumins of the Urine, Their Detection and Their Clinical Significance. D. Fulton, Los Angeles.
- 119 Diseases of the Tropics—Their Effect on Commerce. P. Manson, London, England.
- 120 Newfoundland—Climate and Physical Geography. C. M. Skinner, Brooklyn, New York.
- 121 Actual Care of the Sick in Hospitals and Care of the Sick in Their Homes. W. Lindley, Los Angeles.
- 122 Diseases of Women and Children. W. A. Edwards, Los Angeles.
- 123 Attitude of the Medical Profession Toward the Social Evil. H. A. Kelly, Baltimore.

## Journal of New Mexico Medical Association, Albuquerque, N. M.

September 15.

- 124 Hemorrhagic Typhoid—Typhoid Parotitis—Recovery. B. D. Black, Las Vegas.
- 125 Gastroenteric Intoxication in the New-Born. J. R. Gilbert, New Mexico.
- 126 Treatment of Peritonitis—Diffuse and General. G. C. Bryan, Alamogordo, N. M.

## Journal Kansas Medical Society, Lawrence, Kan.

September.

- 127 Surgical Disease of the Gall Bladder. G. C. Purdue, Wichita.
- 128 The Country Practitioner as a Surgeon. B. R. Riley, Coyville.
- 129 Therapeutic Action of Chemic Salts. B. D. Eastman, Topeka.

## Medical Herald, St. Joseph, Mo.

September.

- 130 Infection of the Ovaries and Tubes and Natural Resistance to Invasion. J. R. Brady, Sioux City, Iowa.
- 131 Auto-Serotherapy. G. S. Browning, Sioux City, Iowa.
- 132 Pharyngeal Tonsil as a Causative Factor in Systemic Disturbances. W. J. Bussey, Sioux City, Iowa.
- 133 Eye Symptoms in Medical Diagnosis. F. E. Franchere, Sioux City, Iowa.
- 134 Catarrhal Deafness; Its Prevention. F. Roost, New York.
- 135 Cerebro Psychic Rest, and Rest Through Cerebro Psychic Diversion in the Cure of Insanity and Insanoid States. C. H. Hughes, St. Louis, Mo.
- 136 Case of Choroiditis Due Probably to Necrosing Ethmoiditis. W. W. Bulette, Pueblo, Colo.

## American Journal of Urology, New York.

September.

- 137 Present-day Status of Tuberculosis of the Male Genital Organs. E. R. W. Frank, Berlin.
- 138 Injuries of the Ureters During Gynecologic Operations. C. G. Cumston, Boston.
- 139 The Technic of Genitourinary Examination. G. L. Eaton, Cal.

## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

October 7.

- 1 Combined Aortic and Mitral Disease in Rheumatic Children. F. J. Poynton.
- 2 Strain as a Factor in Cardio-Aortic Lesions. H. B. Anderson.
- 3 \*An Inquiry Into the Cause of Angina Pectoris. J. Mackenzie.
- 4 \*Case of Syncopal Bradycardia Showing the Independent Action of the Two Sides of the Heart. J. S. Maynard.
- 5 \*Albuminuria of Adolescents. C. Dukes.
- 6 Case of Ligature of the Profunda Femoris Artery, Common Femoral Artery and Common iliac Artery on the Same Side, with Perfect Recovery. H. E. Clark.
- 7 Innominate Aneurism: Simultaneous Ligature of Right Carotid and Subclavian Arteries; Recovery. H. N. Dunn.
- 8 Stages of Pulmonary Tuberculosis. T. Campbell.
- 8½ \*Sixty-seven Cases of Congenital Cleft Palate Treated by Operation. J. Berry.
- 9 Gastro-Duodenostomy as a Substitute for Gastro-Jejunostomy. S. White.
- 10 Appendicostomy. C. B. Keetley.
- 11 Note on a Specimen of Bladder and Urethra Removed Two Years After Suprapubic Prostatectomy. J. W. T. Walker.
- 12 Talma-Morison Operation. Report of a Successful Case. de W. I. C. Wheeler.
- 13 Ligature of the Innominate Artery. W. Sheen.
- 14 Total Enucleation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. Freyer.

3. Cause of Angina Pectoris.—For many years Mackenzie has noted carefully the individual symptoms present in case of angina pectoris in order to find some cause for these symptoms, as well as the mechanism by which they are produced. In view of the fact that angina pectoris occurs in lesions of great diversity, Mackenzie believes that some condition common to all must be the cause of the symptoms. The fact that angina pectoris appears only after the heart muscle has been long exposed to excessive strain points to the cause being situated in the muscle. All the functions of the muscle fibers save that of contractility can be shown to be intact in many pa-

tients who suffer from angina pectoris. The alternating action of the heart is a demonstrable sign of exhausted contractility, and its presence is always associated with symptoms that are included in the symptom-complex of angina pectoris. The same exciting cause—extra strain on the heart—may provoke both the angina pectoris and the alternating action and both may disappear with the removal of the cause. The inference to be drawn from the consideration of these facts is that the symptoms that are included in the term “angina pectoris” are so closely associated with an impairment of the function of contractility of the muscle fibers of the heart that in all probability angina pectoris will be found to be an evidence of the impairment of the function of contractility.

4. Syncopal Bradycardia.—The chief point of interest in Maynard's case appears to be the undoubted evidence afforded of an independent action of the two sides of the heart. The descending or diastolic position of the sphygmograph curve showed no evidence of subsidiary pulsations communicated by the heart, and yet the ear and the hand detected secondary impulses which could not have failed to have been registered by the sphygmograph had these originated in the left heart. Hence Maynard concluded that the sounds and impulses referred to were produced in the right side of the heart during the diastolic pause of the left ventricle. The patient was treated with various drugs, including strychnin, with and without strophanthus, and mercury perchlorid; strychnin, on the whole, appeared to be most beneficial. The accelerated influence on the heart's action of either stimulants or exertion was very slight.

5. Albuminuria of Adolescents.—The form of albuminuria considered by Dukes is that usually referred to as early, latent, functional, cyclic, and intermittent albuminuria and which occurs usually among boys and girls at school. Dukes says that boys exhibiting the signs of the malady are sometimes sent from school on the ground that they are unsuited for the rough and tumble of school life. They are also excluded from all public appointments in the navy, army, and civil service at home and abroad. Life insurance is deferred or refused to these applicants, except at prohibitive rates. Dukes found that the larger class of patients exhibiting this symptom also exhibit increased arterial tension in consequence of irritability of the vasomotor nerves. This tension is very unstable and is most frequently produced by excess of nitrogenous food, by imperfect elimination, and by hereditary tendency to gout. A dose of blue pill and alkalids works wonders. The next most extensive class comprises those who have deficient vasomotor control. The treatment of this class resolves itself into abundance of food and tonics. The remainder are the spare, highly strung, oversensitive neurotics. The bromids, indiciouly administered with occasional doses of blue pill, afford alleviation to patients of this type, but the only efficient remedy is the removal of anxiety so that intellectual work may be undisturbed by the intrusion of depressing feeling. Dukes says that when the albuminuria of adolescents is recognized and treated there is little likelihood of its proving the precursor of organic disease of the kidneys, even when its duration has been many years.

8½. Operative Treatment of Congenital Cleft Palate.—Results obtained in 67 cases of operation for congenital cleft palate are carefully tabulated by Berry. He never operates during the first 22 months of life, believing that some time during the third year of life, in the vast majority of cases, is the time when the operation can be done with most advantage to the patient. In some few cases of delicate children and ill-nourished children in whom the soft tissues covering the palate bones are thin, it may be advisable to postpone the operation to a somewhat later date, but the cases in which operation should be done after 4 years of age are extremely rare, says Berry. He has never declined to operate in any case under the age of 20, nor has he ever advised treatment by mechanical apparatus rather than by operation in any patient under that age. The operation performed by Berry has been on the lines of that originally introduced by Langenbeck and Ferguson. Briefly the operation consists of dissecting up a broad band of soft tissues from the hard palate on either side of the cleft, in detaching the soft palate completely from the posterior mar-



gins of the horizontal plates of the palate bones, and then, after these soft tissues have thus been brought down, in sliding them toward the middle line. Their inner edges are then united by sutures, either before or after lateral incisions have been made through the anterior part of the soft palate and posterior part of the mucoperiosteum of the hard palate. By these means even the widest cleft in the hard palate can be closed, although more than one operation may be necessary. Two points are essential for success. One is that the soft palate shall be completely detached from the posterior edges of the palate bones. If this is not done (even in most cases of cleft limited to the soft palate) the soft tissues in bad cases can not be brought down enough to enable the edges to meet in the middle line. The other point which demands consideration is the position and extent of the lateral incisions that must be made to relieve tension and temporarily to paralyze part of the soft palate. In ordinary cases in which the cleft is not very wide these incisions should be made after the palate has been sewn up. In cases of very wide cleft they must be made before the edges can be approximated. In his earlier operations Berry used to make these incisions too near the middle line from fear of wounding the posterior palatine artery, and too far forward from fear of encroaching too much on the soft palate, and thus endangering the vitality of the flap. He pays very little attention to the palatine artery. He cuts close to the teeth, and often right across the artery near its exit from the palatine foramen. The lateral incision should extend as far backward as the middle of the soft palate at its junction with the lateral wall of the pharynx.

The Lancet, London.

October 7.

- 15 An Address. R. B. Carter.
- 16 Address on Efficiency. J. C. Browne.
- 17 Method in Medicine. R. A. Young.
- 18 \*Ethyl Chlorid as a General Anesthetic. W. J. McCardie.
- 19 \*Case of Motor Aphasia Without Agraphia. B. Branwell.
- 20 \*Observations on the Thymus Gland in Children. J. M. F. Brickdale.
- 21 Case of Pneumonia with Affection of the Cranial Nerves; Recovery. J. F. H. Dallys.
- 22 Method for the Detection of Flaws in Nominally Air-tight Sealed Glass Vessels. E. Maynard.
- 23 Series of Cases of Lead Poisoning Due to Hard Water. J. C. Thresh.
- 24 Case of Large Chylous Abdominal Cyst; Operation; Recovery. E. B. Fuller.
- 25 Chronic Paralysis of the Intercostal Muscles as a Primary Cause of dropsy. G. W. Howland.

18. **Ethyl Chlorid as a General Anesthetic.**—McCardie believes that ethyl chlorid occupies a position as an anesthetic about midway between nitrous oxid and ether. It is, as one would expect from its composition, more toxic than the former, and when used in properly selected cases nearly as safe as the latter. Nitrous oxid as regards safety is still in a class by itself. We should use ethyl chlorid rather to replace chloroform and ether in certain cases than to administer it as a substitute for nitrous oxid. For short operations needing longer and deeper anesthesia and greater muscular relaxation than nitrous oxid or nitrous oxid mixed with oxygen affords, ethyl chlorid is of great advantage. As a preliminary to etherization this anesthetic is unequalled. The contraindications to ethyl chlorid are connected with the upper air passages and particularly with inflammation or narrowing in or about the larynx—e. g., swelling or edema thereabouts. Patients suffering from goiter take it well unless there be marked dyspnea or stridor. McCardie is convinced that ethyl chlorid also is very useful in military surgery, owing to its portability and rapidity of action. In certain procedures, such as tying blood vessels and small amputations, it is necessary to operate on the spot before the patient can be safely transported to a base hospital. The saving of five or six minutes in the induction and of ten minutes in the recovery from narcosis in such conditions is most important, especially as the number of surgeons is always out of proportion to the number needed in a serious engagement. Time, too, could be saved by administering ethyl chlorid before chloroform. Again, in soldiers enfeebled by campaigning and suffering from great loss of blood, shock would be far less intensified by ethyl chlorid than by chloroform. After ethyl chlorid narcosis, patients are at once safely transportable.

19. **Motor Aphasia Without Agraphia.**—The great point of interest in Branwell's case is the fact that there was complete motor aphasia without any agraphia; any defect in writing which was present in the early stages of the case was clearly a mere defect of manipulation, a defect due to inability to hold the pencil and not an aphasic defect properly so-called. The aphasia was purely motor. Branwell is convinced that a sudden organic brain lesion, probably either embolism or hemorrhage, was the cause of the symptom.

20. **Thymus Gland in Children.**—Brickdale summarizes his article as follows: 1. The usual weight of a microscopically normal thymus in a child under 1 year is under 100 grains. 2. Children suffering from "primary atrophy" or marasmus commonly, but not always, exhibit fibrotic changes in the thymus; the weight and size of the organ are also usually diminished. 3. Children suffering from "secondary atrophy" exhibit similar changes, but they are not so constant. 4. Possibly some other factor than mere malnutrition or starvation may produce these fibrotic changes, as a case in which pure starvation was produced by congenital stenosis in the alimentary tract they were not observed. 5. In cases of acute illness in children, fibrosis of the thymus may accompany general wasting. It is difficult in these cases to exclude previous disturbances of nutrition, at any rate among hospital patients. 6. Enlargement of the thymus and other lymphatic structures in the body may occur as the result of acute toxic absorption (as in diphtheria) or a more chronic condition (as in lymphatism). In these enlarged thymus glands eosinophile cells are numerous, but no special types are peculiar to either class. 7. In some conditions, especially in tuberculosis, cells with basophile or neutrophile granules seem to replace the eosinophiles. 8. In congenital heart disease eosinophiles are not found in the thymus. 9. True hyaline degeneration very occasionally occurs in Hassall's corpuscles. 10. Fatty degeneration of the cells is common and appears often to affect the peripheral zone of the lobules.

Presse Médicale, Paris.

- 26 (No. 74, September 16.) Du choléra en Allemagne (in Germany). Dunbar.
- 27 Radioscopie gastrique. Technique spéciale et applications cliniques. G. Leven and G. Barret.
- 28 Esophagoscopie dans le traitement des corps étrangers de l'esophagoscope. L. Sencert.
- 29 (No. 75.) \*Les grosses rates en pédiatrie (enlarged spleens). G. Carrière.
- 30 \*De la fièvre hystérique (fever). G. N. Caramano.
- 31 (No. 76.) Technique de l'appendicéctomie. A. Gosset.
- 32 L'albumine dans les régimes alimentaires. M. H. Labbé.
- 33 (No. 77.) La lutte contre la tuberculose. Le sanatorium familial de Montigny-en-Ostrevent. M. Letulle.
- 34 (No. 78.) Passage du Spirochete pallida dans le liquide de vesicatoire (into blister). C. Levaditi and G. Z. Petresco.

29. **Enlarged Spleen in Pediatrics.**—Carrière discusses the various conditions liable to entail enlargement of the spleen in infants and differentiates a case under observation as splenomegaly with pseudoleukemic anemia in a rachitic child, aged 20 months. The possibility of a syphilitic origin for the condition imposes the necessity for specific treatment supplemented by nourishing food and tonics.

30. **Hysterical Fever.**—Caramano has had occasion to observe several cases of hysterical fever. He mentions that it is characterized by its sudden onset, without headache or chill, by its periodicity, and by the good general condition afterward, the patient being ready to eat at once. It usually comes on about 5 or 6 p. m. and subsides three or four hours later. The thermometer may go up very high and the pulse may become accelerated. He has noticed a pulse rate of from 130 to 140, with a temperature of from 39.5 to 41 C. (103 to 105.8 F.) The hysterical nature of the fever can be determined only after exclusion of all other causes. It sometimes follows a cold or sore throat, but is generally the result of autosuggestion. Hanot's patient was convinced she would have typhoid fever because she had attended two cases of typhoid, and Vaillant's thought she would have malarial fever because she had been visiting in Corsica. Treatment of hysterical fever should not be with drugs. Suggestion alone will conquer it. In 2 cases Caramano followed Vidal's advice and gave his patients what he told them was a very active medicine and that it would be dangerous for them to take more than the two tablespoonfuls he ordered. If the drug acted properly the urine would turn



blue. The medicine was only a weak solution of methylene blue, with a few drops of nux vomica to give it a taste. Both patients were permanently cured in less than two days.

34. Passage of Spirochetes into Serum of Blisters.—Levaditi and Petresco relate a number of experiments and experiences which demonstrated that the *Spirochæta pallida* passed into the blisters made artificially on secondary syphilitic lesions on the skin, and also into blisters produced on sound skin in the vicinity of secondary syphilitic cutaneous lesions. Control experiments on non-syphilitic subjects invariably resulted negatively. The spirochetes were found in the blister over a secondary syphilitic lesion even when the skin was intact, but the findings were negative when the lesions were those of recent infection or were tertiary manifestations. The discovery of the spirochetes in an artificial blister may have important diagnostic significance in puzzling cases of syphilis.

#### Revue de Médecine, Paris.

Last indexed XLIV, page 140.

- 35 (XXV, No. 2.) Ration alimentaire dans quelques cas de tuberculose humaine. C. Richet.
- 36 Le bégaiement épileptique (stuttering). C. Féré. Three cases.
- 37 Sur l'hyposthénie cardio-vasculaire climactérique. J. Pawinski.
- 38 \*Opothérapie rénale (Méthode Renault-Dubois). Ingestion de macération de rognons crus de porc. Résultat cliniques. F. Chaupin. (Commenced in No. 1.)
- 39 Maltosurie dans un cas de traumatisme crânien. R. Lépine and Boulud.
- 40 (No. 3.) Contribution à l'histoire de la neurasthénie sexuelle. C. Féré. Two cases.
- 41 La fièvre menstruelle des phthisiques. C. Sabourin.
- 42 L'hypophyse et la pathogénie de la maladie de Basedow. A. Salmon.
- 43 De la glycogénie dans le diabète consomptif. R. Lépine.
- 44 Cas de diabète aglycémique. Id.
- 45 (No. 4.) Classification et valeur pathogénique des albuminuries orthostatiques. J. Teissier.
- 46 Le métabolisme de l'eau et des chlorures (of water and of chlorids). H. Labbé and E. Morchoisne.
- 47 Auréoles névropathiques. C. Féré.
- 48 De l'oligurie habituelle physiologique. J. Cottet.
- 49 (No. 5.) Raideur juvénile (rigidity). Nageotte-Wilbouchévitch.
- 50 Fungoid Mycosis with Multiple Deep Ulcerations Treated and Cured with the Soluble Toxin of the Erysipelas Streptococcus.—Mycosis fongode, etc. Martin-Roux.
- 51 \*De l'apoplexie traumatique tardive (son importance au point de vue médical). P. Marie and O. Crouzon.
- 52 Origine du pigment dans le diabète bronzé, et pathogénie de cette affection. L. Margain.

38. Organ Treatment of Nephritis.—THE JOURNAL has chronicled Renault's successful treatment of nephritis with a maceration of pig's kidneys. The technic was described on page 341 of volume xlii, 1904. Chaupin here relates in full detail his latest experiences with it in selected cases. The dose recommended for adults is two kidneys a day for ten days out of fifteen. The kidneys should be from young pigs and should not weigh more than 160 gm., selecting the lighter colored ones. The maceration has a very energetic diuretic action and also an unmistakable antitoxic property. The latter is demonstrated by the rapid subsidence of the symptoms, suggesting a general disintoxication, the edema and congestions vanishing, the arterial hypertension subsiding, and the enlarged heart becoming smaller. In some cases this effect occurs promptly, in others not for a long time. In one case this treatment was kept up for eleven months without improvement, after which amazing benefit was realized. The maceration sometimes has a laxative effect or may cause sweating. The albuminuria usually subsides, and sometimes there is increased excretion of urea and chlorids, with a higher "coefficient of oxidation." The general health invariably showed marked improvement. Other writers have reported 23 cases of severe nephritis benefited likewise by this organ therapy. Renault does not regard it as a specific, but merely as an extremely valuable adjuvant to the usual measures.

51. Tardy Traumatic Apoplexy.—Marie and Crouzon describe a case of apoplexy with hemiplegia and aphasia developing in a man of 50, six days after he had been thrown from the top of a cab. Discussing this and similar cases on record, they conclude that tardy traumatic apoplexy is due to some lesion of the brain, generally hemorrhagic, produced by the accident in a predisposed subject. The influence of the predisposition, of arteriosclerosis in particular, can be readily traced in the traumatic cerebral processes, even when they assume the form of a neurosis. Whatever the predisposition, the

rôle of the traumatism is no less capital. The physician confronted with these tardy traumatic nervous affections should seek for an organic cause and should study whether the traumatism alone is responsible or whether there may not be some underlying predisposition.

#### Semaine Médicale, Paris.

- 53 (XXV, No. 39.) A propos de la mortalité comparée des nourrissons dans les principaux pays d'Europe (infantile death rate).

#### Archiv f. Verdauungs-Krankheiten, Berlin.

Last indexed page 1122.

- 54 (XI, No. 4.) \*Insufficient Nourishment of Dyspeptic and Nervous Persons.—Die ungenügende Ernährung bei Dyspeptikern und Nervösen. A. Mathieu and J. C. Roux (Paris).
- 55 \*Determination of Remains of Albumin in Food by Means of Theosinamin.—Ueber die Bestimmung der in den Fäces vorhandenen Nahrungseiweiss-Reste mittels Thiosinamins. E. Rosenberg.
- 56 \*Ueber eine schwere Form von chronischem Colon-Spasmus. R. E. Schütz.
- 57 Ein bemerkenswerter Fall von Magen-Tetanie (gastric). H. Edenhulzen.
- 58 \*Milchdiät bei chronischer Tropen-Diarrhoe (milk diet). F. Vogelius.
- 59 \*Die Palpation der Flexura sigmoidea. F. Schilling.
- 60 Single and Specific Nature of Pancreas Trypsin.—Beitrag zur Frage der einheitlichen und spezifischen Natur des Pankreastrepsins. L. Pollak. Id. M. Ehenreich.

54. Lack of Sufficient Nourishment in Dyspeptic and Nervous Persons.—Mathieu and Roux emphasize the fact that the relative inanition in cases of dyspepsia and neurasthenia is liable to entail serious consequences, aggravating the primary ill and leading to others. The most important points for the diagnosis are the behavior of the liver, tongue and stomach, the perversion of hunger, and the mental condition. Loss of weight is an indication of relative inanition. The loss of fat in the abdomen is liable to cause the liver to slide down and forward, and it may become reduced in size to 4, 5 or 6 cm. When such a small liver is encountered, in the absence of cirrhosis, it is a sign that the patient has been inadequately nourished for a long time, and this assumption is corroborated by the increase in the size of the liver when the patients are better fed. The liver diminishes in size from loss of fat and of glycogen and possibly also from the lesser volume of the blood in circulation. Whether the lesser size of the liver is actual or is merely an apparent reduction from the falling forward of the liver, the symptom is very important for the diagnosis of relative inanition and allows its degree to be determined. The vanishing or perversion of the sense of hunger is another important sign. The perversion of hunger in nervous young women is sometimes shown by a feeling of nausea in the morning before arising and again about 4 or 5 in the afternoon. If they eat a little, the tendency to nausea vanishes. If this perversion of the sense of hunger is supposed to be the result of dyspepsia, and the food is still further reduced, the patients grow still weaker; plenty of nourishing food is the natural remedy, and it should be insisted on with decision and perseverance. This hunger with nausea resembles what Benda has called "hunger with fainting." His patients experienced at certain hours a feeling of faintness with great depression and sometimes nausea, cyanosis and cold sweats. Hunger with periodically recurring conditions of anguish is another variety. In these nervous conditions the appetite is satisfied with a few mouthfuls, and if more is eaten there is uncomfortable satiety. This is especially liable to occur in hysteric young women, and it requires great powers of persuasion and perseverance to overcome their resistance to take more food when they feel satiated with the first mouthful. The tongue of persons debilitated from relative inanition is generally white and dirty and there is splashing in the stomach. The digestive apparatus loses its fat and shrinks in size and the muscularis of the stomach becomes thin. The organ stretches with the smallest amount of food ingested, and five or six hours elapse before even a small meal is passed along out of the stomach. A splashing sound can easily be elicited in the morning, fasting, after drinking 50 or 100 gm. of water. Succussion will also reveal a floating sound near the umbilicus or even several centimeters below. The extreme dilatation of the stomach is apt to alarm the physician and to cause him to reduce the nourishment still more, but this is a grave error which merely aggravates and perpetuates the morbid condition.



Nourishing feeding will restore conditions to normal if persevered in, if the patient stays in bed or lies down most of the time. In the course of three or four months the stomach will be found to have returned to its normal dimensions. In one instructive case cited the patient gained 35 pounds and all disturbances ceased after institution of a suitable nourishing diet. This relative inanition is liable to entail simple neurasthenia, hysteria or fixed ideas. The prognosis is most favorable in the neurasthenic cases. The patients must be encouraged that all will soon come out all right, but that for two or three weeks after resuming abundant nourishment they are liable to have a number of more or less violent digestive disturbances. Such patients usually co-operate with the physician, but this is seldom the case in hysterical perversion of the appetite. Hysterical individuals are incapable of making an effort. The anorexia becomes a fixed idea, and psychic measures are necessary. The prognosis is much more unfavorable in the cases of hereditary degeneration with fixed ideas and phobias.

**55. Thiosinamin Test of Remains of Albumin in Feces.**—Rosenberg has been testing Oefele's thiosinamin test, but has found it unreliable. Thiosinamin, he says, dissolves coagulated egg albumin, but not the albumin in muscle and connective tissue.

**56. Chronic Spasm of Colon.**—Schütz reports 3 cases of chronic spasm of the colon. The patients were young women, two of them virgins. The assumption of appendicitis in one case led to an unnecessary operation. The contraction of the colon could be readily palpated, but it was dubious whether this was an idiopathic, purely nervous affection or the result of some lesion elsewhere. The spastic colon was movable and thinner than usual. The attacks were treated like lead colic. Purgatives merely added to the disturbances, and even oil enemata aggravated the condition. Opium and a liquid diet were the only means that brought relief. After the attack had commenced to subside, the tendency to contraction was combated with rest, hot applications, warm prolonged baths, belladonna, arsenic and regulation of the diet. All irritating foods, coarse bread and vegetables, had to be avoided. Massage is contraindicated, but slight vibration massage proved so beneficial in some cases that it should always be given a trial. Galvanization also demonstrated a favorable influence on the contraction. In one case the trouble was evidently a primary neurosis. In another there were symptoms of irritation in various nerve regions. The trouble is evidently the result of abnormal irritability of the nerves of the intestine in persons with a tendency to anemia and neuropathy. In two cases the trouble dated from the fourteenth and seventeenth year. In the first the attacks lasted from eight to twelve weeks and at last for six months, but they occurred only four times in five years. In the other patient they occurred frequently, but lasted only a few days, frequently coming on with the menses. Constipation was the rule among the patients. The pains are like cramps in the sides and across the abdomen, at first occurring only at stool, but gradually increasing in duration, with agonizing exacerbations. The bowels do not move at all, and there may be loss of appetite with nausea and broken sleep. The normal temperature, pulse and respiration exclude the idea of peritonitis. There is no sensitive region to be found in the abdomen outside of the contracted colon.

**58. Milk Diet in Tropical Diarrhea.**—Vogelius advocates an abundant and strict milk diet as offering the best chances for recovery in cases of tropical diarrhea. In a case described at length he commenced with 2.5 liters in twenty-four hours, gradually increasing to 3 or 4 liters and keeping up this exclusive milk diet for four or five weeks after the stools had become formed.

**59. Palpation of Sigmoid Flexure.**—Schilling gives minute directions for palpating the region of the flexure to obtain the maximum of information. He also cites a number of cases showing the results of this careful investigation, which afforded information of the greatest moment for the treatment.

#### Berliner klinische Wochenschrift.

61 (XIII. No. 35, Aug. 28.) Isolierte Lähmung des rechten Nerv. musculocutaneus nach Tripper (post-gonorrheal paralysis). M. Bernhardt.

- 62 \*Fall von Thyreoaplasie (congenitalem Myxödem) und über den abnormen Tiefstand des Nabels bei diesem Bildungsdefekt. P. Argutinsky.  
 63 Ueber das Verhalten des Lecithins zu den Fermenten. P. Mayer.  
 64 Das elastische Gewebe der Magenwand und die Beziehung desselben zur Pathologie des Magens (elastic tissue in stomach walls). T. Mironescu.  
 65 \*Fall von spontaner Luxation des Bulbus. H. Levin.  
 66 Beitrag zur Lehre vom Meckel'schen Divertikel. M. Zondek.  
 67 \*Einige neue Gesichtspunkte über Herzneurosen und die Superposition von Erweiterungen auf sie (cardiac neuroses and enlargement). P. C. Franze.  
 68 \*Ueber die hämorrhagische Form der Leber Cirrhose. L. v. Aldor.  
 69 \*Die diagnostische Hoden Punktion (of testicle). C. Posner.  
 70 \*Die acuten Darmerkrankungen des Säuglings (Infantile intestinal affections). B. Salge.

**62. Congenital Myxedema.**—Argutinsky gives illustrations of a child with thyreoaplasia inducing congenital myxedema, showing the great benefit derived from fifteen months' thyroid treatment. He calls attention to the remarkable lowness of the umbilicus in the child before treatment and the gradual rise of the umbilicus to its normal position as treatment progressed. He has found a dozen other cases illustrated in the literature, the pictures showing the umbilicus remarkably low on the abdomen. When thyroid treatment is not instituted, the children grow up with this anomaly, but in the illustrations of children thriving under thyroid treatment the umbilicus seems to have risen to its normal location.

**65. Spontaneous Luxation of the Eyeball.**—Levin's patient is a corpulent man with a tendency to exophthalmos since youth, noticeable also in other members of the family. One night he was awakened by a violent pain in his eye and he found that the eyeball protruded entirely from its socket. It was entirely outside of the lids, and he pushed it back into place with his fingers. This spontaneous luxation of the eyeball recurred repeatedly, affecting sometimes one eye and then the other. One of the eyeballs is liable to drop out in this way if he bends his head over far to one side, the spasmodic contraction of the lids behind the eyeball keeping it from spontaneous reposition. The vision is not affected by these spontaneous luxations, which are probably the result of vascular congestion in the veins of the orbit. Treatment was directed to relieving the tendency to congestions and variees and to controlling the eyes by keeping them bandaged at night. The patient found the bandaging so annoying that tarsorrhaphy is under consideration to make the palpebral fissure too small to allow protrusion of the eyeball.

**67. Cardiac Neuroses and Superposed Dilatation.**—Franze has observed a few cases of dilatation of the heart on both sides due to a neurosis of the heart or blood vessels or both. The patients were generally young or middle-aged and had complained of neurasthenic symptoms for some time previously, to which were finally added symptoms of a neurosis of heart or vessels or both, and the latter in time entailed unmistakable enlargement of the heart on both sides. The heart action suffered in consequence, but it could be modified by medication. The dilatation aggravated the other troubles and was important both for therapeutics and prognosis. He cites the particulars of a few cases and discusses the *modus operandi* of the dilatation. The sympathetic system is usually responsible for these neuroses of the heart, and this explains the curative action of electricity correctly applied in such cases. When the systole is feeble for a certain length of time, the inevitable result will be dilatation of the ventricles. Rehfisch and Colbeck have already suggested that nervous heart disturbances might entail organic changes. Prolonged decrease in the energy of the contractions of the heart must entail dilatation of the ventricles from the pressure of the accumulating blood within. The heart responds to stimuli differently from other muscles. Either it does not respond at all or it exerts its maximal energy. The smallest excitation produces the maximal functional response. Franze adds that the dilatation resulting from pathologic reflex or other excitation yields to appropriate dietetic and physical measures, especially to an individualized electrotherapy with the alternating current or "four-cell baths" in combination with carbonated thermal saline baths. In case of neuroses of the heart or vessels inquiry should be made for local foci in the abdomen or pelvis, especially in the urogenital tract in men and in the uterus or



adnexa in women. If a focus can be discovered, then the neurosis may be accepted as a reflex phenomenon by intermediation of the sympathetic. Also in all cases of general neurasthenia with nervous cardiac disturbances, the participation of the great sympathetic plexuses and ganglia should be suspected as the source of the pathologic irritation.

**68. Hemorrhagic Form of Cirrhosis of Liver.**—Aldor relates the history of 4 cases, some under observation for four years. His experience suggests that this affection is possibly identical with the syndrome known as Banti's disease. The special features of his cases were the absence of ascites and of meteorism, as well as of digestive disturbances and the recurrence of hemorrhages. In 2 cases they occurred as hematemesis, in 1 as enterorrhagia and in another as epistaxis. In some of the cases the spleen was not much enlarged and an extensive collateral circulation between the portal vein and the vena cava was surmised. In other cases the spleen was very large. Aldor is inclined to regard the hemorrhages as a kind of compensatory process. The resulting anemia was very protracted, but the patients recovered their previous strength after each hemorrhage with surprising promptness.

**69. Puncture of Testicle in Diagnosis of Azoospermia.**—Posner believes that the production of spermatozoa continues unchecked, although the passages for their outward flow may have been obstructed for years. It is extremely probable that under normal conditions a certain proportion of the spermatozoa die in the testicles and are absorbed, possibly supplying some element to the organism needed in the general metabolism. The question whether the testicles are still functioning normally is, therefore, of great importance, as operative intervention, opening a passageway for the spermatozoa to escape, will cure many a case of apparent irremediable azoospermia. To determine this question, Posner punctures the testicle with a Pravaz needle. It is a very simple and harmless procedure, without the slightest inconveniences. If the findings are negative he punctures again, as negative findings are sometimes encountered in healthy persons. He aspirates only enough fluid to spread on a glass for microscopic examination. It is difficult to obtain more than this, except in case of hydrocele or cystic enlargement of the tubuli seminiferi. The May-Grünwald stain shows up the spermatozoa well, but is not absolutely necessary. Posner has thus punctured the testicle in 17 cases, and among 12 patients who had epididymitis from seven to twelve years previously spermatozoa were found in all but 2, while, with a single exception, none were found in the 5 patients whose epididymitis dated from twelve to twenty-six years before. The exception was a man who had living spermatozoa, although the ducts had been obstructed by epididymitis seventeen years previously. The spermatozoa were found in lively motion in one case, contrary to the general assumption that they do not become lively until they feel the effect of the prostatic fluid. Posner's previous communication on the value of surgical treatment to remove the obstacle causing apparent azoospermia was published in the *Deutsche med. Wochft.* last year, and was summarized in THE JOURNAL, page 638 of volume xliii.

**70. Treatment of Intestinal Affections in Infants.**—Salge merely reviews the present status of treatment of intestinal affections. In those due to too much food at a time and too short intervals between, without organic changes, he states that all food should be stopped and only as much weak, black tea given as corresponds to the amounts of the preceding feedings. If this starving for twenty-four hours is not enough, calomel can be given in doses of from .02 to .05 gm. every two hours until three doses have been taken. It is best to substitute some other food for the milk for a time afterward. When the stools become less fluid and generally dark-brown in color, after three days of flour feeding, milk can be resumed. If a tendency to vomiting and loss of appetite persists, the motor function of the stomach should be examined. This can be done by siphoning out the stomach three hours after a meal to find whether it is empty or contains free hydrochloric acid. If not empty, the stomach should be rinsed, which is a simple matter in an infant. A 1 per cent. solution of Carlsbad salts is admirable for the purpose. The appetite sometimes returns surprisingly after lavage of the stomach, and he sometimes

uses it for this indication alone. When the anorexia is persistent, pepsin or hydrochloric acid or bitters might be tried or a mixture of 1 part tincture of strychnin and 2 parts of fluid extract of condurango in 10 parts of tincture of wine of rhubarb. Five drops of this mixture are given three times a day, fifteen minutes before the meal. When the dyspeptic disturbances are severe, the symptoms of intestinal catarrh suggest a serious intoxication of the system. Here the main indication is to sustain the heart. If the tendency to collapse can be controlled, the children recover in apparently desperate cases. Large doses of camphor are required, from .1 to .2 gm. at first and then from .05 to .1 gm. every two hours. All food should be suspended and only enough tea given to moisten the mouth. The loss of water is compensated by subcutaneous saline infusions twice a day, injecting from 120 to 150 c.c. of a .9 per cent. salt solution, or, better still, a solution of .5 salt and .5 sodium bicarbonate in 100 parts water. The high temperature is combated by wrapping the child from head to feet in a sheet wrung out of cold water (not room temperature) and covering with a blanket. After from ten to fifteen minutes another sheet is applied in the same way, repeating the procedure about five times. In case of collapse the child must be artificially warmed, even putting it in an incubator if necessary. After the infant has recuperated from the tendency to collapse, feeding should begin again, but without any fat in the food. Breast milk is liable to contain too much fat, and the child may relapse if placed at the breast, the collapse being fatal in this case. Salge has had excellent results from the use of human milk from which the fat has been removed. This is possible only when an abundance of human milk is at disposal, but it has saved many infants in his experience who otherwise would have been doomed. When human milk with fat removed can not be obtained, the tea should be continued for days and the breast milk should be drawn and given by the teaspoonful, in small amounts, not more than 50 c.c. the first days and increasing this amount very slowly and cautiously. The result is not so certain as when skimmed breast milk can be given. If no breast milk is available the tea diet should be continued for two or three days and then thin flour gruel or whey added. Milk should be resumed very cautiously, and buttermilk and diluted milk made with some preparation of malt should be given during convalescence. Cholera infantum is merely a severe form of intestinal catarrh and the indications are the same. Nephritis is the principal complication to be feared.

#### Centralblatt für Chirurgie, Leipsic.

Last indexed page 745.

- 71 (XXXII, No. 32, Aug. 12.) \*Subcutane Verlagerung des Omentum (displacement). A. Narath.
- 72 (No. 33.) \*Ueber die Behandlung der chirurgischen Infektionen mit Phenol-Kampher. V. Chlumsky.
- 73 Zur Technik der seitlichen Entero-Anastomose (side-to-side). Küster.
- 74 (No. 34.) \*Beitrag zur Wanderlappen-Plastik (traveling flaps). W. Hagen.
- 75 (No. 35.) Zur Pathologie des Prolapsus ani et recti und seine operative Behandlung durch Beckenboden-Plastik (plastic reproduction of solid floor of pelvis). C. Hofmann.
- 76 (No. 36.) Zur operativen Behandlung des Genu recurvatum. C. Deutschländer.

**71. Subcutaneous Omentopexy.**—Narath thinks that all the advantages of the Talma operation can be secured by merely drawing up a piece of the omentum and fastening it in a subcutaneous pocket. His experience has shown that this answers perfectly the purpose of inducing extensive anastomoses and thus relieving the ascites. He incises above the umbilicus on the median line under Schleich local anesthesia. The ascitic fluid is evacuated, its escape from the deep-lying parts being insured by suction through metal catheters in rubber tubes inserted into the small pelvis and in the hypochondrium and lumbar regions. The greater omentum is seized and a thick tuft pulled out of the wound, but without altering the position of or pulling on the transverse colon. A part should be chosen containing as many blood vessels as possible, and it should be the thickness of one or two finger breadths. The incision should then be sutured to allow space only for the tuft of omentum without compression. This portion of the omentum is then sutured to the parietal peritoneum and linea alba, avoiding the veins. A pocket in the subcutaneous tissue



is then hollowed out, and the tuft of omentum—from 10 to 15 cm. long—is laid in this hollow. No further fixation is required. The results have been eminently satisfactory. The omentum is thus transplanted into a region particularly rich in blood vessels, and by the increased intra-abdominal pressure the blood is forced at once from the omentum into the developing anastomoses, as can be easily seen on inspection.

**72. Carbolic Acid and Camphor in Treatment of Infected Wounds.**—Chlumsky is enthusiastic over the fine results obtained in the treatment of infected wounds with a mixture of pure carbolic acid and camphor. The camphor seems to neutralize the caustic action of the carbolic acid so that the mixture feels like mere oil or chloroform when poured on the hand. His formula is: Carbolic acid 30 parts, camphor 60 parts, and alcohol to make 100. He has been using this mixture for six years in treatment of surgical infections, erysipelas, phlegmons, tuberculous fistulas, furuncles, etc. He evacuates the pus and pours the mixture into the cavity, as much as 30 to 50 gm. in a deep abscess, without any disagreeable by-effects. Infected wounds are rinsed with the mixture, and a tampon saturated with it is laid in the wound until suppuration is diminishing, when the mixture is poured in. In erysipelas the affected area and the surrounding skin are swabbed with the mixture from two to five times a day. Old patches are surrounded by a bank of cotton saturated with the mixture and covered with oiled silk or waxed paper. In recent cases the redness subsides and the trouble is aborted in a few hours. The mixture keeps perfectly if evaporation of the camphor is prevented.

**74. Flaps for Repair of Defects in Skin.**—Hagen describes two cases in which he covered a large defect with a flap from the same limb far above. The outer end of the pedunculated flap was turned over and sutured in the upper part of the defect below. The raw surface of the flap was thus turned upward, except at the end where it had been sutured in place in the defect. A roll of gauze under the arch formed by the flap kept it from falling and oiled silk on the raw surface kept it from drying up. In six days the sutured end had healed in place and the base of the flap was gradually divided and brought down to complete the covering of the defect below by the fourteenth day. In less than a month it had healed completely in place, the only trace of the defect being a linear scar around the edges of the transplanted flap.

#### Deutsche medizinische Wochenschrift, Leipsic.

- 77 (XXXI, No. 37, September 14.) \*Die Dauererfolge der operativen Behandlung des Krebses (remote results of cancer operations). J. Dollinger.
- 78 Ueber infantilen Kernschwund (defect in nucleus). N. Gierlich.
- 79 \*Zur Kenntnis des idiopathischen Oedems des Säuglings (in infant). L. F. Meyer.
- 80 Ueber den Spirochätennachweis bei Syphilis. W. Scholtz. Id. C. Grouven and H. Fabry.
- 81 Relations Between Aggressive Action and Body Substance of Bacteria.—Ueber den Zusammenhang zwischen Aggressivität und Leibessubstanz von Bakterien. O. Bail.
- 82 \*Photo-Salve Treatment. — Lichtsalbenbehandlung mittels Wärmestrahlung. Axmann.
- 83 Ueber Balneotherapie bei Nervenleiden (in nervous affections). B. Laquer (Wiesbaden).

**77. Remote Results of Cancer Operations at Budapest.**—Dollinger's statistics embrace 193 cases of cancer with 33 operations for recurrence. Of this number the remote results are known after three years in 150 patients and 40 per cent. have been free from recurrence. The history of 80 patients is known for five years, and of this number 41.23 per cent. have been free from recurrence. The results will be better in the next decade, as the technic of operations for cancer is being constantly improved.

**79. Treatment of Idiopathic Edema.**—Meyer's diagrams and clinical histories demonstrate the great importance of restricting the intake of salt in the food when an infant shows indications of idiopathic edema. Artificial foods should be avoided as they generally contain more or less salt. He relates the results of tests and the great influence on the elimination of urine during these periods in which salt, sodium phosphate or distilled water were given.

**82. Photo-Salve Treatment.**—Axmann reports favorable results in various cutaneous affections from the use of a salve applied to the parts which were then exposed to heat rays

from an electric light or in an electric-light bath. The composition of the salve rendered it impermeable to the active rays, but its therapeutic action was unmistakably promoted by the heat.

#### Münchener med. Wochenschrift, Munich.

- 84 (LII, No. 35, Aug. 29.) Specific Antibodies in Tape Worm Hosts.—Zur Frage der Bildung spezifischer Antikörper im Organismus von Bandwurmwirten. J. Langer.
- 85 Typhusbazillus und Bazillus faecalis alcaligenes, 2 nicht verwandte Spezies. R. Trommsdorff.
- 86 Ueber die Anwesenheit der Spirochäte pallida in sekundärsyphilitischen Manifestationen und über die zu ihrem Nachweis angewendeten Färbungsmethoden (stains). I. Bandi and Fr. Simonelli.
- 87 \*Permeability of Tubes for Injected Fluids.—Ueber die Durchgängigkeit der Tuben für in den Uterus injizierte Flüssigkeiten. F. Buttenberg.
- 88 \*Treatment of Nervous Subjects in the Mountains.—Ueber die Behandlung von Nervösen im Hochgebirge mit besonderer Berücksichtigung von Davos. F. Jessen.
- 89 Ueber leichte Formen der Holzphlegmone (woody phlegmon). Fichtner.
- 90 Ueber Krebsbildung (cancer formation). W. Fuchs.
- 91 Fall von Abknickung der Speiseröhre durch vertebrale ekchon-drose (kinking of esophagus).. H. Zahn.
- 92 (No. 36.) \*Catalytic Influencing of Oxidation of Sugar.—Ueber die katalytische Beeinflussung der Zuckerverbrennung. H. Schade.
- 93 Ueber Coxa valga. Th. Kölliker.
- 94 \*Ultra-violet Light Treatment of Wounds.—Wundbehandlung mittelst ultra-violetten Lichtes. Axmann.
- 95 \*Das Karzinom der Mamma. Schinzinger.
- 96 Rebellischer Pylorospasmus; Gastroenterostomie; Heilung. Schüssler.
- 97 Necessity for Constant Weighing in Antifat and Forced Feeding Cures.—Notwendigkeit der Bestimmung des spezifischen Körpergewichtes bei Mast- und Entfettungskuren. J. Wengler.
- 98 \*Schleimsekretion des Darms (mucus secretion in intestines). R. E. Schütz. (Commenced in No. 35.)
- 99 Ueber Meningitis cerebrospinalis epidemica (Weichselbaumsche Meningitis.) H. Schottmüller. (Concluded).

**87. Permeability of Tubes for Injected Fluids.**—Buttenberg's experiments on 27 cadavers showed that the tubes are permeable in the majority of cases, but that only a small amount of the injected fluid can pass through them. He advises the use of a reliable two-way catheter, and that the injection should be made with a pressure corresponding to a height of less than a meter. Very poisonous disinfectants, such as corrosive sublimate, should not be used for uterine injections. It is not enough to rinse the catheter and tubes in the disinfectant. They should be allowed to stand in them as long as possible, while other preparations are being made, hands disinfected, etc., and should be rinsed out with boiling water to warm them just before use. The presence of inflammation should contraindicate the use of caustics and strong poisons.

**88. Treatment of Neurasthenics and Neurotics in the Mountains.**—Jessen practices at Davos, in Switzerland, and states that the air of the mountains there contains so much radioactivity that he was able to collect sufficient to inhibit the growth of the *Staphylococcus aureus* and the *B. prodigiosus*. He presents an array of arguments to show that the stimulating effect of a mountain climate is particularly beneficial in certain purely functional nervous affections, results being attained which are not realized anywhere else. Brilliant results are obtained in acquired neurasthenia, in nervous stomach disturbances, hyperacidity and cardiac neuroses. Affections with an organic basis are not adapted for this mountain cure, but latent pulmonary tuberculosis frequently hides under the picture of neurasthenia. The depression, abnormal irritability, hyperacid disturbances and cardiac neuroses of the heart may be the only evidences of the insidious lung process for which the mountain climate is especially adapted. Fine results are also obtainable in diabetes, exophthalmic goiter, asthma, chlorosis, etc. The only requisite is that the patients are still capable of responding to stimuli. He quotes the remark made by certain persons that they never lie down in bed at Davos without a shudder at the possible danger of tuberculosis contagion, and presents evidence to prove that the prophylactic measures and disinfection carried on there to such perfection render the town much safer from tuberculosis contagion than any large city. The mortality from tuberculosis among the natives is far less than it was before the place became a health resort.

**92. Catalytic Influencing of Oxidation of Sugar.**—In this second communication Schade discusses the catalysis of sugar



combustion in the economy of organic nature. He surmised that the blood—as the intermediate agent of the oxidation effects—besides the rôle of transporting the oxygen, also plays a part in promoting the receptivity of the intraorganic sugar so that it takes up with greater avidity the oxygen brought by the blood. This assumption has been confirmed by his discovery that a single drop of human blood, or mere traces, placed on a lump of ordinary cane sugar, even before it is dry, renders it highly combustible. If the sugar is then held in an alcohol flame it lights at once and burns furiously, sometimes even explosively. Grape sugar behaves in the same way, but not with such intensity. The oxidability of the sugar is materially enhanced by contact with the blood. Further tests showed that other substances have this same power of catalytic influencing of sugar. If a lump of sugar is dipped in cigar ashes or brought into contact with the kernels of fruit or grains or similar vegetable product, coffee, tea, pepper, cocoa, etc., it burns with great energy when touched with a lighted match. All these substances are good catalyzers. Their catalyzing property is not affected by cooking and differs in other respects from that of the oxydases. He, therefore, proposes for this group the term “oxydators.” He thinks that his researches promise to reveal the *modus operandi* of the action of ferments. He has succeeded in tracing the oxygen-transporting components of hemoglobin through the various steps of the decomposition products to the terminal stage of the metallic iron. Not only hemoglobin, but also its hema-tin, its ash, its iron salts and the pure metallic iron have all demonstrated their capacity for transporting oxygen. The organic envelope as a condition *sine qua non* for the catalysis of hemoglobin and of the glycolytic enzymes has been done away with by these researches. They have shown that part of the specific ferment activity can be accomplished by their simplest inorganic elements as a catalytic effect.

94. **Ultra-Violet Rays in Therapeutics.**—Axmann thinks that the ultraviolet rays have marked chemical action, and that these alone can be utilized for therapeutic purposes. The advantages derived from red glass, blue glass, etc., are due to the fact that they change the rays passing through them into chemically active short wave rays. He reports his experience with lamps made to produce these rays alone. It has been extremely favorable in alopecia, chronic eczema, acne, sycosis, crsipelas and in cases of suppurating wounds. He noticed that venous blood after long exposure to the air turned a bright red when brought near the ultraviolet rays from his lamp. The coagulation of the blood was also accelerated. He explains these phenomena as due to the nascent ozone, and states that fresh and suppurating wounds behave under the rays as if they had been swabbed with hydrogen dioxid. He has thus treated 10 patients with ulcers on the feet of from six weeks' to three years' duration. The exposures were half an hour in length, and the ulcers all healed in four weeks at farthest, from three to eight exposures being made. In one of the recent cases the ulcer healed under the physician's eyes in two exposures. The chemical action of the rays may be enhanced, he thinks, by sensitizing the tissues with some chemical. He is now experimenting with chlorin. Chemical processes are the forces at work and bearers of the energy.

95. **Castration in Cases of Mammary Cancer.**—Schinzinger states that he proposed, in 1889, the advisability of castration in case of cancer of the breast. Cancer seems to be more malignant in young women, and his idea was that castration would hasten the atrophy of the mammary glands and thus reduce the extra malignity of the neoplasm. He reviews the literature on the subject, but has had no opportunity to carry his idea into execution. He would not restrict it to inoperable cases, but would castrate on the first discovery of cancer. Out of his 80 cases of mammary cancer since 1889 three were in men. Two of the men had sisters or a daughter with carcinoma of the breast, neck or abdomen.

98. **Intestinal Mucus Secretion.**—Schütz concludes his article with the statement that purely neurogenic mucous hypersecretion is of rare occurrence. It can be assumed when the excessive secretion occurs spasmodically, the amounts being moderate or minimal during the interval, and when the hypersecretion is accompanied by nervous symptoms or appears after

nervous excitement. As a rule, however, there is always some catarrhal condition underlying the apparently purely nervous affection.

## Books Received

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By H. Sahli. Edited with additions by F. P. Kinnicutt, M.D., and N. B. Potter, M.D. Authorized Translation from the Fourth Revised and Enlarged German Edition. Cloth. Pp. 1008. Price, \$6.50 net. Philadelphia: W. B. Saunders & Co., 1905.

OFFICIAL REGISTER AND DIRECTORY OF PHYSICIANS AND SURGEONS in the State of California, to which is added a Directory of Physicians and Surgeons of Oregon and Washington. Revised and Published by the Medical Society of the State of California, November, 1905. Cloth. Pp. 374.

THE ACCESSORY SINUSES OF THE NOSE and Their Relations to Neighboring Parts. Illustrated by Fifteen Colored Plates by G. Killian. Translated by R. Patterson, M.D., M.R.C.P., Atlas. Price, \$7.50 net. Chicago: W. T. Keener & Co.

CLINICAL METHODS. A Guide to the Practical Study of Medicine. By R. Hutchison, M.D., F.R.C.P., and H. Rainy, M.A., F.R.C.P. Ninth Edition. Cloth. Pp. 634. Price, \$2.50 net. Chicago: W. T. Keener & Co., 1905.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNUAL MEETING of the American Laryngological Association held at Atlantic City, N. J., June 1-3, 1905. Cloth. Pp. 360. New York: Published by the Association, 1905.

TREATMENT OF DISEASES OF THE EYE. By V. Hanke. Translated by J. H. Parsons, B.S., D.Sc., F.R.C.S., and G. Coates, M.D., F.R.C.S. Cloth. Pp. 222. Price, \$1.25 net. Chicago: W. T. Keener & Co., 1905.

INDIGESTION, The Diagnosis and Treatment of the Functional Derangements of the Stomach by G. Herschell, M.D. Third Edition. Cloth. Pp. 293. Price, \$1.50 net. Chicago: W. T. Keener & Co., 1905.

SURGICAL ASPECTS OF DIGESTIVE DISORDERS. By J. G. Mumford, M.D., in Association with A. K. Stone, M.D. Cloth. Pp. 395. Price, \$2.50. New York: The MacMillan Co., 1905.

A MANUAL OF CHEMISTRY, INORGANIC AND ORGANIC. By A. P. Luff and F. J. M. Page. Illustrated. Third Edition. Cloth. Pp. 555. Price \$1.75 net. Chicago: W. T. Keener & Co.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. xvii. For the Year 1904. Cloth. Pp. 277. New York: Rooney & Otten Printing Co., 1905.

IMMUNITY IN INFECTIVE DISEASES. By E. Metchnikoff. Translated from the French by F. G. Binnie. Cloth. Pp. 591. Price, \$5.25. New York: The MacMillan Co., 1905.

DISSECTING MANUAL, Based on Cunningham's Anatomy. By W. H. Rockwell, Jr., M.D. Flexible Cover. Pp. 306. Price, \$2.00 net. New York: William Wood & Co.

HYGIENE AND PUBLIC HEALTH. By B. A. Whitelegge, C.B., and G. Newman. Illustrated. Cloth. Pp. 636. Price, \$1.75 net. Chicago: W. T. Keener & Co., 1905.

TRANSACTIONS OF THE MEDICAL SOCIETY of the State of New York, for the Year 1905. Cloth. Pp. 450. Published by the Society, 1905.

METHODS OF ORGANIC ANALYSIS. By H. C. Sherman, Ph.D. Cloth. Pp. 245. Price, \$1.75. New York: The MacMillan Co., 1905.

LABORATORY MANUAL OF PHYSIOLOGY. By F. C. Busch, B.S., M.D. Illustrated. Flexible Cover. Pp. 206. Price, \$1.25 net. New York: William Wood & Co.

THE PANAMA CANAL, SYSTEM AND PROJECTS, of L. W. Bates. Cloth. Pp. 178, with Illustrations. Denver, Colorado.

## NEW PATENTS.

Recent Patents of Interest to Physicians:

- 800467 Elastic bandage. Henry Myers, Philadelphia.
- 800487. Inhaler. Jerome Rich, Jackson, Mich.
- 800489. Electrical vibrating and massaging device. Louis E. Richmond and C. J. Graham, Cleveland, Ohio.
- 800595 Electrical vibrator for massaging purposes. Louis E. Richmond and C. J. Graham, Cleveland, Ohio.
- 800407. Truss. Francisco Serio, New York.
- 801180. Cabinet for transference used in x-ray apparatus. Monroe S. Clawson, New York.
- 801019. Fountain syringe. Charles J. Kintner, New York.
- 800925. Purifying visc. Willy Loebell, Klein-Zschachwitz, near Dresden, Germany.
- 801028. Making plasters, etc. Willy Loebell, Klein-Zschachwitz, near Dresden, Germany.
- 800676. Combined telephone receiver and aural-massage instrument. Hermann G. Pape, New York.
- 801117. Invalid bed. Marguerite D. Stow, Caldwell, N. J.
- 801352. Maternity drawers. Nina W. Anderson, Macon, Ga.
- 801681. Clinical thermometer. Charles Nurnberg, New York.
- 801477. Door-operated air-pump for atomizers. Wm. H. Rose, Baltimore.
- 801693. Pasteurizer. Wm. J. Ruff, Quincy, Ill.
- 801745. Massage apparatus for improving the hearing. Eugene W. Schneider, New York.
- 801555. Inhaler. David L. Sprague, Clear Lake, Iowa.
- 801556. Truss. James K. Stockton, New York.
- 801865. Obstetrical and invalid bed. John Hall and H. A. Paddelford, North Monroe, N. H.
- 802190. Emergency bandage for surgical purposes. S. E. Heine-man, Detroit.
- 802233. Curative apparatus. Wm. J. O'Donnell, Rochester, N. Y.
- 801912. Syringe. Gustave Behmann, Newark, N. J.
- 801924. Syringe nozzle. Sylvester R. Shiley, Reading, Pa.
- 802339. Inhaler. A. de Trey, Philadelphia.



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## Original Articles

### PSEUDO-SCLEROSIS (DIFFUSE SCLEROSIS), WITH THE REPORT OF A CASE WITH NECROPSY.\*

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WITH PATHOLOGIC REPORT AND REMARKS.

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PHILADELPHIA.

In 1883 Westphal<sup>1</sup> reported two cases presenting a symptom-complex resembling that of multiple sclerosis, but in which microscopic examination of the brain and cord gave negative results. To this condition was given the name pseudo-sclerosis. Since this time a number of cases (14) presenting this condition have been reported, mostly by German observers. It will be noted in reading the abstracts of these cases, which are given below, that the brain and cord in a number of them were unusually firm. A similar condition of hardness, although possibly more marked, is observed in another group of cases also presenting a symptom-complex resembling that of multiple sclerosis, in which microscopic examination of the brain and cord shows a proliferation of neuroglia and vascular disease. To this condition the term diffuse sclerosis has been applied, and a number of cases have been reported, mostly by German authors.

As will be shown further on, some authorities are coming to the opinion that the same pathologic condition is present in both pseudo-sclerosis and diffuse sclerosis, the former being merely a milder degree of the latter. To call attention to this possible relationship is one of the objects of this paper.

The pathologic condition now known as diffuse sclerosis has been frequently noted in the past, especially in the brains of idiots, and cases occurring in adults were reported years ago, although not under this title; but it is only recently that attempts have been made to erect on this basis a distinct disease.

Probably the first case was reported in 1849 by Duplay<sup>2</sup> to the Biologic Society of Paris. The patient had suffered for a number of years with paralysis and contractures of the lower extremities, probably brought on by overexertion and sexual excess. After a while the bladder, rectum and tongue became paralyzed, the mental condition being reported as good. At the autopsy the internal membranes were found to be opaque, but not adherent to the cortex; the gray matter was normal, but two-thirds of the white matter was sclerosed, more

so toward the ventricles. This condensation was equal in extent on both sides. The tissue was yellowish and cloudy. The optic chiasm and the striate bodies were also of greater consistency than normal. The cord was small and atrophic.

In 1854, under the title of "A Case of Cerebral Sclerosis," M. Hirsch<sup>3</sup> reported a case and stated that several others have reported cases of chronic induration of the brain tissue. His patient was a man, 53 years of age, who had been suffering for several years. At the autopsy the principal conditions found were an injection and infiltration of the pia-arachnoid, which was easily separated from the cortex, and a toughness and dirty-white color of the brain substance; there was very little cortex, the tough, dirty-white material taking its place; in some places the brain seemed cartilaginous. The ventricular lumen was small, the striate bodies and optic thalami were atrophic and tough. In the left frontal lobe several spots of sclerosis differing from the rest of the substance in luster were seen. The pons, medulla and peduncles were also indurated. The basilar arteries were sclerotic. The condition of the spinal cord was similar to that of the brain. The clinical symptoms were disturbances of sensation, headache, dizziness, disturbances of motion as convulsive movements and contractures, paralysis of one hypoglossal nerve and of the bladder and anal sphincters, and causeless laughter and crying.

The first American case was probably reported by Echeverria<sup>4</sup> in 1869. His patient was a man aged 69 years, who had been an epileptic. His symptoms for several months before his death consisted of dizziness when he attempted to walk, weakness of the tongue, and paralysis of the lower limbs with contractures and involuntary muscular contractions. There was also pain in the legs. A bed sore and an eruption of herpes zoster developed. At times he was confused, at other times he would lose the power of articulating and swallowing, while at other times these processes and his mentality were intact. At the autopsy, in addition to aneurism of each vertebral artery, the cortex of the brain was found to be anemic and yellowish, and the brain substance was sclerosed, especially along the superior and inferior marginal convolutions, and both sides of the fissure of Sylvius. The medulla and the cord were also involved. Microscopically, the nerve elements were found to be diminished in number, their places being taken by proliferating connective tissue cells and fibers.

After this some other cases were reported, notably by Kelp,<sup>5</sup> and in 1878 A. Strümpell<sup>6</sup> wrote an exhaustive paper on the subject. He defined it as a condition in which the abnormal hardness and consistency of the brain, as a whole or in its greater part is noticeable on

\* Read before the Philadelphia Neurological Society, April 25, 1905.

\* From the Neuropathological Laboratory of the University of Pennsylvania, and from the Philadelphia General Hospital.

1. Archiv. für Psychiatrie, vol. xiv, 1883, p. 87.

2. Schmidt's Jahrbuch, 1850, ixvii, p. 388.

3. Prag. Viertel. Jahrsch. f. prakt. Heilk., 1854, 124.

4. "A case of Sclerosis of Both Third Anterior Frontal Convulsions Without Aphasia," Med. Record, 1869, iv, p. 1.

5. Deutsches Arch. f. klin. Med., 1872, x, p. 224.

6. Arch. f. Psych., 1878, ix, p. 268.



macroscopic examination. As causes he mentions hypertrophy of the brain, usually associated with idiocy; atrophy of the brain, senility, alcoholism, saturnism, and acute and chronic inflammatory diseases. He reports a case in an alcoholic and believes the sclerosis to have been due to a chronic diffuse interstitial encephalitis. He concludes that a definite disease can not be described from the reported cases.

After Echeverria, probably the next American cases were reported by Bullard.<sup>7</sup> In 1897 Heubner<sup>8</sup> reported a case and endeavored to set up a definite clinical picture. He describes it as a disease characterized by the appearance of paralysis and psychic disturbances. A spastic paresis of the legs first develops, which gradually extends to the arms; at the same time apathy and dementia appear and may terminate in idiocy. In the end a general paralysis develops; in some cases dysarthria and dysphagia occur. Optic neuritis was seen in one case. Etiologically he believes that hereditary syphilis and cerebral trauma play active parts.

In 1900 H. Weiss<sup>9</sup> reported a case and gave an exhaustive description of the disease, with full bibliography. His patient was a woman, 37 years of age, who had had symptoms of acute meningitis, associated with a suppurating middle ear. Two years after this attack she developed stiffness and weakness of the legs, painful spasms, hesitating speech, emaciation, increase of all the reflexes, increased mechanical irritability of the muscles. There was no involvement of the cranial nerves, sphincters or of sensation. He lays especial stress on the universal rigor which developed whenever she attempted to move. This he described as follows: When quiet, all the voluntary muscles are flaccid, with probably a slightly higher tonicity than normal; as soon, however, as movement is attempted the muscles become rigid, and the rigidity slowly increases to a maximum and then decreases in the same way. This rigor can be produced also by passive movements. All the muscles (trunk, extremities, larynx, eye, etc.) are affected. Every movement is laborious, hesitating and dragging. Speech is difficult because of spasm of the vocal cords. In addition to these symptoms there was apathy and gradually developing dementia. He considered the condition to be due to the previous meningitis. According to Weiss, other symptoms which may be present are vertigo, headache, ideas of grandeur as in parietic dementia, sudden changes of mood, the patient passing from a happy state into crying attacks; strabismus, inequality of the pupils, myosis, slow reaction of the iris to light, fibrillary tremors, general muscular atrophy, and tremor on movement.

In discussing the etiology, he states that the cases are to be divided into those existing before birth and those arising after birth. In the former class, the anatomic changes show that the child has had meningitis in utero associated with cerebritis, the nerve elements having been destroyed in large numbers. A meningo-encephalitis can also produce it in an adult; other factors are syphilis, either acquired or hereditary, individual predisposition, heredity, overexertion, traumatism, alcohol and epilepsy.

*Patient.*—The patient whose case is now reported was admitted to the Philadelphia General Hospital Oct. 28, 1900. The man was a negro, 57 years of age, and a laborer by occupation. His chief complaint was "tremor and weakness of the extremities."

*History.*—There was nothing to note in the family history. Until six months before admission, when his present illness began, he had been a healthy and hard-working man. Until four years previous to admission alcohol had been used to excess. Syphilis was denied. The autopsy, however, showed that probably he had had it. Gonorrhea he had had once. The first symptoms noticed were progressive loss of strength, staggering and a tendency to trip over small objects. He stated that at times he became giddy and had fallen. He had suffered from dyspnea on exertion for the past twenty years.

*Examination.*—The heart, lungs and other viscera were apparently normal. The urine was normal. There was ataxia of both arms, also a coarse tremor, which was intensified by voluntary movements, such as lifting a glass. The gait was slightly staggering and spastic. The knee-jerks were increased, ankle clonus was absent, but the Babinski reflex was present on the right side. The pupils were equal, did not react to light, but did in accommodation. There was no other involvement of any of the cranial nerves nor of the bladder or rectum. Sensation was normal. A diagnosis of multiple sclerosis was made.

March 1, 1901, the following notes were made: There is no scanning speech. Tremor of the tongue is not present when the tongue is protruded, but there is a marked tremor of the muscles of the upper part of the face at this time. When the arms are extended a coarse tremor is developed. Extension of the legs also causes a tremor to develop in them, which ceases when the patient attempts to touch anything with his foot. This movement, however, is ataxic and there is slight ataxia of both arms. Nystagmus is absent. The gait and station are fairly good. The knee-jerks are much exaggerated, and ankle clonus is present on the right side. The Babinski reflex can not be elicited.

July 5, 1902, it was noted that for several days previously the patient had been noisy and had refused to eat, asserting that the food had been poisoned. By July 19 these symptoms had disappeared. This was the only time that the patient's mental condition occasioned any comment, he having been up and about since admission. July 28 he was suddenly taken with a convulsion, which lasted an hour. He then became comatose and remained so until he died, on July 29.

Assuming that diffuse sclerosis and pseudo-sclerosis are distinct conditions, Frankl-Hochwart<sup>10</sup> has made an elaborate attempt to formulate points of distinction in their symptomatology. He compared 13 cases of so-called pseudo-sclerosis with 22 cases of diffuse sclerosis with the following results:

#### ETIOLOGY.

1. *Age.*—The majority of cases of both occur in early life; only 3 cases of diffuse sclerosis are recorded in which the symptoms appeared after 40.

2. *Heredity.*—A history of various forms of nervous disease in the family may be obtained in either condition. This, however, seems to be somewhat more frequent in pseudo-sclerosis than in diffuse sclerosis.

3. *Traumatism.*—No case of pseudo-sclerosis can be traced to this. Eight cases of diffuse sclerosis have such a history; 5 head injuries, 1 fall from a tree, 1 a lightning stroke, and 1 difficult labor.

4. *Lead Poisoning, Syphilis and Typhoid Fever.*—These are mentioned as causes of pseudo-sclerosis; alcoholism, meningitis, nephritis and syphilis among those of diffuse sclerosis.

#### SYMPTOMATOLOGY.

*Paralytic Symptoms.*—These are the same in both conditions, i. e., either paralysis or paresis, which may be transitory and change its location; it may be hemiplegic in type.

7. "Cortical Sclerosis of the Brain in Children," W. N. Bullard, Jour. Nerv. and Ment. Dis., 1890, xv, 699.

8. Charité Annalen, 1897.

9. Obersteiner's Arbeiten, vol. vii, 1900, p. 245.

10. "Zur Kenntniss der Pseudo-Sclerose," Obersteiner's Arbeiten, 1903, x, p. 1. (A bibliography is appended in the monograph.)



*The Gait.*—Either an ataxic or spastic gait is common to both affections, in some cases of diffuse sclerosis, however, walking is impossible on account of the spasms caused by the effort to walk.

*Contractures.*—These are common to both conditions and may be either transitory or permanent. The muscles of the back of the neck may be affected.

*Tremor.*—This is constantly present in pseudo-sclerosis and in two-thirds of the cases of diffuse sclerosis. The intention tremor is the more common; in pseudo-sclerosis this is in the nature of a to-and-fro movement, which does not occur in diffuse sclerosis. The head, face and tongue may also be the seat of tremor.

*Pain and Paresthesia.*—These occur equally.

*Mentality.*—In pseudo-sclerosis mental disturbances are the rule but not as common as in diffuse sclerosis, not one of the patients with this latter condition having a normal mind. Epilepsy, headache, vertigo, causeless laughter and crying, syncope and apoplexy occur equally in the two affections. Paralysis of the tongue, either bilateral or unilateral, is noted more frequently in diffuse sclerosis.

*Tendon Reflexes.*—These are increased equally in both conditions. Clonus is more frequent in diffuse sclerosis.

*Speech Disturbances.*—These are more marked in diffuse sclerosis (80 per cent.). The speech may be either scanning, dragging or indistinct. Aphasia may also occur in diffuse sclerosis, but has not occurred in pseudo-sclerosis.

*Affections of Other Nerves.*—The cranial nerves are more frequently affected in diffuse sclerosis than they are in pseudo-sclerosis. In the former optic neuritis, optic atrophy, optic pallor, amblyopia with normal fundus, hemianopsia, transitory diplopia, and strabismus have each been noted once; nystagmus and abducens paralysis, three times. Pupillary disturbances, i. e., either inequality, slow reaction or no reaction, may be present in diffuse sclerosis, but in pseudo-sclerosis the pupils react normally. In 11 cases of diffuse sclerosis facial paralysis occurred; this was never seen in pseudo-sclerosis. Hypesthesia and hypalgesia were present in 9 cases of diffuse sclerosis, but in only 1 of pseudo-sclerosis. Forced movements and tic occurred in a number of cases of diffuse sclerosis, but in only 3 of pseudo-sclerosis. Trophic and vasomotor disturbances and muscular atrophy are much more common in diffuse sclerosis. This is also true of bladder and rectal disturbances. Remissions occur in pseudo-sclerosis, but do not in diffuse sclerosis. The duration of the two affections is about equal.

It will be noted that the symptoms of these conditions are very similar, and it seems possible that, clinically as well as pathologically, as will be shown further on, this elaborate attempt to distinguish between the two diseases may be to make a distinction without much of a difference. As has been said, some authorities seem to be tending to this view.

Thus A. Strümpell,<sup>11</sup> in reporting 2 cases of pseudo-sclerosis, mentions that out of 4 cases of this disorder reported by him a peculiar anomaly which seemed to connect this disease with diffuse sclerosis had existed twice, i. e., the white matter was anemic and hard. This was also noted by Westphal in one of his cases. Strümpell concludes as follows: We have to do with the picture of a disease which in its details and in its chronic course resembles markedly multiple sclerosis, but its

pathologic basis has never been found in any case. In most of the sections thus far made, nothing has been found. . . . In some of these cases a peculiar dense, leathery consistency of some parts of the brain substance has been observed. No histologic cause for this is known. Such cases seem to act as transitional cases between pseudo-sclerosis and those in which the entire cerebrum possesses this dense, tough consistency, and which have been spoken of as instances of diffuse sclerosis.

Oppenheim<sup>12</sup> remarks that in many of its symptoms diffuse sclerosis resembles pseudo-sclerosis, in which anatomically there is an increased consistence of more or less of the tissues, so that even anatomically it is difficult to draw a distinct line between pseudo-sclerosis and diffuse sclerosis. He concludes as follows: There is a certain form of disease resembling multiple sclerosis which occurs especially in childhood, although it may appear later. It is characterized by early dementia, a special variety of tremor and disturbance of speech, muscle tremor, the absence of nystagmus, of affection of the optic nerve and of tendon phenomena. This condition is known as pseudo-sclerosis. Anatomically it is either absolutely negative or there may be a slight degree of diffuse cerebral sclerosis. The same symptom-complex, or one approaching more closely to dementia paralytica, may be associated with a true diffuse cerebral sclerosis and degeneration of the pyramidal tracts. This condition can not be diagnosed during life. The combination, occurring in childhood, of progressive spastic paralysis with progressive dementia may arouse the suspicion that such a diffuse sclerosis exists. On account of the rarity of multiple sclerosis in early childhood it is proper to make, in such patients, a probable diagnosis of diffuse sclerosis, but in such cases the question must always be left open, whether pseudo-sclerosis or diffuse sclerosis exists. These conditions must be differentiated from multiple sclerosis and parietic dementia. Weiss says that the absence of nystagmus, changes in the eye-grounds, sensory disturbances and localized muscular atrophy distinguish diffuse sclerosis from multiple sclerosis; but a reference to Frankl-Hochwart's table will show that all of these symptoms, with the exception of the last, may be present in diffuse sclerosis, though rarely.

It is evident from the foregoing that so far as our present knowledge goes the diagnosis of this condition during life is exceedingly doubtful. The peculiar features of the case reported are the advanced age of 53 years when the symptoms began, the absence until late of marked mental changes, the absence of marked speech disturbances, and the presence of the Argyll-Robertson pupil. His symptoms differed from those usually found in multiple sclerosis, in the absence of nystagmus, great increase of the tendon reflexes, and scanning speech. It may be worthy of note that until four years previous to the onset of the symptoms the patient had used alcohol freely.

PATHOLOGIC REPORT AND REMARKS BY DR. SPILLER.

Sharp distinctions between the pseudo-sclerosis and the diffuse sclerosis are impossible either by means of the symptoms or the pathologic findings. It is true that Strümpell and Frankl-Hochwart made the diagnosis of pseudo-sclerosis each in one case during the life of the patient; Strümpell did not form the correct diagnosis until he found he had erred in a case with similar symptoms that came to necropsy, and Frankl-

11. Strümpell: Deut. Zeit. f. Nervenheilk, 1898, xii, p. 115, and vol. xiv, 1899, p. 348.

12. Nervous Diseases, 4th Edition, p. 359.



Hochwart at first believed that his case was one of multiple sclerosis. It is not surprising, therefore, that when the patient described by Dr. Potts was seen soon after his admission to the hospital in 1900 by Dr. C. K. Mills and myself, he was supposed by us to have multiple sclerosis.

In pseudo-sclerosis the findings should be negative, and in the diffuse sclerosis a more or less intense proliferation of neuroglia throughout the brain and spinal cord should be present, but transitional forms between the two disorders have been established by the pathologic findings. The neuroglial proliferation, however, does not form the distinct areas of degeneration seen in multiple sclerosis.

I have found the reports of 14 cases of pseudo-sclerosis with necropsy, and yet the findings were not negative in all of these. In one of Westphal's cases the brain was very firm (Case 1), as it was also in one of Strümpell's cases (Case 2), and in one of Langer's cases (Case 1). Frankl-Hochwart regards such cases and the case of Burk as transitional forms. In Bäumlín's case with necropsy there were slight spinal meningitis and some loss of nerve fibers in the spinal cord. In a number of cases of pseudo-sclerosis the brain was not examined microscopically. In two of Strümpell's cases the crossed pyramidal tracts appeared to be slightly degenerated (Cases 1 and 2). In Frankl-Hochwart's case the frontal lobe was atrophic. In one of Fickler's cases the cerebral gyri were diminutive, the pons and medulla oblongata were very small, the crossed pyramidal tracts were less deeply stained and contained more neuroglia tissue than was found elsewhere in the white matter. In Fickler's other case the pons and medulla oblongata were unusually small and hard.

Strümpell, in reporting the negative findings of his third case, remarks that pathologic changes in the central nervous system must have existed, but they were not of so gross a character that they could be detected by the usual histologic methods. Schultze found thickened vessels and some swollen axis cylinders.

It may be well to give the findings in the cases of pseudo-sclerosis with necropsy. With one exception (Babinski) I have obtained the original reports of these cases and have abstracted the findings.

1. In C. Westphal's<sup>1</sup> first case the gyri were small, especially in the temporal and occipital lobes, the white matter of the brain was anemic and very hard, especially in the posterior portions. The microscopic examination of this case was negative.

2. Westphal's Case 2. Microscopically and macroscopically the central nervous system was normal.

Fickler includes the second case of Langer<sup>13</sup> as one of pseudo-sclerosis, but Strümpell thinks both cases probably belong to this group.

3. In Langer's first case the brain substance was hard, but no microscopic changes were found in the central nervous system. The patient had had convulsions and had been unable to swallow, and Langer says that his condition resembled hydrophobia when he attempted to swallow.

4. In his second case the symptoms and pathologic study are very briefly reported. No changes were found in the central nervous system.

5. Babinski.<sup>14</sup> The cerebral pia was a little edematous. The brain and spinal cord appeared to be normal. Microscopically the tissue was normal, except that there was some slight sclerosis in certain places. The brain was not examined microscopically.

6. Francotte.<sup>15</sup> Macroscopically and microscopically nothing abnormal was seen. The brain and cord were not examined by the Marchi method.

7. In Strümpell's<sup>11</sup> first case the consistency of the brain was normal; sections from the spinal cord stained by the Marchi method showed a moderate amount of black dots scattered diffusely, but perhaps a little more numerous in the crossed pyramidal tracts. The crossed pyramidal tracts in the cervical region were less deeply stained, and there seemed to be a slight loss of nerve fibers in these areas.

8. In his second case the brain was remarkably hard and was almost of the consistency of leather in the occipital lobe. The lateral ventricles were dilated. The crossed pyramidal tracts seemed slightly degenerated in the upper part of the cord. The tissue from the brain, although it had felt so hard, appeared to be normal under the microscope. The Marchi method probably was not employed in this case.

Strümpell regards the cases with hardening of the central nervous system as transitional forms between pseudo-sclerosis and diffuse sclerosis, and he thinks syphilis may be an important cause of both processes.

9. In Strümpell's third case the central nervous system was normal macroscopically and microscopically. Marchi's method was not employed.

10. F. Shultze<sup>16</sup> says, in the brief report of his case, that he found thickened vessels and some swollen axis cylinders. The cerebral cortex was not examined microscopically.

11. Bäumlín<sup>17</sup> found chronic leptomeningitis of the brain and some spinal meningitis, slight loss of nerve fibers in the cord, congestion of the brain, and slight dilatation of the lateral ventricles. The brain was not examined microscopically. Marchi's method was not used.

12. Frankl-Hochwart<sup>10</sup> found the Pacchionian granulations very numerous in his case. The frontal lobe was atrophic, but otherwise there were no macroscopic or microscopic alterations.

13. Fickler<sup>18</sup> (Case 1) observed sclerosis of basal vessels, and the fissures of the cerebrum were deep and the gyri small, the pons and medulla oblongata were very small and hard, and the pyramidal tracts were slightly degenerated. The brain and spinal cord were examined microscopically, but not by the method of Marchi.

14. Fickler (Case 2.) The pons and medulla oblongata were small and hard. Microscopic examination does not appear to have been made.

We may compare the findings in these cases of pseudo-sclerosis with those obtained by Hugo Weiss<sup>9</sup> in a case of diffuse sclerosis. The central nervous system was very hard. The brain on microscopic examination appeared to be normal. The neuroglia was proliferated in the spinal cord, and numerous spider cells were found. The septa were two or three times the usual thickness. The walls of the vessels, even of the smaller vessels, were thickened, and perivascular cellular infiltration was present. The nerve cells were normal.

The findings in other cases of diffuse sclerosis as given by Weiss have been: Distinct proliferation of the neuroglia, greater at some parts of the central nervous system than at others; perivascular round-cell infiltration, many spider cells, thickened and numerically increased vessels, and chronic meningitis. Degeneration of distinct systems of fibers does not occur.

It is evident, therefore, that sharp distinctions between the findings of pseudo-sclerosis and those of diffuse sclerosis can not be made, and that the differences are probably chiefly in the degree of the alteration and

15. *Annales de la Soc. Médico-Chirurgicale de Liège*, vol. xxvi, 1887, p. 308.

16. *Lehrbuch der Nervenkrankheiten*, vol. 1, 1898, p. 285.

17. *Deutsche Zeitschrift für Nervenheilkunde*, vol. xx, 1901, p. 313.

18. *Deutsche Med. Wochenschrift*, No. 11, Dec. 15, 1905, p. 1886.

13. *Wiener Med. Presse*, vol. xxv, 1884, p. 698.

14. "Étude anatomique et clinique sur la sclérose en plaques," Paris, 1885.



not in the character of the alteration. The unusual firmness described in some of the cases of pseudo-sclerosis must be caused by a proliferation of the neuroglia, even though this proliferation can not be detected by the microscope.

#### NECROPSY.

The case that Dr. Potts and I report may be regarded as one of pseudo-sclerosis, or at least as a transitional form. It is probably the first case that has been observed in a colored person. The necropsy was made by Dr. F. P. Gay, July 29, 1902. The pathologic diagnosis was hardening of the brain and spinal cord; chronic diffuse nephritis; gummata of liver; acute serous pericarditis; acute fibrinous pleurisy.

The brain was extremely hard in all parts and the blood vessels throughout were very prominent. On section, the brain was markedly firm in both the gray and white matter. There was no evidence of gross pathologic lesions. The white substance was more firm than the gray. The cortex was slightly increased in thickness and was homogeneous and extremely firm in consistence. The injection of the capillary vessels was extremely marked throughout the brain. The basilar artery was rigid.

The spinal cord was extremely firm and showed no areas of degeneration. The entire brain, when removed from the cadaver, felt as though it had been partially hardened by some fluid.

The microscopic examination was made by me. The cerebral pia was slightly thickened and showed an unimportant round-cell infiltration. Sections from the para-central lobule stained by the Weigert hematoxylin or acid-fuchsin method presented no distinct signs of degeneration; but some of the small capillaries within this part of the brain were thickened and some were calcified. The cells of Betz, stained by thionin, were normal, except that occasionally slight diffuse staining was detected. Slight round-cell infiltration was seen about some of the small vessels within the paracentral lobule, but this was not important. In some parts of the paracentral lobule hemorrhages within the perivascular spaces were found.

The medulla oblongata appeared to be normal, both by the Weigert hematoxylin and the acid-fuchsin stains.

The neuroglia of the white matter of the spinal cord was possibly slightly increased in amount, and occasionally a somewhat swollen axis cylinder was found. The nerve cells of the anterior horns stained by thionin appeared to be normal in the cervical and lumbar regions. No alteration could be detected in the spinal cord by the Weigert hematoxylin method, and there was no round-cell infiltration within the spinal cord or spinal pia. The Marchi sections of the cord showed a very few black dots in the crossed pyramidal tracts, so few that they are of questionable importance, and were not unlike what Strümpell found in one case.

NOTE.—Since this paper was prepared a case of diffuse sclerosis has been reported by Rebizzi.<sup>19</sup> He expresses opinions regarding the relation of the pseudosclerosis to the diffuse sclerosis similar to those set forth in this paper.

19. Rebizzi: *Rivista di patologia nervosa e mentale*, Feb., 1905, p. 57, and March, 1905, p. 105. Abstract in *Review of Neurology and Psychiatry*, June, 1905, p. 420.

**Feeding Patients in the First Stage of Labor.**—The *Canadian Nurse* states that patients are less exhausted after labor if they can be induced to take a little easily digested nourishment during the first stage; and that tea, hot milk or chicken broth seldom interferes with the subsequent administration of chloroform, should this be necessary.

## CANCER OF THE BREAST.

### END RESULTS OF 100 OPERATIONS.

HOMER GAGE, M.D.

WORCESTER, MASS.

Five years ago this winter, I reported<sup>1</sup> the results of my operations on the cancerous breast, with the subsequent history of each of 46 cases. To this record I now desire to add 62 cases of cancer of the breast, all operated on prior to 1904, 42 of which were done before 1902, and have, therefore, passed the traditional three-year period.

Since the reading of the earlier paper, little has been added to our knowledge of the disease itself, nor has any substantial advance been made in the means of preventing or controlling it. The subject of the general distribution and prevalence of cancer has been much discussed, and the deaths from cancer certainly seem to be increasing steadily from year to year. This opinion is derived from the results of postmortem examinations made at the large clinics of continental Europe, as well as from the general mortality statistics of this and other countries, and from the mortality experience of the older life insurance companies.

The statistics of the autopsy room, and of the life insurance companies would seem to indicate that this increase is chiefly in the internal or visceral form of cancer, and, therefore, may be due, perhaps, in large measure to more accurate methods of diagnosis and classification. It would hardly be fair to infer from anything yet published, that there is any especial increase in cancers of the more superficial, and therefore more easily recognized parts of the body; as for example, the tongue, lip, breast or testicle. In any very marked general increase, it would seem as if these parts should share. Whether they do or not, would certainly appear to be important in reaching a conclusion on the larger question.

In spite of the efforts so long and earnestly devoted to the study of cancer in the laboratories of the world, its origin and nature still remain an impenetrable mystery. From the clinical side, it seems as if an infectious agent must be found, and it is believed that the agent will be found to be a protozoon such as is found in malaria, and is thought to have been found in smallpox and scarlet fever.

From the laboratory side, however, the discovery of such an organism, or of any organism, as the specific cause of cancer, seems highly improbable. Meanwhile we must go on empirically attempting its removal by radical operation, and waiting for its local or internal reappearance.

In my former paper, I said that I purposely avoided the use of the term cure, because it seems to be impossible to fix a limit beyond which it may not reappear, and I still think it much more exact to speak of immunity for a longer or shorter period, rather than of cure, and to omit all reference to a three-year limit.

It is perfectly true that recurrences are more common in the first year than in the second, and in the second, than in the third, and in the third than in the fourth, and so on progressively; but the progression is a regular one, with no more relative difference between the third and fourth years than between the second and third, or the fourth and fifth.

The use of the three-year period as the limit which divides the probability from the improbability of re-



currence, should be abandoned, as it no longer has any foundation for its existence.

Since 1900 there have been no valuable additions or modifications of the technic of the radical operation as then described. At that time, it seemed as if the field of operation were likely to be extended. Halstead proposed to remove the glands from the lower cervical triangle in every case, and Cushing had essayed to follow the affected lymphatics down into the mediastinum. Neither of these plans has received much encouragement, and both seem likely to fall into disuse.

Whatever may be one's theory of the origin of cancer, all agree that it is disseminated through the lymphatics, and that the probability of its thorough extermination is inversely in proportion to the number of glands secondarily involved. The free anastomosis of the lymphatics of the neck makes it altogether probable that if they are already involved, a radical or complete removal of the disease is very unlikely, and the attempted removal of more than doubtful expediency. Our efforts would better be directed to securing an early recognition of the disease and more prompt removal, than to an extension of the field of operation in neglected cases beyond the probability of a successful result.

One of the curiosities of the subject has been the discussion, during the last few years, of oöphorectomy for the relief of inoperable cancer of the breast. It was first suggested and advocated by Beatson of Glasgow in 1896, and Boyd,<sup>2</sup> in 1900, reported the results of 54 cases; 19 patients received more or less benefit, and 34 little or none at all. In some cases the superficial disease had entirely disappeared, and cancerous ulcers had healed over. But the benefit seemed to be of short duration.

Abbe, of New York, reported one or two very strikingly successful results, but they were reported so soon after the operation, as to be of little value in determining their permanent success; and, on the whole, as was to be expected, the idea seems to have been one of those curious freaks that now and then appear in surgery and medicine, hold the stage for a little while, and are soon forgotten. It never had the slightest rational basis for existing at all.

The application of the *x*-rays to the treatment of cancer of the breast has received some attention during the past few years, but this, too, has failed to accomplish much beyond the occasional healing of superficial ulceration, and the general relief of pain. As a means of effecting a radical removal, it is much less reliable than the knife, and takes so long that its preliminary trial wastes valuable time, and lessens the chance of a successful operation.

We find success, therefore, just where we did five years ago, depending on the radical operation as advocated so earnestly in this country by Halstead, viz., the removal of the entire breast with a large amount of overlying skin, with the pectoral portion of the pectoralis major muscle, and the whole of the pectoralis minor, and with the thorough and complete dissection of the axillary space.

Further experience confirms the opinion expressed in the previous report, that removal of the muscles in no way interferes with the use of the arm. In this second series there has been much less impairment of usefulness than was encountered with the earlier operations, where the muscle was untouched. The removal

is more thorough, and the dissection of the axilla, which in the present state of our knowledge is essential to a thorough operation, is made safer, easier, and far more complete.

#### SUMMARY OF CASES.

In the report of 1900, there were 46 cases, and of these, at the present time, 8 patients are living and well without recurrence. In 3 cases, 12 years have elapsed since the operation; in 1, over 11 years; in 1, 10 years; in 1, 9; in 1, 8; and in another, over 6 years. In the ninth case, the patient who was living and well at the time of the report, died 6 years after the operation of probable cancer of the brain, although no verification of the diagnosis could be made, as postmortem examination was refused.

There were no deaths from the operation, but local or regionary recurrences were noted at least in half of the cases. As many of these operations were done before I began to remove the pectoral muscles as a routine practice, now seven years ago, and were therefore less thoroughly done, I expressed my belief then, that the later results would be better, and I take pleasure now in presenting the record of what has been done from the beginning of 1899 to the end of 1903.

There are in all 62 cases, and here, as in the previous series, there has been no mortality from the operation, every one of the patients having recovered fully and completely, so as to be discharged from the attending physician's care; making 108 cases, without a single operative death. In all but 5 of these 62 cases, the muscles were removed as described above. In 3 of these 5, a palliative operation was done, as the disease had progressed so far that radical removal was impossible; and in 2, to which future reference will be made, only the tumor was excised. To those patients who were living at the time of the previous report, and to all in the present series of 62 cases, circular letters were sent requesting the following information:

Has there been any sign of return of the disease?

If so, when did it first appear?

If so where did it first appear?

Present condition.

If not living, date of death—cause of death.

Evidence of return of the disease, whether internal or external.

Name of physician attending at death.

Answers have been received from the patients, their attending physicians, or both, in every instance but one. In that case, the patient can not be traced. Deducting that one, the three incomplete palliative operations, and one case in which death was due to typhoid fever three months after the operation, and we have to consider 57 cases. In every one a pathologic examination and report has been made by Dr. F. H. Baker, and the clinical diagnosis of cancer has been confirmed. No attempt has been made to divide the growths into the so-called varieties of cancer, such as the medullary, schirrhous, adenocarcinomatous, carcinomatous, colloid, etc. Such a classification has always seemed to me very inexact; just how much fibrous stroma is necessary to make a growth schirrhous, how soft and cellular it must be to be classed as medullary, and so on, must depend entirely on the individual judgment of the examiner, and it would hardly be expected that any two classifications of a hundred specimens would be alike.

Of these 57 operations, 38 were done between 1899 and 1902; i. e., all of them more than three years ago. Fifteen of these patients, or 39.5 per cent, are alive and free from recurrence at the present time. In 2,

2. Brit. Med. Jour., Oct., 1900.



more than 5 years have elapsed since the operation; in 8, more than 4 years; and in 5, more than 3 years. In the earlier series of 46, only 11 passed the 3-year limit free from recurrent disease; so that the results as regards immunity, are distinctly better in the later series, which comprises the more radical operations.

If we turn to the unsuccessful cases, the improvement is much less marked; in the earlier series there were 23 patients in whom the disease reappeared locally, or 50 per cent.; in the later series there are 20 patients in whom local or regionary recurrence has been noted, or 53 per cent.; I group the local and regionary recurrences together because even when there is no appearance of disease in the external skin, an infiltration of the cervical or supraclavicular glands, and the hard, brawny swelling of the arm due to pressure on the axillary or subclavian vessels, are really evidences of a return of the cancerous disease in the track of our operation; and of quite a different character from the secondary growths which we observe in the stomach, liver, and brain, often after so long a period of immunity, as to encourage one to believe in the possibility of a permanent cure.

#### AGE OF PATIENTS.

A study of the ages of these patients at the time of operation throws little light on the value of age as a factor in determining the possibility of recurrence. Of the 88 patients thus far considered, 7 were between 30 and 40; 29 between 40 and 50; 22 between 50 and 60; 23 between 60 and 70; and 7 between 70 and 80. Of those who passed the 3-year limit without recurrence, 2 were between 30 and 40; 10 between 40 and 50; 5 between 50 and 60; 6 between 60 and 70; and 3 between 70 and 80. From these figures, it would appear that almost one-half of those between 70 and 80 had remained well; that about one-third of those between 30 and 50; and only one-fourth of those between 50 and 70, were equally fortunate.

This would seem to confirm the prevailing impression that cancer in very old people is less malignant than in the earlier years, just as all the vital processes are less active; but it is rather surprising to find that the patients between 30 and 50 have done a little better than those between 50 and 70. Of the two patients who were under 40 years of age—one was 34, and the other 38 years old, and both have been over 4 years without reappearance of the disease.

In both, microscopic examination showed that not only the breast, but the axillary glands were infiltrated with cancer at the time of the operation. It is unfair to draw any conclusions from so small a number of cases, but I think we may safely say that these results confirm the favorable prognosis generally accepted in patients over 70 years of age; and that they hold out greater hope than we have usually dared to express in the cases which appear before the climacteric.

#### DURATION OF DISEASE.

It is interesting to study the length of time which the disease is known to have existed prior to operation, but such statistics give little accurate information. It is very doubtful if any of these patients knew within many months of the time when bunches first appeared in the breast. How common it is to have a patient ask advice in regard to a lump in the breast, which she had discovered for the first time a week or two before, but which, from its size and feel, the surgeon knows must have been growing many weeks, if not months.

Perhaps, however, in a large enough series, the error

would be so nearly constant, that one could at least be sure which were earlier, and which were later operations. In this present series of cases, there were 74 in which the duration of the disease is given; in 5, it was less than 3 months; and of these, 1 patient is alive and well 12 years after operation; in 18, it was between 3 and 6 months, and of these 5 patients are alive and well from 12 months to 3½ years later; in 20, it was from 6 to 12 months; and of these, 5 patients are free from recurrence from 13 months to 3½ years; in 22, it was from 12 to 24 months; of these 6 patients have had no return from 11 months to 3 years, after the operation; and in 9 cases the disease had existed over 2 years at the time of its removal; and 4 patients are still free from any signs of recurrence; 9, 5, 3¾ and 3 years respectively.

Certainly no deductions of any value can be drawn from these figures. The smallest percentage of those remaining well after the 3-year limit, is among those who were operated on earliest, and the best results obtained were among those in whom the disease had existed the longest; a striking illustration of the unreliability of figures.

I believe that each of these 4 patients in whom the disease had been present over 2 years, and who are still well, represents a less malignant form of cancer, or a personal resistance to cancerous invasion. We have not yet learned to differentiate between the degrees of malignancy, any more than we have discovered why some streptococcic invasions are so much more fatal than others. Until we can do this, I doubt if much of value is to be derived from the study of the duration of cancer before its removal.

#### TIME OF RECURRENCE.

Of more importance than the age of the patient, or the duration of the disease, are the statistics which show the time when recurrence of the disease was first noted, and whether it took place in the neighborhood of the scar of the previous operation, i. e., locally, or more remotely, in other parts of the body.

Halstead made another division, which he called the regionary recurrences, i. e., those in which the scar and adjacent skin were not involved, but in which the disease appeared in the cervical and infraclavicular glands. The distinction seems to me rather a fine one, and I have preferred to call everything local, which appears in the vicinity of the former operation, and presents visible or palpable signs of recurring cancer.

In the earlier series of cases, we find that local recurrence took place in less than 6 months in 11; in less than a year in 7; in less than 2 years in 5. Internal recurrence was noted in 8; in 5 of them within a year; 3 times it is stated that the disease appeared in the stomach, once in the lungs, and once in the "bowels"—in another case, the disease is said to have been noticed first, 2 years after the operation in the abdomen, and death followed a year later with no local manifestation. One patient died 3½ years after operation, with cancer of the clavicle, and generally disseminated visceral cancer; while the eighth died 6 years after operation of cancer of the brain.

It will be observed that local recurrence occurred 3 times oftener than internal, and that in more than three-fourths of the cases, it occurred within a year. Now, if we come to the second series of cases, we find that local recurrence was observed in 7 cases within 6 months; in 3, within one year; in 7, within 2 years; and in 3, within 3 years; while only 3 patients died



from internal cancer without any local manifestation. Thus, only half of the patients had presented signs of local recurrence within the year. It will be noted, therefore, that not only has the number of those who have had immunity for 3 years increased in the second series, but the period of immunity in the rest has been decidedly longer.

I believe that this is the result of a more thorough and radical removal of the primary disease, and I am strengthened in this belief by a consideration of the patients who were operated on in 1902 and 1903, and which I have not included in these summaries.

In 1902, 11 patients were operated on for cancer of the breast; 7 of whom are still free from any signs of the disease; 2 died with reappearance of the disease locally within one year; and in 1, a local recurrence was removed in 1903, and she is still free from any further manifestations. Thus, in only 3 cases out of 11, has there been any recurrence of the disease locally, and all are 2 years old, and some of them lack but a few months of being 3 years old. One patient died within 3 months of cancer of the lung, which was probably present at the time of the operation, but not recognized.

In 1903 there were 9 operations, and in only 2, has there thus far been any recurrence. One was a patient who had been under the care of a "cancer doctor" for 4 months, and presented a sloughing ulcer, involving the whole breast; the glandular infiltration extended beyond the possibility of its complete removal, and she died with signs of local recurrence within 4 months.

The other was a very advanced case, in which I found enlarged glands reaching up above the clavicle, beyond the point where I could remove them, and therefore stated in my notes of the case that I considered recurrence merely a question of time. In one other case, in which the patient was operated on 2 years ago last May, there are some indications of malignant disease of the stomach, but this is not yet certain. In any event, here are 6 out of 9 patients who have lived beyond the year, 5 of them more than 2 years without any reappearance of cancer.

#### CONCLUSION.

Our investigations into the time when the recurrent cancer of the breast is likely to manifest itself, would, therefore, appear to show that a much longer period of immunity may be safely promised, now that the disease is more thoroughly and radically removed at the outset, than was formerly thought possible.

I think that these results fully justify the expression of confidence contained in my former report. No attempt has been made to select cases favorable for operation. No patients have been rejected except those in which it was perfectly evident that all the diseased area which could be seen or felt, could not possibly be removed; e. g., those cases in which the cancer was already firmly fixed to the chest wall, or in which the cervical and infraclavicular glands were so large as to be palpable.

Partial operations, such as these conditions make necessary, are doomed to failure from the start, and should not be attempted. Under all other circumstances, a radical removal may be safely advised. Even then, the disease on dissection will often be found to extend far beyond the limits which were recognized at the preliminary examination, but this chance must be taken, and even if the axillary glands are considered enlarged, if those beyond can not be felt, the patient should

be given the benefit of as complete an excision as is possible.

As I stated in an earlier part of this paper, I prefer not to speak of any of these cases as cured. I am not at all sure yet that cancer is ever cured, in the sense that benign tumors are cured by their removal, but I do believe that more radical and improved methods of operating have lengthened very much the period of probable immunity from a recurrence of the growth, and that the limit of benefit has not yet been reached. I think the results of these later cases justify this belief.

### REPAIR OF THE PERINEUM.\*

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SAN FRANCISCO.

If we examine the status of the operation for repair of the perineum, we find the following suggestive facts. In the various text-books and standard articles on the subject there are between 25 and 30 different methods described. Running through these we fail to find any common law or principle that governs them.

The word perineorrhaphy means simply sewing the perineum. If we were to depend on the study of these operations in order to find out whether it has any deeper meaning we should conclude that the word is used literally. That is to say, the majority of operations are simply methods of sewing and patching rents or tears.

Perineorrhaphy should imply the restoration of the function of the perineum by restoring the anatomic relation of its structures.

Before offering a practical method of repair, there are certain premises that should be accepted. They may be summed up as follows:

1. The usefulness of the perineum depends on the action of its muscles, rather than on its bulk or the strength of its fascia.
2. The chief functional structure of the perineum is the levator ani.
3. When the function of the perineum is at fault, it is the levator ani more than any other structure that needs repair.

The realization of the prime importance of the levator ani has apparently had very little influence on the technique of perineorrhaphy. I know of only two or three authors who insist on direct repair of this muscle and *who show how to do it*. By establishing its importance we realize the superiority of active function over mere bulk and acknowledge that the good perineum depends on what it can do rather than on how it looks.

It is difficult to disabuse ourselves of the idea that the function of the perineum is dependent on its size, or shape, or the strength of the tissues of which it is composed. In other words, we are prone to attribute to it passive strength, rather than active function.

The perineum is the meeting point of several muscles whose function it is to keep the rectum, vulva and vagina closed.

The rectum is closed by the powerful sphincter ani, but with this muscle we have nothing to do in the ordinary repair of the perineum. The muscles that concern us are the superficial perineal and the levator ani.

The vulva is kept closed by the superficial muscles.

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



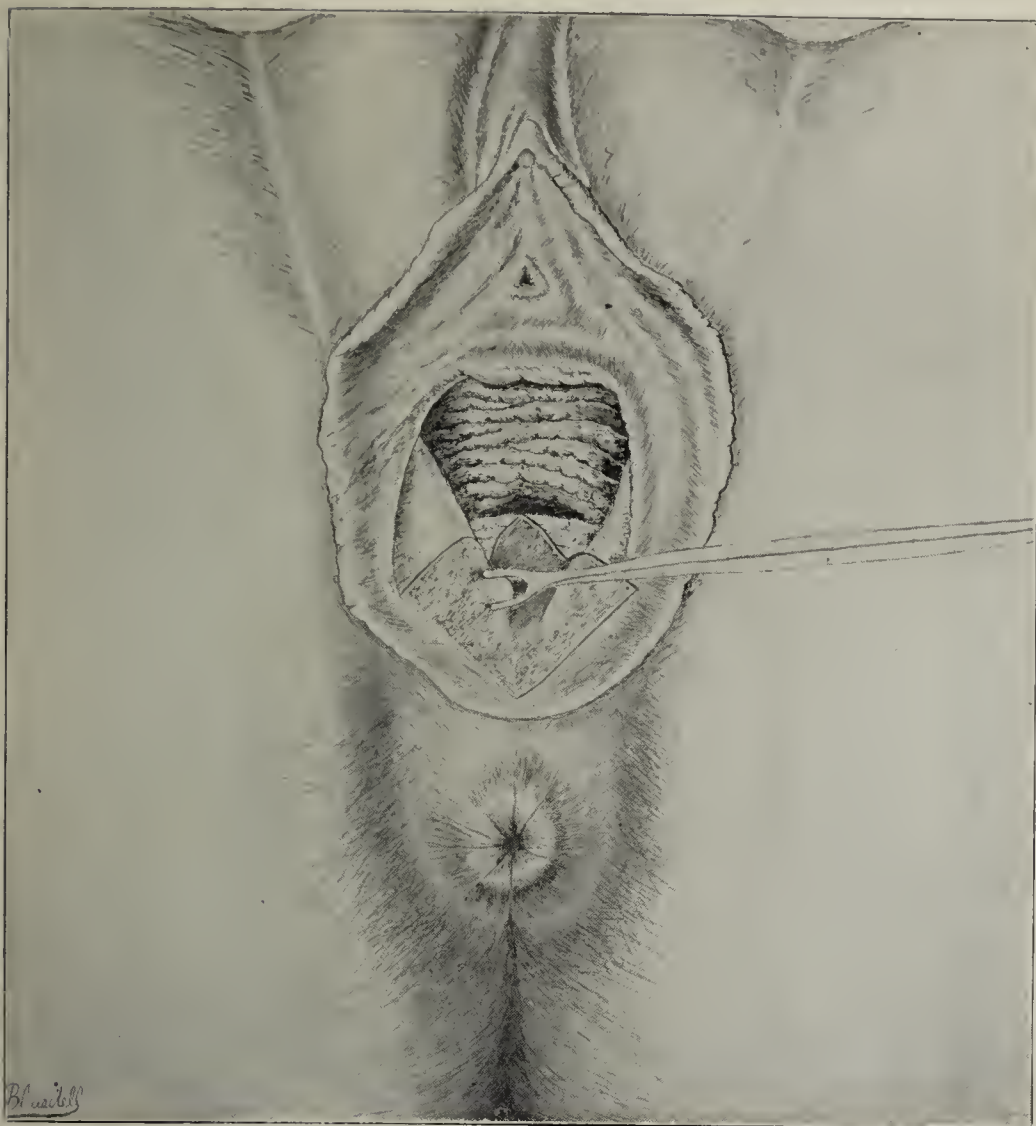


Fig. 1.—Edge of levator fished out.

Of these the bulbo-cavernosi keep the labia together, and narrow the vaginal outlet.

The transversus perinei assist in keeping the entrance closed and have some action in lifting the perineum as a whole, but neither of these muscles have much to do with keeping the vaginal walls in contact. In order to demonstrate this point we have only to call attention to the conditions found in a skin perineum where the bulbo-cavernosus and transverse perineal muscles may be intact and yet all the symptoms of relaxed vaginal outlet be present.

Suppose, however, we take the opposite condition of things, where the superficial muscles are injured but the levator ani remains unimpaired. Here we find that even where there is considerable gaping of the vulva the vaginal walls still remain in contact and no rectocele or cystocele occurs.

It is, then, the firm closing of the vagina, keeping the walls in contact and excluding the air, which prevents prolapse of the vaginal walls. That the levator is the chief factor in maintaining the closed condition may be shown first by testing with the examining finger, second by dissection, which reveals a considerable bundle of fibers running between the rectum and the vagina and which evidently act as a sphincter.

It follows from what has been said that as long as the levator is uninjured a laceration of the superficial muscles hardly

needs repair. Suppose the vulva does gape a little and expose some of the vaginal mucosa, no harm is done, and we know from experience that nearly every woman who has borne children presents this condition. To repair in such a case is nothing more than cosmetic, and we are hardly justified in advocating cosmetic operations in this part of the body, at least in polite society.

On the other hand, when the perineum does not perform its duty, when there is rectocele or cystocele, then the levator ani is at fault. It is torn or stretched or relaxed, and its repair must be the chief aim of any operation designed to restore the perineum.

#### CONDITION OF THE LEVATOR WHEN INJURED.

In childbirth the levator ani is enormously stretched and sometimes lacerated. If injured, the ruptured ends retract, diminishing the thickness of the perineum in proportion to the injury to the muscle. The retracted ends may be found at the sides of the vagina. In place of a body, we have remaining between rectum and vagina only a thin septum consisting of rectal mucosa joined to vaginal mucosa. In some cases where there is not a complete laceration of the levator fibers, they are so relaxed or overstretched that they can not properly keep the vagina closed. The result is a hernia of the pelvic contents. If

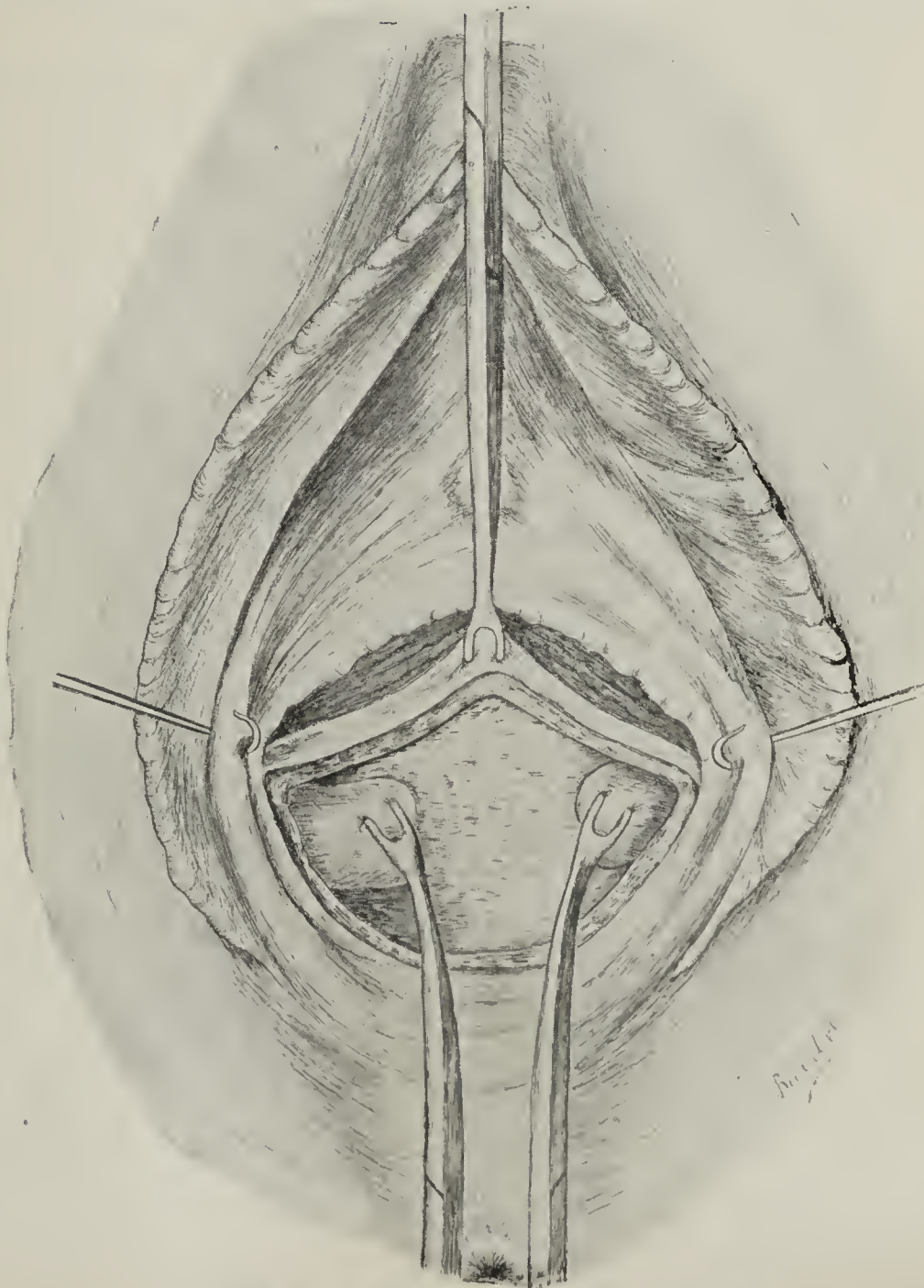


Fig. 2.—Both edges held ready for suturing.



divided ends apart rather than to unite them.

#### HEGAR OPERATION.

In the Hegar operation, the triangular denudation leaves nothing in the way of direct union of the fibers, but there is no special effort made to isolate, expose and unite them. As they are retracted, they are necessarily covered with more or less tissue. Simply to bring the denuded surfaces together does not bring the two portions of the levator in direct contact.

#### REED'S OPERATION.

One of the very few efforts to get the levator directly united is made by Reed. He splits up a flap, as in Tait's operation, feels for the levator with the finger, passes two sutures through each edge and in tying draws them together in the median line. The flap is then sewed down over the united muscle. To my mind, this operation is based on correct principles. Where there is but a small amount of redundant mucosa it is above criticism. In the majority of cases, however, it is desirable to remove more or less tissue on account of redundancy, the presence of cicatrices, irregular sulci, etc. Accordingly, the following technic is offered as an easy method of exposing and uniting the le-

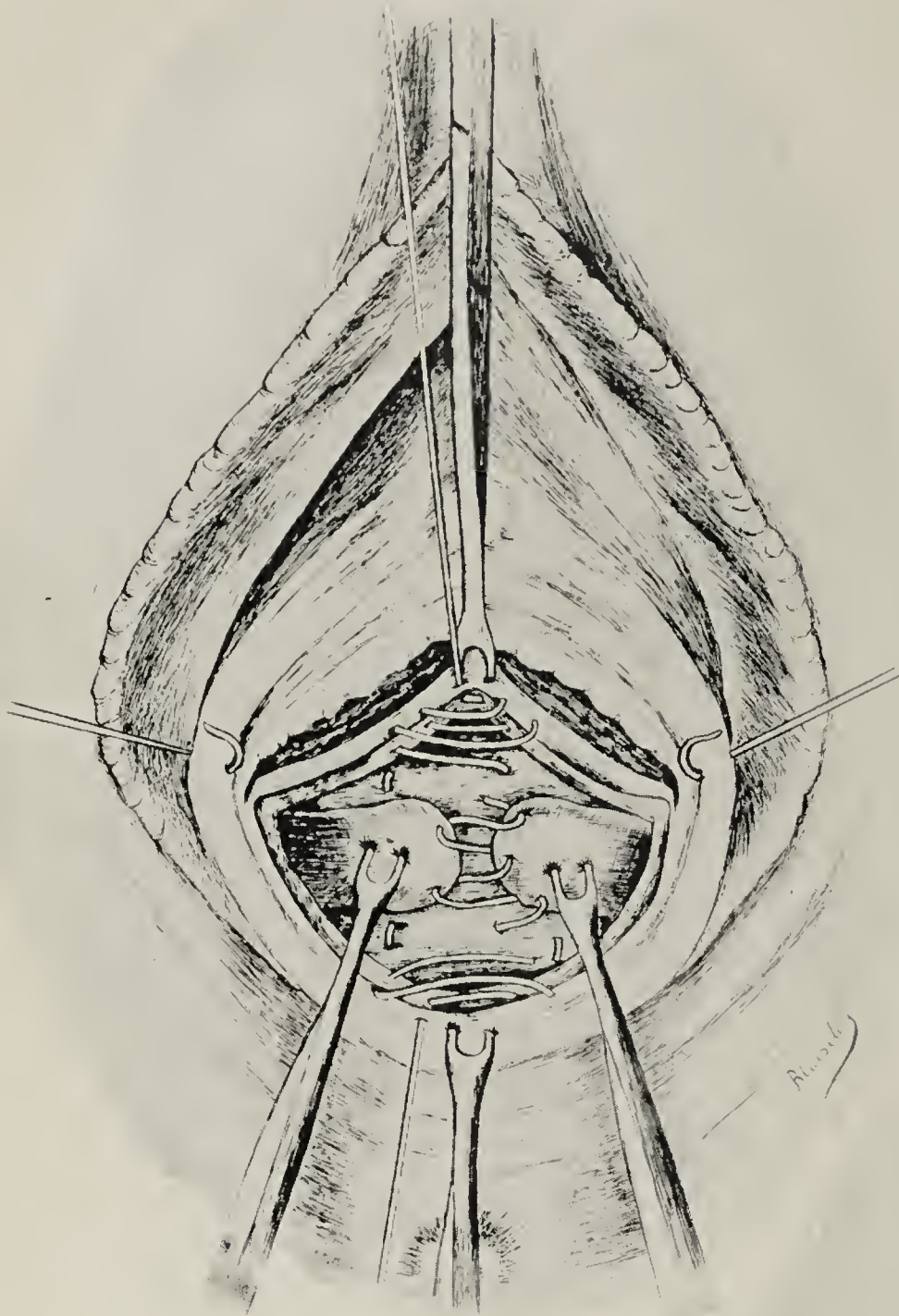


Fig. 3.—First suture inserted (vulsella should still be in place).

we could examine the injured levator ani, stripped of all other tissues, we would find that it practically presents one large opening for rectum and vagina, instead of a separate opening for each. Therefore, in order to cure the hernia, the openings through the pelvic floor must be made smaller by restoring to their former relations the retracted ends of the levator ani.

#### EMMETT OPERATION.

Do the ordinary operations bring the levator ani fibers directly in contact? In the Emmett operation, the inverted W denudation leaves a tongue in the median line, which is a portion of the original rectocele. This tongue is a thin septum consisting chiefly of vaginal mucosa joined to rectal mucosa and either containing no levator fibers, or at most fibers that are relaxed. It is, then, a pathologic structure and in no way suitable to form a connecting link between the retracted ends of the levator. Yet in the operation this intervening tongue of rectocele is sewed to the levator on each side. It serves to keep the

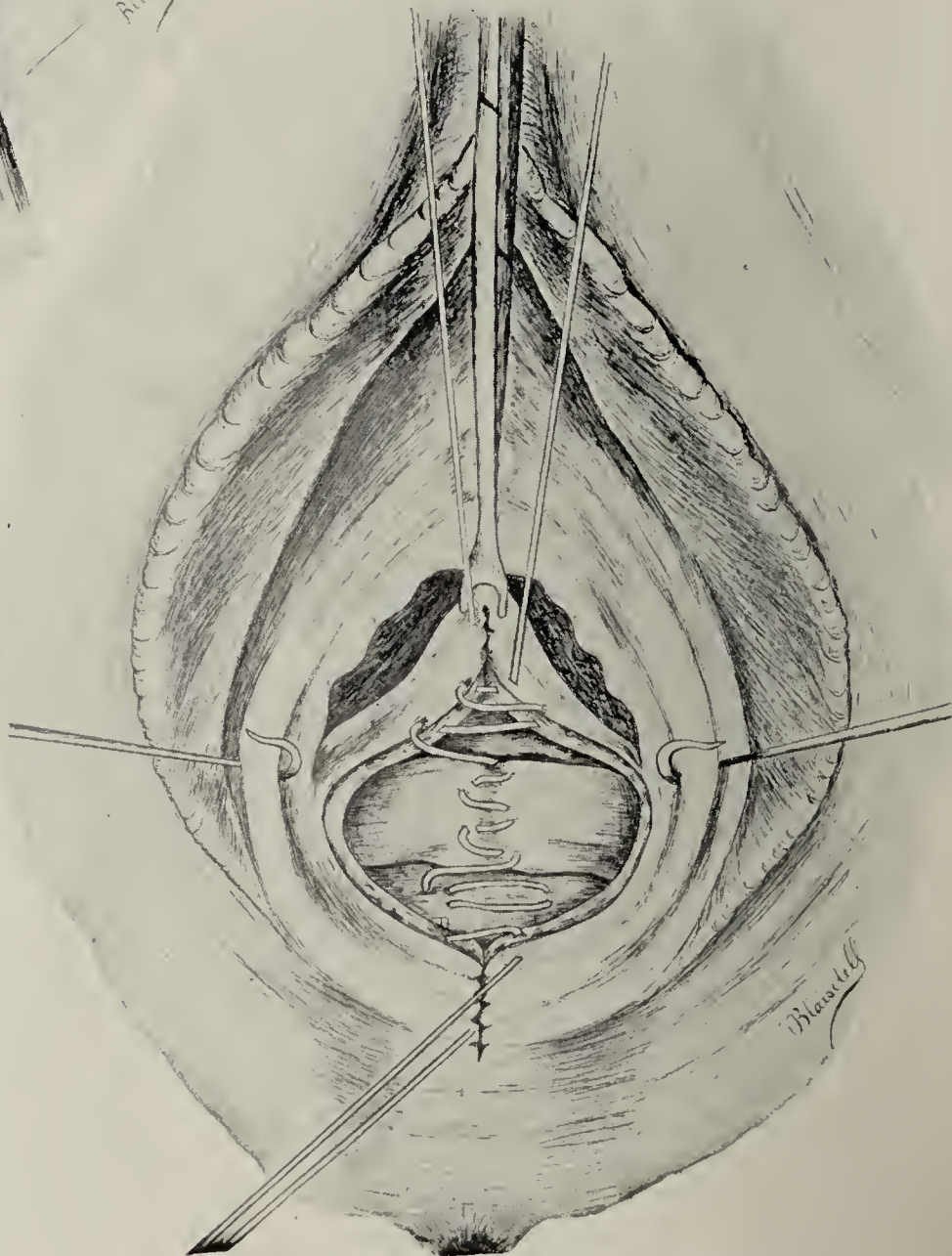


Fig. 4.—First suture drawn taut; second suture inserted.



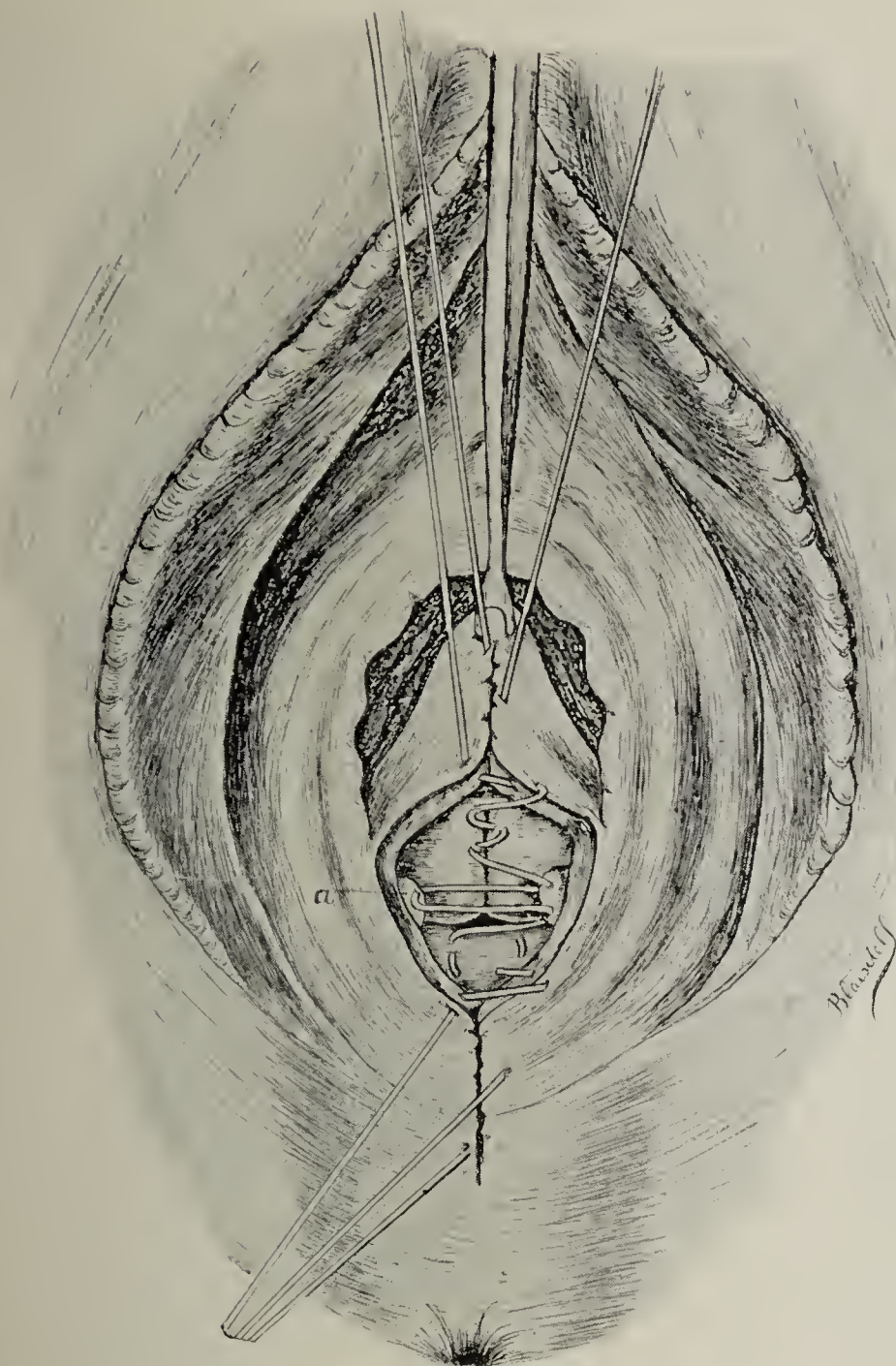


Fig. 5.—Second suture drawn taut; third suture inserted.

vator fibers, adapted to cases where there is much relaxation or deep sulci.

#### FISHING OPERATION.

In the first place, the edges of the levator are located on either side by examining with a finger in the vagina. A simple denudation is now made with the idea of uncovering the points where the muscle is felt. A triangular denudation answers as well as any, and is adopted because simple and convenient.

When the mucosa is removed, the muscle is again felt for, a vulsellum or tenaculum forceps is pressed into the tissues, the edges caught and fished out so as to be freed from the surrounding tissues (Fig. 1). The same is done on the opposite side. The two portions of the muscle are thus made to stand out prominently, are under perfect control and may be examined and united under guidance of the eye (Fig. 2).

It seems to me that some such exposure of the levator ani should be the basis of every operation for repair of the perineum, at least where there is relaxation or a rectocele. We can not but acknowledge that

it is a rational procedure, provided we concede the paramount importance of the levator ani.

How the edges shall be brought together makes little difference and may be left to the choice of the operator, but the point insisted on is that, in some way, they be exposed and directly united.

#### THE SUTURE.

In considering how the parts may best be united, it develops that a great deal of trouble has been experienced with the suture. Probably more varieties of suture have been suggested for perineorrhaphy than for any other one operation. The reason for such a great variety is to be found in the common experience of operators. They find that the sutures fail to hold, or cut into the tissues, or produce stitch abscesses, or in some cases even bury themselves completely.

The difficulties are due partly to the impossibility of protecting the perineal region from rectal, bladder and vaginal discharges. But my own experience and study of the subject lead me to believe that failure is most frequently due to the use of interrupted sutures. Sutures that are tied necessarily interfere more or less with circulation. How can any tissue live that is packed with many closely set, tied sutures, as is recommended in many operations?

The unyielding nature of the interrupted suture is the most serious drawback to its use in perineal work, for any slight swelling causes it to cut into the tissues and open up avenues of infection.

Buried sutures in the perineum are always objectionable, because even in the hands of the most careful they may become infected and cause failure.

A suture inserted in the perineum ac-



Fig. 6.—Relations of sutures and method of clamping.



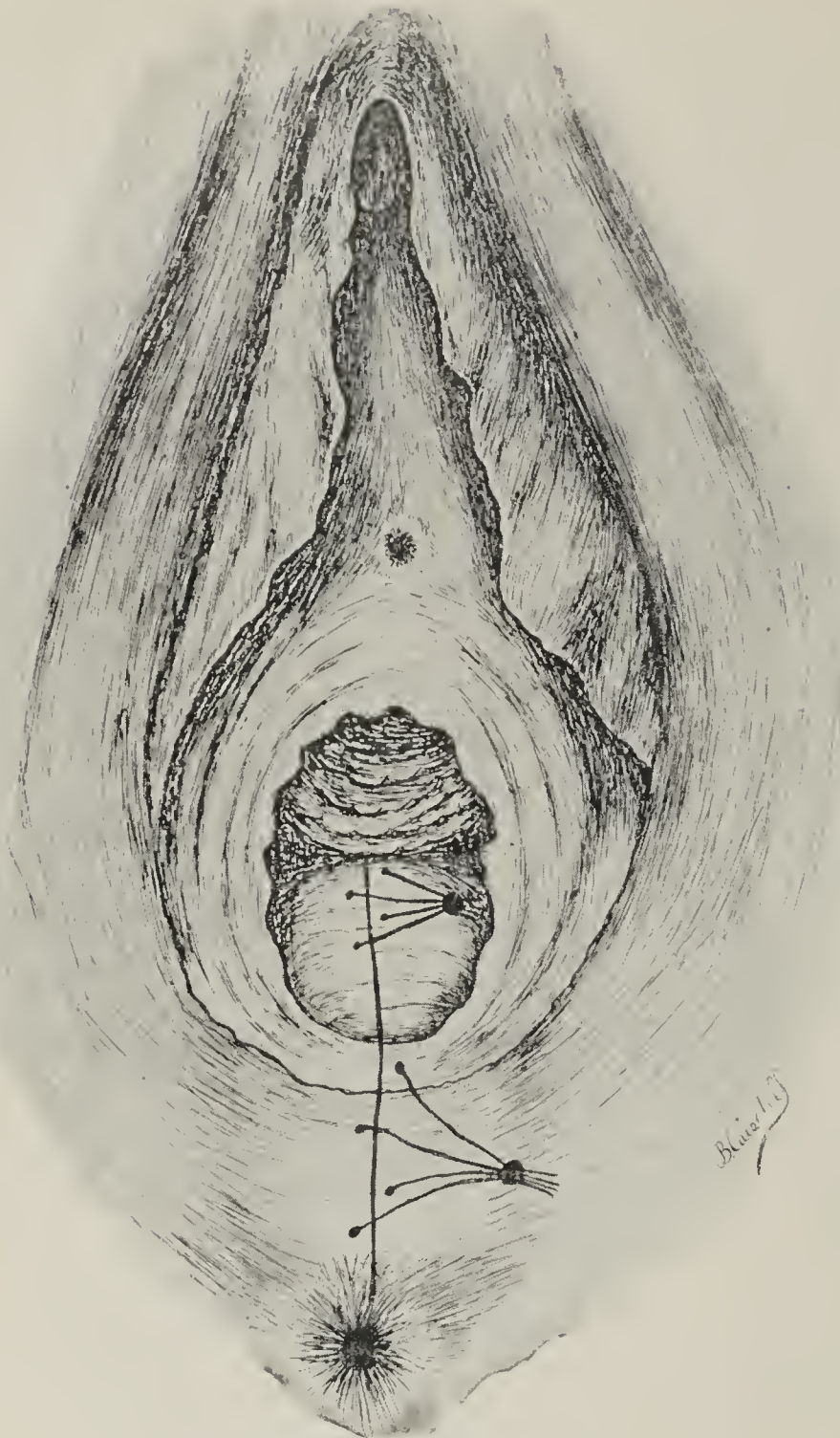


Fig. 7.—Operation completed.

According to the following technic appears to obviate the chief objections to both the buried and the interrupted suture, and at the same time allows for swelling.

Silkworm gut is used. Passing through the apex of the triangular denudation (Fig. 3,) the suture is inserted with a mattress stitch, from side to side, in the deepest portion of the wound. In passing by the exposed levator ani fibers (still held by vulsella) it passes through the edges of each two or three times. It then continues in the deep portion of the wound, taking up next the tissue over the denuded ends of the superficial perineal muscles. Finally it emerges through the skin, on the perineal surface, just above the lower angle of the wound. It is then drawn taut approximating the tissues. A second and third are passed in similar fashion, each taking in a portion of the levator ani, one above the other (Figs. 4 and 5). As each suture is drawn taut, the tissues come together, bringing the denuded surfaces in contact.

The fourth suture is submucous and serves for a final closure of the wound. When all the sutures are inserted and drawn taut they have the relations shown in Fig. 6.

The most important feature of the suture is the method of fastening the ends. After making certain that the sutures are all drawn taut, the vaginal ends are

gathered into a single shot and clamped from half an inch to an inch away from the surface. The perineal ends are then likewise clamped about the same distance from the surface.

This device allows for swelling. While the sutures keep the parts firmly in contact, yet if any swelling occurs the tissues simply slide along the free ends toward the shot, taking up more or less of the slack.

The appearance of the parts when the operation is finished is shown in Figure 7.

In removing the sutures, which is usually done on the tenth day, the shot within the vagina is seized and the sutures cut off close to the surface. The perineal ends are then grasped and pulled out.

By this method of suturing the perineum is built up layer by layer and the surfaces approximated evenly, without tension and without constriction of the circulation. The consequence is that the tissues are in the best possible condition for immediate union.

In case swelling occurs, the sutures can not injure the tissues by cutting into them or cutting out. The surfaces are still kept in contact against the time when subsidence of the swelling or inflammation permits the healing to proceed.

606 Sutter Street.

#### DISCUSSION.

DR. J. H. CARSTENS, Detroit, said that the pelvic organs are not supported by muscle. Muscle never supports anything. It is the fascia, the tissue between the muscles. Muscles simply stretch out and they get shorter, but they can not hold anything by themselves; and so it is with the uterus. It is the pelvic fascia, the fascia between these various layers of muscle that make the perineum strong. Dr. Somers talked as though the tear is always in the center of the perineum. That is the case only occasionally. The perineum tears all over, in all directions, according to the strength of the muscle. The tear is ragged and depends on the position of the presenting part. All these things have to be borne in mind. There is no one correct way of repairing a torn perineum. It depends on the individual case. Sometimes one must put in the sutures one way and sometimes another. To restore a torn perineum the surgeon must be an artist. In operating immediately after delivery, before the muscles have had a chance to retract, with a large *en masse* suture one may be able to bring the muscles together pretty fairly. But this can not be done after the muscles have retracted. If the ends are pulled together, the probability is that they will not be in perfect apposition with each other. If the tear is on one side and ragged, this method will fail utterly. Dr. Carstens declared that a catgut ligature can not be inserted as Dr. Somers described, and challenged anyone to do it. The suture straightens out and then cuts through the tissues. All silkworm-gut ligatures, no matter how they are put in, will get round. Dr. Carstens criticised the big flap made by Dr. Somers, and said that it stretches and contracts, and if the woman becomes pregnant again there is not enough elastic tissue to stretch out and the perineum is bound to tear again. The surgeon has no more business to remove any of the mucous membrane and submucous elastic tissue in a vaginal operation than in a hare-lip operation. The flap-splitting operation of Tait is good, but it is too much like butchery. That was one of Tait's distinctive characteristics; he lacked the delicacy of touch that a gynecologist should have. He put in a big *en masse* stitch with a big needle that looked like a poinard, and then



he wondered why the woman had pain after the operation. One can perform a delicate flap-splitting operation, sometimes going nearer to the vagina and sometimes nearer to the rectum. In performing this operation, the flap is dissected out and lifted up two inches or two and a half inches, so as to get beyond the scar tissues. That gives a big opening. If the rectal muscle is torn, it is drawn together with dry sterilized catgut. Then the perineal muscles are sewn together separately, the fascia is brought forward together with the muscle on either side, little sutures are put in or run together with a little needle, bringing together one muscle after the other, and, finally, when the tissues are in contact, then, with a running stitch of fine catgut, the skin is brought together, and the whole structure is restored, muscle to muscle and fascia to fascia. There is no cutting or giving way of sutures and the woman has no pain. There is no tension on the sutures, no tearing out of sutures.

DR. H. O. MARCY, Boston, said that the repair of the perineum seems to be the *bete noire* of obstetric surgery. All gynecologists certainly should agree on the general principles of the operation, though even these do not seem to be well recognized. He said that all must agree with Dr. Carstens regarding the importance of the fascia as well as of the muscles. The site of the rupture will necessarily vary, as the direction of the force is not uniform. The pelvic floor in both sexes is made up of muscles and fascia blended together and wrapped and reinforced by connective tissue. When these tissues are torn asunder they must be restored as nearly as possible to their former condition. In order to reunite the separated transversi, the vagina must be separated from the rectum. This separation should be carried to the crest of the rectocele by a free open dissection. It is done best by dilating the sphincter ani and keeping the parts tense with the fingers in the rectum until the operation is finished. In this way the muscles are easily brought into view, and Dr. Marcy thinks that they are best reunited by a double continuous suture of kangaroo tendon, applied by means of a needle with an eye near the point, which is especially designed for this purpose. A shoemaker's stitch coapts and does not constrict the parts. A light running absorbable suture coapts the superficial tissues, building up the perineum to its normal depth. The skin is evenly joined on the median line and the line of suture is covered by a few fibers of absorbent cotton, wet with contractile iodoform collodion. This makes an effective antiseptic scab. With proper care, primary union will result. Recently a surgeon saw Dr. Marcy operate, and asked the matron of the hospital how many failures Dr. Marcy had in his operations, and he was told that not one failure had occurred in seventeen years.

DR. W. F. B. WAKEFIELD, San Francisco, declared himself thoroughly in accord with Dr. Somers, and with Dr. Carstens, whom, he thinks, has entirely misunderstood Dr. Somers. The only difference Dr. Wakefield can see in their technical construction is that Dr. Somers removes more mucous membrane than Dr. Carstens does. Dr. Wakefield has used Dr. Somers' method many times, with excellent results. He thinks Dr. Carstens' method will produce equally good results.

DR. E. D. FERGUSON, Troy, N. Y., said gynecologists must not lose sight of the fact that both muscle and fascia are essential to the perineum and pelvic floor. Dr. Carstens spoke of the inadequacy of the muscle, but there is the same inadequacy of the fascia. Both these structures must be brought together by interrupted or other sutures. The fascial tissues, if subjected to continuous pulling, will stretch. No muscle will stand continuous traction. It has a voluntary function. The result is that if one depends on fascia, it will elongate. If one depends on muscle alone, it will lose its power; but the muscle can contract and rest the fascia, and a long-continued traction will not produce a permanent loss of function if muscle and fascia can take each other's place.

DR. CHARLES S. BACON, Chicago, said that some years ago little was said about repair of the levator ani muscle, only about repair of the perineum. That, of course, is a mistake, and may lead to some errors in the consideration of this question. The levator ani muscle is extremely important, but a

very essential part is also the muscle of the urogenital trigone. Between the fasciæ of this structure there is muscular tissue which has been divided into different layers. This muscle closes up that part of the pelvic outlet which is not closed by the levator ani, and through it pass the vaginal and urethral tubes. This must be considered in the repair of the lacerations of labor. Dr. Bacon stated that the structure of the urogenital trigone is very thick, and in a repair it must be brought together very carefully, and it occurred to him that it would not be repaired so well by Dr. Somers' method. The direction of the fibers is quite different from that of the fibers of the levator ani muscle; so that even if the method is a good one for the repair of the levator ani, it might fail to bring together the urogenital trigone structures. One would also suppose that this longitudinal suture would not bring together well the levator ani and its fascia. That, however, is a matter to be determined only by experience. One thing that should be emphasized, Dr. Bacon said, is the mistake that Dr. Carstens made in saying that the essential thing is the fascia and not the muscle fiber. Undoubtedly, the fascia is important, and one can not unite the muscle without bringing the fascia together, but to claim that the fascia is all-important is certainly a mistake. Fascia will not hold unless there is muscle. It is only the muscle of the natural ligaments of the uterus that holds. The fascia alone will not hold in the repair of the abdominal incision. The muscles must be united. Muscle tissue everywhere is of extreme importance for obtaining permanent results, and fascia is only the support of the muscle. While he agreed with Dr. Carstens in his technic, Dr. Bacon thinks it is a mistake to claim that the fascia is all-important.

DR. F. T. ANDREWS, Chicago, said that while Dr. Somers has described a very beautiful operation for the repair of the perineum, a perineum is not worth anything unless it is in the right place. The levator ani muscle with its fascia is the thing to which attention must be given, but this muscle, after a laceration, has one large opening in it. The baby's head has come down through the pelvis. There are no tissues, practically, in the pelvis. The coccyx is crowded back. The anus is two inches below the coccyx and fully as far back, and the tissues are all crowded outside. The muscle and its fascia are no longer perfect. That has not all happened at once; there has been a long-continued pounding and stretching of the tissues. If that perineum is repaired by picking up the ends of the muscle and fascia and bringing them together, there is no longer a shallow bowl, but a deep funnel. The tissues have not been lifted so as to support the organs within. One can not accomplish the desired result by bringing the tissues together; they must be denuded in order to get down to the muscle and fascia and to put in the stitches so that every stitch draws the tissues forward. By measuring from the pubes, it will be found that the rectum is too far back; so, too, the vagina. The stitches should be passed so as to carry everything upward and forward. The laceration should be so repaired that there will be sufficient obliquity in the vaginal axis. To do this, the traction of all stitches should be upward and forward, thus restoring to the levator ani muscle its original shape, that of a shallow bowl.

DR. A. R. KIEFER, St. Louis, believes that the reason operators differ in this matter is that there does not seem to be sufficient knowledge of the normal anatomy of the perineum. Much has been said about bringing the fibers of the levator ani muscle together. Normally, there is very little interlacing of the fibers of this muscle until it gets back to the rectum. Therefore, in an ordinary laceration of the perineum, very few fibers of the levator ani are torn. These muscles are held in close relation by the intervention of fasciæ, as mentioned by Dr. Carstens. These accurate descriptions of replacing the levator ani muscle fibers in the median line are amiss. Dr. Kiefer agreed that the thing to do is to try to replace the parts just as they were before the injury; therefore, there can be no uniform manner of denudation or of placing the sutures, because there is no uniform manner of laceration. He finds that sometimes he can use large stitches to advantage, and sometimes small ones. If, however, one introduces the large suture, beginning on the surface and picking up only



the superficial portions of the denuded surface, it will result in a small area of included tissue which pulls the skin inward, and there will be a small perineum.

DR. G. B. SOMERS declared it seems that we are still at sea as to what is really necessary to be done in repairing a lacerated perineum. The anatomy and function of the perineum are not understood. He does not maintain that one operation is better than another, but he does maintain that before repairing a perineum we must establish certain definite principles as a working basis; we must have an anatomic rather than a pathologic basis. One can build up a perineum by any one of about forty methods so as to get a good looking perineum, but the point is: Will that perineum last? With the Emmet or Hegar or Tait operation he has found that after six or eight months the tissues have stretched, because pathologic and not normal structures have been used. The first point he tried to demonstrate was the importance of the levator ani muscle. It is the most important muscle of the perineum, and unless the surgeon is convinced of that the operation is a useless one. The sphincter action of this muscle must be restored so as to maintain the closure of the vaginal walls, keeping the anterior wall in contact with the posterior. Dr. Somers expected to be misunderstood in many of the points he tried to make, and he expected that some one would bring up the old point of the difference between the muscle and the fascia. This shows that there is a lingering idea that the function of the perineum depends on the strength of the tissue of which it is composed, rather than on its sphincter-like action. No muscle is of value apart from its fascia, so that when in speaking of a muscle, one must also consider its fascia. The levator ani has rectal as well as vesical fascia, and both are important. It is true that tears rarely occur in the median line, and Dr. Somers' demonstration was as to the ultimate results of a tear in one of the sulci. The majority of lacerations occur in the sulci. He maintains, however, that the fibers gradually retract and atrophy, so that ultimately the conditions are the same as if the tear had been in the median line. With reference to the importance of the superficial muscles, he said that in the majority of women who have borne children, these are torn and the vulva gapes open, exposing more or less the entrance to the vagina, but a little farther within it is perfectly plain that the vaginal walls are held together by a strong band of levator fibers, and as long as these are intact there is neither rectocele nor cystocele. If one believes that the levator ani muscle is the principal portion of the perineum, and that the function of this muscle should be restored, then he must have some way of uniting it. Simply to use the Hegar or Emmett operation does not provide for a direct union of the two edges of the muscle. Dr. Somers' chief object in presenting the paper was to show an easy method of restoring the function of this muscle.

## TYPHOID FEVER IN CHILDREN.\*

WILLIAM J. BUTLER.

CHICAGO.

### REVIEW OF LITERATURE.

The symptom-complex of typhoid fever seems to have been recognized by the earliest observers; not, however, under its present name, but by a number of different ones, derived from various characteristics of the disease, viz., from the character of the fever and its duration, from the predominance of nervous or intestinal symptoms, from septic manifestations, from its resemblance to other fevers, from its mode of prevalence, and from its supposed origin.

Hippocrates<sup>1</sup> description of a fever observed by him would form an excellent clinical picture of what we now term typhoid fever.

From Spigelius, in the seventeenth century, to the

present time, various writers have described a disease which, clinically and pathologically, resembled typhoid fever.

### FREQUENCY OF TYPHOID IN CHILDREN.

The occurrence of typhoid in children appears to have been an early observation. It seems quite impractical, however, to arrive at any accurate estimate of its comparative frequency for many reasons, unless we refer to statistics obtained in epidemics taking place in small towns. The following statistics may prove of interest in this direction:

Franque found in Nassua, in 31 years, among 11,028 cases of typhoid, 2,021 under 10 years. Gaultier de Claubery<sup>2</sup> found 31 per cent. under 15 years, out of 7,348 cases. Baginsky,<sup>3</sup> in 50 cases in a local epidemic, reported 16 under 10 years. Rosenthal, in a village epidemic, observed 28 under 10 years in 115 cases. Schadler,<sup>4</sup> under similar conditions, found 11 under 10 years, out of 144 cases. Murchison<sup>5</sup> reported 28.5 per cent. of 5,911 cases under 15 years. Curschman<sup>6</sup> reports 27.7 per cent. of his Leipsic cases occurring in children, and 11 per cent. of his Hamburg cases.

The above data does not admit of any accurate deductions as to its comparative frequency, except possibly the statistics of Rosenthal, Baginsky and Schadler, based on observations in localized epidemics. But even under the circumstances it is probably not infrequently overlooked in sucklings.

While typhoid in children is far more frequent in later periods of childhood, its occurrence in the earliest months, and even *in utero*, was early recognized, as indicated by the reports of Abercrombie, Charcellay, Mazzini, etc.

Innumerable reports have since appeared, which certainly represent but a small fraction of cases that have actually occurred. The fact remains, however, that it is comparatively infrequent when compared with later periods of childhood.

Wunderlich<sup>7</sup> states that it was seldom found in infants, but increased in frequency in children from 2 to 6 years of age, reaching its maximum for childhood in the latter year.

Montmollin<sup>8</sup> reported the greatest frequency from 6 to 12 years.

Table 1 gives more recent data quoted by Curschman<sup>6</sup> from Oldenburg Children's Hospital of St. Petersburg, from 3,504 cases of typhoid in children.

TABLE 1.—TYPHOID CASES IN CHILDREN'S HOSPITAL, ST. PETERSBURG.

Between 1 and 6 months	.26 per cent.
Between 6 and 12 months	.99 per cent.
Between 1 and 2 years	4.94 per cent.
Between 2 and 5 years	42.3 per cent.
Over 5 years	51.3 per cent.

### INFLUENCE FORMERLY ATTRIBUTED TO SEX.

Some of the earlier pediatricians attributed to sex a considerable influence in the predisposition to typhoid, as instanced by the following statistics:

Taupin reported 121 cases, of which 86 were boys and 35 girls. Rilliet and Barthez reported 111 cases, of which 80 were boys and 35 girls. Löschner,<sup>8</sup> in 104 cases, reported 62 boys and 42 girls. Friedrich, in 275

\* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Hippocrates: Quoted from Murchison's Treatise on Continued Fevers.

2. Gaultier de Claubery: Rap. sur les épidémies qui ont régné en France de 1841: Mem. de l'Acad. de Méd., vol. xiv, 1849.

3. Baginsky: Virchow's Arch., vol. xlix.

4. Schadler: Diss. inaug., Solothurn, 1854.

5. Murchison: Treatise on "Continued Fevers."

6. Curschman: Nothnagel's "Encyclopedia of Practical Medicine." Typhoid and Typhus Fevers.

7. Wunderlich: Arch. f. physiol. Heilkunde, 1857, vol. 1.

8. Löschner: Prager Vierteljahrsschrift., 1846.



cases, 149 boys and 126 girls. Friedleben,<sup>9</sup> on the other hand, found greater frequency in girls; in 98 cases there were 46 males and 52 females. Murchison considered that the predominance of one sex in different hospitals is determined by accidental circumstances.

Baginsky<sup>10</sup> states that, in general, boys are more frequently attacked than girls. Curschman writes that both sexes are attacked with equal frequency.

Of my 210 cases, 106 were males and 104 females.

#### THEORIES OF CAUSATION.

It is quite interesting to note that of the earlier writers on the subject some believed typhoid contagious, while others took an opposite view. They called attention to its development in people recently arriving in localities where the fever was endemic. In Germany many referred it to poor hygienic conditions, foul air, damp, dark dwellings, and impure and improper food. At the same time they doubted its contagiousness.

In the first half of the last century, von Gietl,<sup>11</sup> of Munich, taught that it was disseminated by the feces of typhoid patients. Piedvache<sup>12</sup> (1849) came to the conclusion that, under certain circumstances, it was contagious. His chief argument was that, when one individual was attacked, many other cases often followed in the same house or district. Bühl<sup>13</sup> and Pettenkoffer<sup>14</sup> originated and advocated the ground-soil theory. Taylor,<sup>15</sup> in 1858, in England, reported an epidemic caused by cow's milk. Murchison advocated the theory of its dissemination by air and water polluted with decomposing sewage and other forms of putrefying animal matter.

Budd<sup>16</sup> believed the typhoid poison a specific agent, which, instead of developing, according to Murchison's theory, outside the body, was discharged with the stools. It, therefore, could not occur without the existence of a previous case. He further stated that if the specific poison in the stools could be destroyed the spread of the disease would be checked.

Gerhard, some years later, wrote that, while man does not possess a microscopic recognition or reagent for typhoid poison, if water contains more than a trace of ammonia and organic constituents, or more than four parts out of a million of saltpeter, it must be regarded as unfit for use and a capable vehicle of infective material. He considered the fever contagious in so far as long and constant contact with typhoid patients results in the transfer of the disease. Gerhard was also of the opinion that it could be transferred *in utero* by a healthy mother, analogous to variola, on the basis of cases reported by Schädler and Herard.<sup>17</sup>

It would seem that all that was lacking in Budd's theory, as suggested by Curschman, was the discovery of the bacillus, which occurred in 1880, being found by Eberth<sup>18</sup> in the intestinal lesions and spleen. It was later isolated by Gaffky,<sup>19</sup> and its morphology and cultural properties thoroughly described. Since then an enormous mass of literature has accumulated in the

study of the bacillus which has brought forth many points of value, among others its occurrence in the stools, the comparatively frequent presence of the bacillus in the urine of typhoid patients, determining the infectious character of the excreta and the necessity of disinfecting the same.

Although much has been written on the tenacity of the typhoid bacillus outside the body under dry and moist conditions, and the possibility of its conveyance to the individual in dust, it is highly probable that practically all cases occur either by direct accidental conveyance from typhoid patient to those in immediate contact, through hands or articles being brought to or into mouth, when soiled by discharges of patient, or, which is by all odds the most frequent, the contamination of water or food by the typhoid bacillus.

The discovery of the agglutinating power (Widal<sup>20</sup> reaction) of the blood of typhoid patients or immunes on the bacillus itself has proved invaluable as a diagnostic resource, and likewise the isolation of the bacillus from the blood.

#### PATHOLOGY.

Taupin<sup>21</sup> and Rilliet<sup>22</sup> were the first to give special study to the anatomic changes in typhoid in children, with the view of determining any difference that might exist between those found in childhood and adult life.

Rilliet came to the following conclusions, among others:

"1. In children are found the lesions of Peyer's patches, the solitary follicles and mesenteric glands, such as are noted in the adult, but the ulcerations are smaller, fewer in number and more superficial. 2. Ulceration is not necessarily the result of phlegmasia, as it may end in resolution. 3. Cicatrization takes place rapidly. 4. Ulcerations of mucous membranes elsewhere are rare."

Gerhard stated that the changes in the bowel in childhood could deviate essentially in their development and extent from those found in adults. He believed, with Rilliet and Friedrich, that ulceration seldom took place between the second and seventh years, although occasionally found in sucklings. When ulceration did occur, the ulcers were few in number, but sometimes deep, even to the extent of perforation.

It was the general opinion of the earlier writers that the intestinal lesions were not numerous; that, as a rule, absorption of the hyperplasia, without proceeding to ulceration, occurred; that when ulcerations took place they were fewer in number, of slight extent and usually superficial, rarely progressing to the extent of perforation. As a result, local complications depending on the ulceration of the intestinal lesion were rare, as hemorrhage and perforation. Montmollin, on the other hand, reported ulceration in 77 per cent. of 23 cases in which autopsy was performed.

The enlargement of the mesenteric glands adjacent to the intestinal lesions presented no deviation to those found in the adult.

Barthez and Rilliet<sup>23</sup> found the spleen of normal size in about one-third of their postmortem cases. Barrier, Löschner, Friedleben and Bednar<sup>24</sup> reported it invariably enlarged. Gerhard wrote that the enlargement of the spleen can fail. The cause of this may be early death, or it may be the result of hemorrhage.

9. Friedleben: *Griesinger's Arch.*, 1848, No. 1.

10. Baginsky: *Lehrbuch des Kinderkrankheiten*.

11. Von Gietl: *Constat's Special Path. and Ther.*, vol. II, 1847.

12. Piedvache: "Recherches sur la contagion de la Fièvre Typhoïde," 180.

13. Bühl: *Zeitschrift f. Biologie*, vol. 1, 1865.

14. Pettenkoffer: "Boden und Grundwasser in ihren Beziehungen zu Cholera und Typhus," Munich, 1869.

15. Taylor: *Edin. Med. Jour.*, June, 1858.

16. Budd: *Lancet*, 1856, vol. II.

17. Herard: *L'Union*, 1855, No. 91.

18. Eberth: *Virchow's Arch.*, vol. lxxxiii.

19. Gaffky: *Mittheilungen aus dem kais. Gesundheits Amt.*, vol. II.

20. Widal: *Bull. Méd.*, 1896.

21. Taupin: *Jour. des con. méd. chir.*, 1839.

22. Rilliet: *Arch. Gen. de Méd.*, ser. 3, vol. IX, 1840.

23. Rilliet & Barthez: *Arch. Gen. de Méd.*, 1846, 3 s. IX.

24. Bednar: "Die Krankheiten der Neugeborenen und Säuglingen," Vienna, 1850.



The liver is frequently enlarged and usually pale in color, turbid on section, and showing microscopically granular and fatty degeneration.

*Respiratory Organs.*—Laryngeal ulcers are rare, except in late childhood. They occur on the posterior wall at the insertion of the vocal cords, on the aryepiglottidean folds, and at the base of the epiglottis. A varying grade of bronchitis is common. Atelectasis is relatively frequently observed, resulting from severe bronchitis; occasionally hepatized patches, in some instances involving a whole lobe, are found. Hypostasis is rare, on account of the shorter course of the disease, as a rule. Taupin reported hemorrhagic infarct and gangrene of lung. Rupture of lung abscess into pleural cavity was reported by Löschner.

*Kidneys.*—The kidneys may show cloudy swelling with granular degeneration of the cells of the convoluted tubules. Seldom a nephritis develops. Rarely miliary abscesses of the kidney, or diphtheritic inflammation of the pelvis of kidney.

*Heart.*—Endocarditis and pericarditis are very uncommon. Of comparative frequency is myocarditis, which Rhomberg<sup>25</sup> reported existed in about 50 per cent. of all cases which came to autopsy. Endarteritis with gangrene are narrated by Trousseau,<sup>26</sup> in Baudelocque's and Patry's cases, one in a child of 10 years, the other in one of 12.

*Nervous System.*—Actual meningitis has been reported, and from the exudate which may be serous or purulent the typhoid bacilli have been recovered. Parenchymatous changes may be found in the peripheral nerves. The muscles often show the waxy degeneration of Zenker, and this is most frequently found in recti abdominis, adductors of thigh and pectoralis.

#### SYMPTOMATOLOGY.

In 210 cases here reported the children presented symptoms for some time, varying from a few days to ten days, before coming under observation. The average period was seven days. The symptoms noted during this time were as follows: In very young children, restlessness and irritability were frequently present at first. In many, however, there was drowsiness, with tendency to sleep a great deal. In older children, drowsiness, weariness, sometimes irritability, restless sleep, dizziness and buzzing in ears were noted. Headache was complained of in the majority of children old enough to localize pain, being present in 151 cases. Delirium was observed in several cases during this period.

Vomiting had occurred in 57 cases, in some once or twice at most; in others several times. In two cases it was more or less constant throughout the disease, both terminating fatally. Many of the earlier observers considered vomiting at the onset, especially when associated with constipation, as an unfavorable symptom, pointing toward a severe course.

With the beginning of temperature, thirst was invariably increased, and anorexia appeared.

Colic was complained of in 47 cases. In many of these the pain was more or less constant, and localized at the umbilicus or in the right iliocecal region. Other children with diarrhea complained of pain just before evacuations only. Colic seldom continued beyond the middle of the first week. In many a sensitiveness to palpation in the right iliocecal region persisted throughout.

Of 107 patients in whom the condition of the bowels was ascertainable, 69 had diarrhea, 31 constipation, and

7 were irregular. Chilliness was occasionally observed at onset, a history of chills being obtainable in 31 cases only. Friedrich noted chills in 6 of 83 cases.

Epistaxis does not appear to be so frequent during the onset in children as in the adult, it being found in only 29 of the 210 cases.

A slight angina was present in 3 cases; opisthotonos in 4 cases, and strabismus occurred early in 1 case.

#### SYMPTOMS AND SIGNS OBSERVED DURING THE COURSE OF THE DISEASE.

Anorexia was invariably present.

The tongue usually presented a whitish fur, with clean borders and tips, later becoming grayish or yellowish-brown and dry. In the severe cases, crusts appeared on the lips; the mucosa of the mouth looked swollen and turgid and bled easily. Sordes formed on the teeth if not cared for. A mercurial stomatitis occurred in one patient who was receiving calomel. A gangrenous stomatitis or noma was not found in any case. Extension of infection along the Eustachian tube, with resulting otitis media, was not uncommon, accompanied by more or less impairment of hearing.

Vomiting occurred in 28 cases during the course of the disease. In 13 of these it had been present at the onset. While vomiting at the onset would not seem necessarily to indicate a severe attack, its occurrence during the course of the disease seems to be of considerable significance, as suggested by the following case reports:

CASE 143.—The patient vomited occasionally, had hemorrhages on the thirtieth and thirty-fourth days, and died in collapse eight days later.

CASE 101.—The child vomited on the tenth and thirteenth days. On the fourteenth day perforation occurred, the patient dying two days later.

CASE 159.—The child vomited on the seventeenth day; on the nineteenth day peritonitis developed. On the twenty-third day there was a copious hemorrhage and the child died the same day.

CASE 4.—The child vomited the day before the hemorrhage. The case terminated in recovery.

CASE 39.—The child vomited on the fourteenth day and had a hemorrhage the same day.

In two cases in which vomiting was an initial symptom, the patients continued to vomit throughout, both dying, one in the first week, the other in the second. While vomiting occasionally resulted from administration of expectorants or as result of transient disturbance of the stomach, in many cases it seemed to antedate a serious complication.

*Condition of Bowels.*—The bowels in 184 patients, in whom this point was accurately noted, were constipated in 100 cases, and in 84 there was diarrhea. The stools in the young children were thin, yellowish-green in color, and sometimes slimy and curdled. In older children they were of the characteristic pea-soup variety. Rilliet looked on constipation at onset as of serious prognostic significance. In the fatal ones of the 210 cases, the condition of the bowels is shown in Table 2.

TABLE 2.—CONDITION OF BOWELS IN THE FATAL CASES IN THE SERIES OF 210.

	At onset.	During course.
1.	Constipation.	Constipation.
2.	Constipation.	Diarrhea.
3.	Constipation.	Diarrhea.
4.	Constipation.	Diarrhea.
5.	Regular.	Constipation.
6.	Constipation.	Diarrhea.
7.	Constipation.	Constipation.
8.	Diarrhea.	Diarrhea.
9.	Constipation.	Diarrhea.
10.	Constipation.	Diarrhea.
11.	Constipation.	Diarrhea.

While constipation was present in 9 of the 11 fatal cases at the onset, it can hardly be considered of special

25. Rhomberg: *Deutsches Arch. f. k. Med.*, 1891.

26. Trousseau: *Clinical Med.*, vol. II



prognostic significance, as many cases of constipation run a mild course, and, *vice versa*, many cases beginning with diarrhea run a severe course.

Abdominal pain, though not infrequent at the onset, is seldom complained of after the first week, except in cases developing complication.

Tenderness in the ileocecal region and gurgling are often found. Seldom, however, is the tenderness severe. Exquisite tenderness usually points toward involvement of the peritoneum.

Tympany of varying degree was present in most of the cases after the first week, in some forming quite an annoying symptom and persisting into convalescence.

*Spleen*.—The spleen was palpable in 134 out of 148 cases. Three were enlarged to percussion, but not palpable.

The enlargement of the spleen is usually found toward the end of the first week. It seldom extends much below the rib arch and usually maintains this size during the course of the disease, and sometimes after drop of temperature, which not infrequently signalizes a relapse.

Variations in the size of the spleen are occasionally noted during the course of the disease. Decrease in size following profuse intestinal hemorrhage (Gerhard) or after marked remission in temperature (Thierfelder)<sup>27</sup> is seen.

*Skin*.—Roseola were found in many cases at the first examination; seldom, however, before the sixth day of the disease. As a rule, the rose spots are not numerous, though in some cases quite profuse. The abortive and mild cases generally present few rose spots or none at all. In one mild case no rose spots were found, although daily sought. A severe relapse followed, and on the eighth day a profuse eruption appeared on the abdomen and chest. In another case that pursued a mild course there was an eruption over the entire body and face which persisted for several days, and a fine desquamation followed. This case gave a positive Widal reaction.

This would seem to indicate that no definite statement can be made as to the extent of the eruption in mild and severe infections. Roseola were found in 115 of the 210 cases.

Herpes was present in 3 cases. One of these was complicated with pneumonia. In another the herpes was observed during a relapse.

Sweats were not infrequent, and likewise sudamina, appearing chiefly on the abdomen and chest.

*Respiratory Tract*.—Epistaxis occurred in 12 cases during the course of the disease. In one, several times. In this patient there were repeated intestinal hemorrhages, which terminated fatally. While the respiratory rate was usually somewhat increased, as a rule, it was not accelerated beyond its normal ratio to the pulse rate, unless pulmonary complications developed. A slight cough was noticeable in a large proportion of the cases. This usually persisted through the greater part of the attack. Actual auscultatory signs of bronchitis were not found in more than half the cases.

*Temperature*.—As many of the typhoid cases in children are of the mild form, the temperature curve in them is a short one, and, being of shorter duration but possessing the peculiarities of the typhoid curve, both end stages are steeper and shorter and the course in general less regular. While this is true for a little more than half the cases, 82 of the 210 cases ran a temperature lasting from 18 to 55 days, and in 90 there was a temperature for less than 15 days.

Among these cases 16 might be regarded as abortive, in that the patients had a temperature for ten days or less, and were not ailing more than a week before coming under observation.

The average duration of the temperature in all cases was 17.3 days.

The maximum temperatures observed in number of cases given are shown in Table 3:

TABLE 3.—SHOWING MAXIMUM TEMPERATURE AND NUMBER OF CASES.

107.4 degrees.	1
106 . degrees.	3
105 to 106 degrees.	60
104 to 105 degrees.	79
103 to 104 degrees.	42
102 to 103 degrees.	13
101 to 102 degrees.	6

*Pulse*.—The disproportion first noted by Roger<sup>28</sup> between the pulse rate and temperature observed in adults holds good for later childhood, but in very young children it runs more or less parallel with the temperature (Table 4).

TABLE 4.—THE AVERAGE PULSE RATE FOR DIFFERENT AGES SHOWING A STEADY DECREASE WITH FEW EXCEPTIONS FOR EACH SUCCESSIVE YEAR.

Age.	Average minimum pulse rate.	Average maximum pulse rate.
1 year.	124	150
2 years.	118	146
3 years.	117	155
4 years.	106	139
5 years.	104	138
6 years.	101	134
7 years.	104	136
8 years.	101	130
9 years.	99	129
10 years.	100	127
11 years.	100	129
12 years.	108	131
13 years.	90	114

A dicrotic pulse was seldom found, the youngest child showing it being a boy of 4 years. Irregularity was occasionally observed at height of attack.

*Blood*.—Blood counts were made in many cases, chiefly with regard to the leucocytes. In a number of those complicated with hemorrhages, red counts and hemoglobin estimates were also made.

The weekly average counts of leucocytes were as follows: First week, 6,571; second week, 7,200; third week, 6,740.

The average count for the first week corresponds quite closely to that given by Thayer<sup>28</sup> of 6,442. The counts in the second and third week were probably not numerous enough to be of accurate value. The extremes in leucocyte counts in first week were 3,200, 12,600; second week, 4,400, 9,600; third week, 4,000, 10,000.

A few counts made in cases following hemorrhage, perforation and pneumonia are of interest.

CASE 69.—Hemorrhage nineteenth day. Count after hemorrhage: Whites, 15,800; reds, 3,840,000; hemoglobin, 95 per cent.

CASE 5.—Hemorrhage fourteenth day. White counts on sixteenth day gave 4,500.

Counts following perforation:

CASE 53.—Perforation. Leucocyte count immediately following perforation was 10,800; later in day, 8,800.

CASE 101.—Perforation occurred on the fourteenth day. Count after perforation was 21,600; on the eleventh day it was 17,600.

CASE 177.—On the first day the whites were 5,200. On the sixth day of relapse there was abdominal pain (peritonitis). At 11 a. m. the whites numbered 7,000; at 4 p. m., 8,400.

CASE 191.—On the twelfth day of relapse perforation occurred. Shortly thereafter the whites numbered 8,200; later in the day, 6,000.

CASE 127.—On the tenth day bronchopneumonia set in; on

27. Thierfelder: Arch. f. phys. Heilk., xlv.

28. Thayer: Johns Hopkins Hosp. Reports, vol. viii.



the fifteenth day the whites numbered 2,500; death occurred on the seventeenth day.

CASE 183.—Pneumotypoid. On the fifth day the whites numbered 10,800.

CASE 43.—On the first day of pneumonia, the thirty-ninth day of typhoid, the whites numbered 18,500. The case terminated in recovery. There were 3,820,000 reds, 4,668 whites, small mononuclear, 7 per cent.; large mononuclear, 3 per cent.; polynuclear, 90 per cent.; hemoglobin, 90 per cent., at first examination.

*Widal Reaction.*—The Widal reaction was made in 96 cases, with the following result:

Eighty-six were found positive; 10 were found negative. Of the negative reactions, in 2 it was tried on the first day; in 1, on the second; in 3, on the third; in 2, on the sixth; in 1, on the eleventh; in 1, on the fifty-fourth, after coming under observation.

The negative results can not be regarded as of much value in these cases, as only one or, at most, two trials were made. The negative result recorded on the fifty-fourth day was a week after the drop of temperature to normal.

Of the positive results, 40 were obtained within the first four days after coming under observation. In some a positive reaction was delayed beyond a time when it would ordinarily be considered of much diagnostic value, as instanced by the following:

CASE 177.—There was high temperature for eleven days. Four Widal tests made during this time were found negative. On the twelfth day the temperature was normal, when an indiscretion in diet occurred. Relapse followed, and on the second day the Widal was positive. Patient died on the thirteenth day of relapse from peritonitis and pneumonia.

CASE 23.—The course was thirteen days, with high run of temperature. Widal test was negative on the second, seventh and eighth days; positive on thirteenth day, or last day of temperature.

CASE 136.—The course was twenty days, with high run of temperature. Widal test was negative on second and fifth days, but positive on fourteenth day.

CASE 55.—Widal test was partial on seventeenth day, but positive on twenty-third day.

CASE 204.—First attack was mild—eighteen-day course. Widal test was negative on eighth day. A relapse of thirty-three days was very severe. Widal test was negative on tenth day of relapse and positive on sixteenth day.

Of these cases it will be noted that in only two could the result have been considered negative, it being found first during the relapse.

A sudden disappearance of the reaction was noted in one case.

*Nervous System.*—Headache was an almost constant symptom among the older children for the first week or two, being seldom complained of in those under 4 years. It was present in 15% of the 210 children. The very mild cases presented a few symptoms referable to the nervous system, beyond slight headache and dullness. The younger children who, at first, were frequently irritable and restless, later became more or less drowsy. In the moderate and severe cases, in general, there was invariably dullness, a greater or less degree of apathy and drowsiness.

Barrier, Friedrich<sup>29</sup>, Seidel<sup>30</sup> and others called special attention to the drowsiness of children suffering from typhoid. Bierbaum<sup>31</sup> stated that drowsiness was a constant symptom, found in older as well as younger children. Gerhard looked on this symptom as characteristic, and considered it due to the narcotic effect of the typhoid poison on the brain.

Fifty-two of the 210 cases presented delirium, in some patients only at night, while others were more or less continuously delirious for short or longer periods. In some, drowsiness alternated with delirium. Occasionally the delirious patients became quite noisy. In a few instances they passed into a stuporous condition, showing the typical *status typhosus*.

Involuntary defections and urinations are common among these patients, and sometimes continue after the mind has apparently cleared.

Ataxia and jactitation were occasionally observed.

In a few cases marked meningeal symptoms developed, which will be considered under complications.

*Genitourinary Organs.*—The urine was invariably scant during height of the disease, increasing in quantity with the decline of temperature. An increased secretion of urea and uric acid and diminution in the chlorids were quite constant. Not infrequently albuminuria was found. An acute nephritis did not develop in any case.

Ehrlich's test was made in a large number of cases, with usually positive results. I do not, however, look on it as possessing any special diagnostic value.

#### RELAPSES.

Cursehman states "it has been definitely settled that relapses are the result of a revival of the primary process. Undoubtedly their development is to be attributed to the entrance into the circulation of living typhoid bacilli, which after the primary attack are left behind in various organs, and associated with this more or less complete redevelopment of the local and general typhoid lesions occur."

While Trousseau did not believe that relapses or new attacks occurred, his explanation (made, of course, in antibacteriologic times) of the recurrence of symptoms is similar to the above. He wrote: "It is the same attack, the symptoms of which, temporarily interrupted, recur under the influence of the same morbid cause which produced it in the first instance." He further added: "However complete the symptoms may be, and although the eruption reappears, the characteristic intestinal lesions never recur."

It would seem that such a condition as described by Cursehman might often result in typhoid septiceemia, in which the local intestinal lesions might not necessarily result.

On the other hand, reinfection of intact Peyer's patches and solitary follicles from typhoid bacilli in the intestinal tract, under favorable conditions, possibly sometimes brought about by digestive disturbances, is not altogether improbable. The frequent close association of relapse and dietetic errors would seem to be more than mere coincidence.

Statistics of later years seem to show a larger percentage of relapses in typhoid cases than in earlier times, when the custom of starving fevers was quite generally practiced.

Relapse seems to occur more frequently in children than in adults. Cursehman, in analyzing his Leipzig and Hamburg statistics, states that relapse occurred in 13.4 per cent. of the adult cases and in 16.8 per cent. of the children. His Leipzig statistics considered alone show relapse occurring in adults in 12.5 per cent. and in 19.1 per cent. of the children. In striking contrast with the above is the statement of Gerhard that relapse occurs much less frequently in children than in adults.

Of my 210 cases, relapse occurred in 31, or 14.7 per cent.

29. Frederick: "Der Abf. Typhus der Kinder," 55, 1856.

30. Seidl: Jena Zeitschrift, vol. iv., Nos. 3-4.

31. Bierbaum: "Der Typhus im Kindlichen Alter," Leipzig, 1861.



When relapse occurs in children, it seems to attack girls more frequently than boys. In the 29 relapses reported by Montmollin, 20 were in girls and 9 in boys. In my 31 relapses, 19 were girls and 12 boys.

Ziemssen<sup>32</sup> and Goth found that relapse more frequently follows mild and moderate attacks, about one-fourth of them following severe attacks. Curschman found it to occur 236 times after severe eases and 260 times after mild attacks.

Of the 31 relapses above mentioned, there had been a mild or moderate initial attack in 17 and a severe one in 14.

The period of intermission between the initial attack and the relapse, with the number of cases for each period in which it was definitely determinable, is shown in Table 5.

TABLE 5.—SHOWING PERIOD OF INTERMISSION BETWEEN INITIAL ATTACK AND RELAPSE.

Afebrile period.	Number of cases of relapse.	Afebrile period.	Number of cases of relapse.
1 day.	4 cases.	7 days.	3 cases.
2 days.	2 cases.	8 days.	1 case.
3 days.	3 cases.	10 days.	1 case.
4 days.	6 cases.	14 days.	1 case.
5 days.	3 cases.	21 days.	2 cases.

In 24 cases one relapse and in 2 cases two relapses occurred. The remaining 5 cases were of the recrudescent form.

#### COURSE AND TERMINATION OF RELAPSES.

Sixteen eases ran a mild course; 4 ran a moderately severe course; 11 ran a severe course; 5 cases terminated fatally, a mortality of 9.7 per cent.

#### MORTALITY.

The mortality of typhoid in children is considerably lower than in adolescence and in later life, increasing, as it does, with each successive decade. In common with the higher mortality of typhoid in general, in earlier years, that of children was given as quite high by the older pediatricians.

Of my 210 eases, 11 patients, or 5.2 per cent., died.

TABLE 6.—SHOWING AGE, SEX, CAUSE OF DEATH AND DAY OF DISEASE.

Sex.	Age.	Cause.	Day of disease.
F.	14 months.	Intensity of intoxication.	3d. day.
F.	5 years.	Perforation.	Sick 35 days; died on 12th day of relapse.
M.	7 years.	Broncho-pneumonia.	29th day.
M.	8 years.	Hemorrhage.	34th day.
M.	8 years.	Hemorrhage, asthenia.	33d day.
M.	9 years.	Perforation.	Seventh day after relapse.
F.	9 years.	Perforation.	Sick 37 days.
F.	10 years.	Intensity of intoxication.	10th day.
M.	11 years.	Perforation.	13th day.
M.	12 years.	Perforation.	18th day.
M.	12 years.	Peritonitis on 6th day of relapse. Lobar pneumonia on 13th day.	Sick 37 days. Died on 15th day of relapse.
F.	15 years.	Peritonitis 16th day. Hemorrhage 23d day.	23d day.

Of the 11 deaths, only one occurred under 5 years, the highest mortality being from 5 to 12 years. Few of the 210 patients were over 12 years, which accounts for the low mortality above that age.

Six of the 11 deaths occurred in males, or 5.6 per cent., and 4.8 per cent. in girls. This is usually reversed, and a higher mortality found in girls. It would seem that sex had but little, if any bearing on the mortality rate.

A consideration of the date of death in these cases shows that one died on the third day, two in the second week, one in the third week, one in the fourth week,

four in the fifth week, and two in the sixth week. Two of the deaths in the fifth week and one in the sixth week were during or following relapse.

While the death rate in relapse in general is considerably less than in initial attacks, the mortality in the 31 cases of relapse was more than twice as great as the death rate in the first attack. In the 189 cases in which there was only one attack, there was a mortality of 4.7 per cent. In the relapse eases it was 9.7 per cent.

The deaths in two instances were due to the intensity of the infection; two patients died from pneumonia, in one of whom a previous peritonitis existed; three died from hemorrhage, one of whom previously developed peritonitis, and another after repeated hemorrhage died of asthenia. Four patients developed perforations, two of whom were operated on, and all four cases terminated fatally.

#### COMPLICATIONS.

Among the 210 cases under observation, several presented interesting disturbances of the nervous system, which would seem to merit brief and separate mention.

CASE 35.—Boy, aged 11. Parent noticed that on the second day of the lad's illness the left eye turned in. The boy came under observation on third day of illness when, among other signs and symptoms, a paralysis of left external rectus was found. On the sixth day the Widal test was positive. Leucocyte count was 5,800. The disease ran severe course of eighteen days. The strabismus improved during convalescence. The boy did not present any other focal symptoms or evidence of meningeal involvement at any time.

The occurrence of ocular paresis in the first week of typhoid infection would seem to be a rare phenomenon. A similar ease involving the motor oculi nerve appears in Johns Hopkins Hospital Reports for 1900, described by Emerson,<sup>33</sup> in which the paresis was first noticed on the eighth day.

Three cases showed more or less marked meningeal symptoms.

CASE 161.—Boy, aged 11, complained constantly of headache, and developed marked delirium early. Examination showed marked opisthotonos and rigidity of the trunk, which was said to have existed from the beginning of the illness. This condition persisted during the course of the disease, with enlarged spleen, rose spots and repeated epistaxis. There was a moderate run of temperature. All symptoms subsided after the second week, and the patient recovered.

CASE 206.—Girl, aged 10. There was a high temperature, and stupor alternating with delirium was present. Toward the end of the first week opisthotonos developed. The abdomen was tense and the knees were flexed. Rose spots were present and spleen was palpable. All symptoms subsided in the course of twelve days, recovery resulting.

CASE 183.—Girl, aged 2½ years, was sick one week. On first examination the clinical and physical signs of pneumonia were present; the head was retracted. Widal was positive on the following day. The disease ran a severe course of ten days, followed by several days of post-typhoid temperature, terminating in recovery.

Neuritis was found in two cases. Both patients had relapses, toward end of which the neuritis developed. Convulsions were not observed in any case during onset or course of disease, nor in convalescence. While fatuity was occasionally noted, we did not find a case of psychosis.

*Circulation.*—Although a varying grade of acute myocarditis is noted in about 50 per cent. of the fatal cases, according to Rhomberg, special evidence of this is not infrequently wanting clinically. In severe infections, however, an irregularity, feebleness and intermit-

32. Deutsch Arch. f. klin. Med., vol. xxxiv.

33. Emerson: Johns Hopkins Hospital Reports, 1900.



tency of the pulse are sometimes present, and a slight increase in the cardiac area, permitting the clinical diagnosis of acute myocarditis. The following cases illustrate this:

CASE 143.—A girl, aged 10, in whom the onset was sudden, with high temperature, diarrhea and vomiting, which continued throughout the disease, had a pulse which was always found irregular and feeble, varying in frequency from 136 to 172. She died on the thirteenth day of the disease.

CASE 170.—A boy, aged 9, passed through a severe attack of twenty-three days' duration, after which the pulse was noted as irregular. The heart area was increased, with a systolic murmur heard loudest over the base.

CASE 122.—A girl, aged 5, ran a high temperature for twenty days, with pulse rate between 100 and 128, and developed at the height of the disease a markedly intermittent pulse which continued into convalescence.

CASE 198.—A boy, aged 10, with a moderate run of temperature for twenty-five days, during the last ten days of fever had a sudden drop in the pulse rate, which had averaged from 90 to 120, down to 48. It continued four days between 48 and 64, and gradually increased to between 60 and 80, with irregularity in quality.

None of the patients developed endocarditis or pericarditis.

*Respiratory Tract.*—Acute angina existed in five cases. In three it developed at onset. In the others on the seventh and eighth days. Griesinger suggested that the atrium of typhoid infection in cases where angina was present from the onset was the throat. This opinion has since been maintained by Baginsky. It is noteworthy that of the first three cases one patient died of perforation on the twelfth day and another of bronchopneumonia. Laryngitis occurred in three cases; in one associated with pneumonia; in another with severe bronchitis.

Six patients developed pneumonia; in two it was lobular and in four lobar. In two of the latter it was present at the first examination; both recovered. Another patient developed lobar pneumonia during a first relapse. The pneumonia ended in resolution and the patient survived a second relapse of typhoid. The fourth patient developed pneumonia of the left upper lobe on the thirteenth day. The patient had already had peritonitis from the sixth day of observation. She died on the fifteenth day. A girl of 2½ years had lobular pneumonia, with meningeal symptoms, on coming under observation. She entered on convalescence on the twelfth day.

The second case of lobular pneumonia occurred on the tenth day of the disease and the patient died on the nineteenth day.

*Organs of Special Sense.*—The eyes were involved in two cases; in one a strabismus, already referred to, occurred; in the other a phlyctenular keratitis.

Fifteen patients had otitis media; in 14 it involved one ear only and in 1 both ears. A varying degree of accompanying deafness usually cleared up in convalescence. One patient who developed a marked deafness in both ears, and in whom no discharge from ears occurred, subsequently died of perforation. Trousseau looked on deafness in both ears as a favorable symptom, stating that he seldom saw such patients die.

*Glands.*—In one case an inguinal abscess appeared on left side in convalescence after a nine-day attack. One patient developed painful and tender submaxillary swellings at the end of an eighteen-day relapse, following an initial severe attack of two weeks. In another case similar gland swellings appeared, in convalescence, after a twenty-seven-day relapse. In neither case did suppuration take place.

*Skin.*—Furunculosis occurred in 4 cases; superficial abscess in 4 cases; bed sores in 2 cases; ischiorectal abscess in one case; extensive cellulitis of neck and back of head, with severe septic symptoms, occurred once, with recovery after operative interference.

*Alimentary Tract.*—Mercurial stomatitis developed in one case, in which a rhinitis and conjunctivitis also existed. Intestinal hemorrhage occurred in 13 cases, of which 4 patients were girls and 9 boys. The ages and number of cases in each year were as follows: At 4 years, 2 cases; at 6 years, 1 case; at 7 years, 3 cases; at 8 years, 3 cases; at 9 years, 1 case; at 10 years, 1 case; at 11 years, 1 case; at 15 years, 1 case.

Of these, 9 patients recovered and 4 died; one of the latter, however, died from perforation which occurred three days after hemorrhage (Table 7).

TABLE 7.—SHOWING THE DAYS ON WHICH HEMORRHAGE TOOK PLACE IN PATIENTS WHO RECOVERED.

Case	Day of Hemorrhage.	Duration of Disease.
Case 98	13th, 15th, 22d day.	37 days.
Case 25.	20th day.	32 days.
Case 69.	19th day.	21 days.
Case 142.	11th day.	28 days.
Case 157.	14th day.	21 days.
Case 76.	16th day.	18 days.
Case 117.	35th day.	54 days.
Case 180.	7th day of relapse.	34 days.

#### FATAL CASES.

A boy, aged 11, had a copious hemorrhage consisting of bright red blood and dark clots on the fourteenth day. On the seventeenth day perforation occurred and the boy died on the eighteenth day. A boy, aged 8, had been sick four weeks; he is said to have passed blood daily for a week. While under observation, he had no hemorrhage. Epistaxis occurred once. The boy died twelve days later from asthenia. Another boy of the same age had a copious hemorrhage on the thirtieth day and another on the thirty-fourth day; he died in collapse on the forty-second day. A girl, aged 15, developed peritonitis on the eighteenth day. There was copious hemorrhage on the twenty-third day and she died a few hours later. The temperature was subnormal and the pulse 150.

Montmollin reported hemorrhage in 14 out of 295 cases, 4 resulting fatally. Curschman records hemorrhage in about 1 per cent of his cases in children, which would seem unusually low, unless fatal cases alone were considered. Peritonitis developed in 6, or 2.8 per cent., of the 210 cases. Of these patients, 2 were males and 4 females. The youngest was 5 years; the oldest 15 years.

Following is brief history of individual cases:

CASE 39.—Boy, aged 11. Temperature was moderate; there was marked tympany, diarrhea and considerable tenderness of left iliac region. On the fourteenth day he grew very restless and had a large hemorrhage, passing dark clots and bright red blood. Temperature was unchanged at the time; pulse slightly accelerated. On the seventeenth day he complained of pain in the abdomen; tympany increased and liver dullness diminished; the abdomen was tense and painful. He vomited frequently. A diagnosis of perforation was made. He was operated on and died the same day.

CASE 53.—Boy, aged 9, had a moderate but erratic temperature for nineteen days and an afebrile period of five days. A mild relapse of ten days followed. After five days of normal temperature indiscretion of diet occurred. The following day temperature was 103.4; pulse 134. He complained greatly of abdominal pain and presented Hippocratic fascies. There was frequent vomiting. Examination showed a distended, hard abdomen, with great tenderness. Liver dullness was diminished. Leucocyte count on the morning of abdominal pain was 10,800; several hours later, 8,800. A diagnosis was made of perforative peritonitis. The boy died five days later.

CASE 101.—Girl, aged 9. The disease ran a moderately high



temperature. She vomited on the tenth and thirteenth days. On the fourteenth day she complained of severe abdominal pain and vomited often and had hiccoughs. Abdomen at first sunken and hard, became distended, tense and very painful. Liver dullness disappeared. Leucocyte count on fourteenth day was 21,600; on the fifteenth day, 17,600. At 8 a. m. of the fourteenth day temperature was 99.6, and pulse 92. At 11:30 a. m., after complaint of abdominal pain, temperature was 101 and pulse 136. A diagnosis of perforation was made. The girl died on the sixteenth day.

CASE 159.—In a girl aged 15, the disease ran a high temperature. She vomited on the seventeenth day. On the nineteenth day she complained of abdominal pain. In the morning the temperature was 100.6; at 1 p. m., 105.6, and at 8 p. m., 99.4, dropping to subnormal, where it remained till the following morning. Thereafter she had high temperature, with maximum of 106. There was frequent vomiting, abdominal distension, rigidity and tenderness. The Hippocratic fascies was present. On the twenty-third day she had a large hemorrhage and died the same day. The diagnosis was perforative peritonitis, with intestinal hemorrhage.

CASE 177.—Girl, aged 12. The first attack was severe, lasting eleven days. There was an afebrile period of one day. After a dietetic error a relapse occurred on the following day. On the sixth day of the relapse she had severe pain in the abdomen, which became distended and tense, and was exquisitely tender. Liver dullness was present. A leucocyte count after complaint of abdominal pain was 7,000 at 11 a. m.; at 4:30 p. m. the same day it was 8,400. The girl developed pneumonia of left upper lobe on the thirteenth day. She died on the fifteenth day. Diagnosis was peritonitis and lobar pneumonia. Four Widal tests made in this case in the initial attack were negative. It was found positive on the second day of relapse.

CASE 191.—Girl, aged 5. First attack lasted nineteen days and was moderately severe. Then there was an afebrile period of three days. Diet was increased and a relapse began on the fourth day. The relapse ran a high temperature. During the early morning of the twelfth day of the relapse she complained of pain in the abdomen. Pulse was 160; temperature, 103.8; respirations, 40. She vomited. Examination showed a distended, hard and tender abdomen. The knees were flexed. Liver dullness was diminished. Hippocratic fascies was present. Leucocyte count was 8,200 in the morning; at 4 p. m. it was 6,000. A diagnosis was made of perforation. She was operated on the same day, and died several hours later.

#### TREATMENT.

The treatment employed in these cases consisted in proper hygiene, and care of the patient, appropriate diet and symptomatic treatment, including hydrotherapy; in some instances, intestinal antiseptics and the treatment of special symptoms and complications as they arose.

The environment and care of the little patients was looked after, when possible, by trained nurses, whose intelligent co-operation in the care of typhoid fever is invaluable.

The diet given during the course of the disease was chiefly milk, barley and strained oatmeal gruels, albumin water, custard, chocolate, eggnog, and ice cream, and drinks of orangeade, lemonade and water.

There seems to be a tendency to enlarge the diet of typhoid patients and to broaden it into quite a menu. A study of the diet in these 210 cases leads me to believe that it is quite an unfortunate venture, so far as children are concerned. The administration of egg, whole, in any form, seems intolerable in a large proportion of children. On the other hand, the white of egg, as albumin water, is always well borne. When eggnogs are given during the first part of the disease, the intestinal symptoms are intensified. After discontinuing their use, the temperature, in some instances, would seek a lower level. They seemed to exert an especially

unfavorable influence in defervescence and during the first days of convalescence, as instanced by the following: A child of 5 years, after running a temperature for 22 days, received, in addition to the regular liquid diet, eggnog before the temperature was fully normal. Temperature arose the following day and continued high for twelve days. In a child of 6 years, typhoid ran a course of 30 days. Four days were afebrile, and eggnog was added to the diet. A relapse of nine days, with high temperature, followed.

While milk is not the appropriate diet for infants, or for very young children, with a catarrhal or follicular enteritis, it seems to be well borne in typhoid patients of the same age, provided it is diluted from one-half to two-thirds with a cereal gruel or lime water. It is not, however, well tolerated when given as whole milk; the stools become curdled and slimy, and tympany increases. This is frequently true with older children, and similar dilutions of milk are desirable. Where greater dilutions are necessary, they may be used.

From a close study of the action of diet in these cases, milk, diluted for infants and young children, as indicated, would seem to be the best diet for children suffering from typhoid fever.

Albumin water is also a suitable part of the diet, as is likewise the usual cereal gruel diluents, as barley water and rice water, to be given, however, more as drinks than to take the place of milk.

Ice cream at times seems to be well borne; at other times the intestinal symptoms become more marked.

The care of the diet in the first days of convalescence is as important as at the height of the attack. Too frequently errors at this period have sad consequences, as instanced by the following: A girl of 12 years passed through a severe attack of 11 days' duration, followed by an afebrile period of one day. She received toast, and temperature rose next day to 105, the beginning of a relapse, on the sixth day of which she developed peritonitis; on the thirteenth day lobar pneumonia, and she died on the fifteenth day. A girl of 11 years had a mild attack of 20 days, with temperature the greater part of the time below 100. After one day of normal temperature she received egg and toast. The temperature rose on the following day, and she had a severe relapse, lasting 33 days, with maximum temperature of 105.

If a patient can continue to live on a liquid diet during the severe course of the disease, they certainly can do so after the temperature is normal. It would appear that it is seldom necessary to disturb this afebrile period by an increase in diet until the patient has passed beyond a time when it is likely to do harm, which time I would place at ten days. Then I would gradually increase the diet, remembering that infants and very young children will not do badly if milk constitutes a greater part of their nourishment.

In cases of intestinal hemorrhage the diet was limited in quantity and was confined to whey, albumin water and beef juice. In cases of perforation, nutrient enemata were used.

Hydrotherapeutic measures employed consisted in tubbing, sponging and the cold pack. Tubbing was used in practically all cases, unless some contraindication existed which rendered it inadvisable. This method is especially suited to children. They are easily transferred from bed to tub, and after the first few tubbings seldom offer any resistance to it.

While the temperature was the usual guide to its employment (103.5 to 104 by rectum), it was also re-



sorted to in the presence of marked nervous symptoms, even when the temperature was at a lower level. The nervous symptoms are probably as important an index to its use as the temperature, as they seem to be a safe guide to the intensity of the infection. Patients with marked nervous symptoms, however, commonly run a high temperature in typhoid, so that, in general, the temperature, except in exceptional instances, forms a reliable indication for the hydrotherapy.

The temperature of the bath at first was about 90 degrees and gradually cooled to 80 or 75, the bath lasting from 10 to 20 minutes, the patient being gently rubbed during this time. It would hardly seem necessary or advisable to resort to the low temperatures of the water as originally recommended by Brandt. A decided lowering of temperature, varying from 1 to 3 or 4 degrees, is obtained by above bathing temperature first recommended by Ziemssen.<sup>34</sup>

While the number of tubbings in 24 hours depended on the temperature, I am inclined to think that we sometimes overdo it and tire our patients. A child with typhoid requires rest, and should be manipulated as little as is consistent with the condition.

In addition to the hydrotherapeutic measures mentioned, in cases of intense intoxication high enemas of salt solution were administered from every four to six hours, in quantities of from two to eight ounces, according to how they were retained. They seemed to be of considerable advantage by increasing elimination, especially renal.

Intestinal antiseptics were given in a number of cases, among them acetozone, salol, guaiacol, benzozol, and calomel; the latter also for its laxative effect. Of the fatal cases, of whom ten patients were under treatment (the eleventh patient dying twelve hours after coming under observation), five were receiving intestinal antiseptics. Of these, 3 received acetozone, 1 salol, and 1 calomel. Of the 210 cases, 45 received acetozone, 15 salol, 7 calomel, 2 guaiacol, and 2 benzozol. One hundred and thirty-nine did not receive any intestinal antiseptics.

It is probably a coincidence that the mortality among those getting intestinal antiseptics was 7 per cent., and among those not receiving them 3.8 per cent. This is probably due to giving intestinal antiseptics in severe cases, with the hope of exerting some influence on the intestinal changes. However, the use of intestinal antiseptics did not seem to be of any special value in any of the cases.

Of the special symptoms, those referable to the nervous system were invariably favorably influenced by hydrotherapy, as was likewise the circulation. The pulse usually showed, where rapid and feeble, considerable improvement following a tubbing, both in quality and diminished frequency.

In cases of constipation in first week, small doses of calomel or castor oil were used. At a later period, the enema was employed, although at times calomel and castor oil in small doses were also given.

Diarrhea was seldom sufficient to call for special treatment beyond attention to diet, as the adding of lime water to milk, and avoidance of broths.

When tympany was marked the usual turpentine applications, and salt enemas, or rectal injections of emulsion of turpentine in equal parts of milk of asafetida and liquor camphor were used.

In cases presenting marked cardiac weakness, stimu-

lants, chiefly strychnin and whisky, were administered. The pneumonias received no special treatment beyond the employment of cardiac stimulants, when indicated, strychnia being used hypodermically when necessary; also whisky or brandy.

In hemorrhage, the usual methods were used: the ice coil or bag, morphia hypodermically, or opium and acetate of lead by the mouth, restriction of diet, and elevation of foot of bed.

Of the cases of perforation, two patients were operated on, but died, as did those not operated on.

Of the medicinal measures, an opiate was given as necessary, and rectal feeding employed.

#### DISCUSSION.

DR. ARTHUR W. FAIRBANKS, Boston, stated that he has been interested in noticing that the rule of differential diagnosis of typhoid and tuberculosis that is of so much value—the disproportion between the pulse and temperature—does not apply in the same degree to children. The Germans have always placed great emphasis in the adult on the slowness of pulse in proportion to temperature in typhoid fever, and it is a very striking occurrence. The pulse is near the normal, 80 or 85, and temperature from 101 to 103 and 104, and possibly higher in typhoid. In tuberculosis it is exactly opposite. In the vast majority of cases the pulse is extremely rapid, out of all proportion to the temperature. In children that fact does not seem to apply. In typhoid fever the pulse seems to follow the temperature. The leucocyte count is of much value in these cases. Dr. Fairbanks recalled that in the summer of 1904, in the holidays, a large number of children were affected with diarrhea. In one case he could find no rose spots and no signs of typhoid fever. There was irregular temperature. There seemed to be no evidence of typhoid fever, but the leucocyte count pointed to typhoid. The bacteria found during a search for Shiga organisms, responded to all the tests of the typhoid organisms. This indicates the value of the leucocyte count in these cases. There is a reduction in the leucocytes, a leucopenia, in typhoid, while in other cases likely to be mistaken for this disease there is almost invariably an increase, a leucocytosis.

DR. W. J. BUTLER, in reply to questions, stated that in typhoid fever in infancy the only positive way of making the diagnosis under all circumstances is by the Widal reaction, or finding the bacilli. The test made with dried blood is quite as satisfactory as with the fresh serum.

#### SOME CAUSES OF FAILURE AFTER GYNECOLOGIC OPERATIONS.\*

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##### GENERAL CONSIDERATIONS.

Our mission as gynecologists is to cure women of their diseases, and any procedure, however skillfully executed, is a failure if a cure is not effected.

Whether gynecology is to continue to be a living, growing specialty and to redound to the benefit of womankind, as its founders originally conceived, will depend very largely on whether it can be rescued from the ultra surgical, and gynecology not be made a synonym for surgery. The brilliant results obtained by general and gynecologic surgery have been so fascinating that many of the most brilliant of our profession have been so charmed by the glitter as to abandon less luminous fields and devote their entire energies to the development of this department of therapeutics, along purely mechanical lines. While, as has often been said, gynecologists were the first to blaze the way to successful

<sup>34</sup> Ziemssen and Immerman: "Die Kaltwasser Behandlung des Typhus Abdominalis," Leipzig, 1870.

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surgery within the abdominal cavity, general surgeons have not been slow to take advantage of this, until now the uterus and its appendages are considered their legitimate field. It is true that many of the most satisfactory results are attained by major operations, still gynecology does not end with these. Gynecology is defined by a modern medical lexicographer as that branch of medicine which treats of women's constitution and diseases. By this it will be seen that the treatment of diseases of women does not end with the treatment of organs peculiar to her, nor necessarily with a special operation, but of the woman as a whole.

I do not mean to infer that a woman is not especially affected by the organs peculiar to her, but that a mere readjustment of a rather unimportant organ without further effort will cure her of her ills, I very much doubt. It is too much the tendency nowadays, to do more or less surgery on a woman, correcting certain lesions, and to send her away cured; but she comes back to us or to some one else and says she feels the same as before the operation and is no better—sometimes worse. We examine her, and find the perineum which we repaired intact, the uterus on which we did a fixation or suspension operation of some sort in its proper position; the ovary that we patched up and left is seemingly doing well; perhaps we removed the appendix and still the woman complains. We tell her that her pelvic organs are all right and that she ought to be well; and she will be in time if she has no organic disease of other important organs, or if she does not become discouraged and sink back into a condition of semi-invalidism, or become involved in the machinations of the osteopath or Christian scientist. I have known many patients who had undergone successful surgery, and not getting the proper relief that they expected, drift into the hands of some pretender, and the surgeon not only does not get the credit due him, but is actually blamed for doing unnecessary operations. It is important, therefore, to bear in mind that women have other organs besides the perineum, cervix, uterus, tubes and ovaries, and above all, that they have very susceptible nervous systems, capable of being influenced by many agencies apparently remote.

So much for the less apparent reasons; and now as to the more tangible reasons why women do not recover after they have undergone certain operative procedure, calculated to prevent or to cure pathologic conditions. Fully realizing the enormity of this task, I will limit my remarks to a few of those most frequently met in the pelvis.

#### PELVIC FLOOR DAMAGE.

Beginning with the lesions in the order that they present themselves to the gynecologist, we will first consider the perineum and pelvic floor. Pregnancy, parturition and the puerperium may not be strictly gynecologic conditions, but that they rapidly become so is conceded. We have only to refer to our gynecologic case records to learn how very frequently women date their ill health to their confinements, often to the first. As pointed out by Hirst a few years ago, this is a most frequent cause of ill health in women. From the time a woman becomes pregnant until she has entirely recovered from her delivery, she is subjected to many and violent influences. First, the disturbances of metabolism and the toxemias; the disturbances of the dynamic relations of the abdominal viscera by the growth and pressure of the gravid uterus and the traumatism and infections accompanying and following delivery. It is practically impossible as conditions now exist, for a woman to be delivered of a child

at full term without more or less injury to the pelvic floor, vagina or perineum. As Edgar says: "When we remember that the outlet of the birth canal, with a diameter of from 1 to 1½ inches is suddenly dilated until a ring of from 10 to 12 inches is produced, it is not hard to understand why injury is inflicted."

These injuries do not take place, as a rule, where they are plainly visible. The line of laceration follows the direction of least resistance, or at the point of greatest pressure. Tears in the vaginal mucous membrane and perineum may not be at the same point. Lacerations of the pelvic floor (levator ani muscle and fascia) may occur immediately under the tear in the vaginal mucous membrane, or it may be submucous at another point, or the musculature of the pelvic floor may be extensively lacerated and the skin and mucous membrane remain intact. The consequences of these lacerations depend entirely on the structures injured. If confined to the skin and perineum, no harm will follow, so far as support is concerned, but if the deeper tissues, the levator ani muscles are involved, there will occur loss of the perineal flexure of the rectum and vagina, with recession of the vagina and anus from the pubic arch, rectocele, cystocele, prolapsus uteri and uterine retro-deviation, subinvolution of the uterus and vagina and splanchnoptosis, followed by dynamic disturbances of the influence of intra-abdominal pressure, supervention of reflex phenomena and a state of general ill health will be instituted.

Too many operators lose sight of the fact that the perineum and the pelvic floor or diaphragm are different structures, developmentally, anatomically, physiologically and pathologically, and anatomists have repeatedly called attention to the disassociation of these two structures. In speaking of the anatomy of the pelvic floor and perineum, I shall be compelled to quote very freely from Peter Thompson on "The Myology of the Pelvic Floor." I am aware that many gynecologists are now teaching the new anatomy of pelvic support, but that the majority of the profession are sufficiently awake to the importance of the exact nature of these lesions I very much doubt.

The pelvic floor is for the support of the superimposed viscera, while the perineum is simply a common meeting point for muscular and aponeurotic structures entirely below and external to the pelvic floor and has to do with the mechanism of the closure of the clefts of the visceral outlets—the sphincters. Those muscles having to do with sphincteric action are developed from the primitive sphincter cloaca, while those forming the pelvic diaphragm were originally the muscles of the caudal end of the vertebral column, and are developed from the primitive flexors and adductors of the caudal vertebræ.

The pelvic floor is composed of four paired muscles—the ischiococcygeus, the iliococcygeus, the pubococcygeus and the puborectalis. These muscles take their origin, roughly speaking, from around the brim of the true pelvis, and are inserted into the sacrum, coccyx and median tendinous raphe. The pubococcygeus and the puborectalis form the most important constituent element of the pelvic support. The pubococcygeus arises from the back of the body of the pubic bone along an oblique line which extends from the lowest limit of the symphysis outward toward the obturator canal and, to a limited extent, from the obturator fascia. From this origin the fibers pass back by the urethra, vagina and rectum and are inserted by a tendinous expansion to the ventral surface of the lower part of the sacrum and coccyx. The puborectalis,



or sphincter recti of Holl, arises from the back of the lowest part of the symphysis, under cover of the pubococcygeus, from the upper layer of the triangular ligament, and from the pubis immediately beneath the symphysis. From this origin the fibers pass around the lower rectum, meeting with the fibers from the opposite side, to form a loop or girdle which slings the rectum and vagina up under the pubic bone.

The puborectalis keeps the rectum and vagina pulled forward under the pubic bone, so that the anus occupies a position on a line from one tuber ischii to the other and midway between the tip of the coccyx and the symphysis pubis. This is the position when the muscle is intact, but when it is lacerated or has lost its tone it allows the perineal body to recede, and the perineal flexure of the rectum and vagina is lost. This is the muscle that receives the major part of the injury sustained during delivery.

If the practice is made of investigating the tonicity of the puborectalis in all vaginal examinations, both before and after parturition, the difference can readily be determined. In women who have not borne children this muscular band can be felt tense and firm, as it passes along by the side of the vagina just within the introitus. In the vast majority of cases after delivery there is a condition of relaxation, of flaccidity and loss of tone, often with little or no resistance to backward or lateral pressure with the finger until the ligaments or pelvic bones are reached. Breaks in the musculature of the pelvic floor can frequently be distinctly felt. I have observed the physical condition of the muscle and fascia before and after delivery in the same woman and noted the difference. These observations were systematically made, not only immediately, but months after labor, and the muscles rarely recover their tone, even in those cases in which immediate repair had been done. These observations were made not only with the woman lying quietly in bed or on a table, but standing. The erect position brings out the contractile power of the levator ani and the integrity of its fascia, and with the finger in the vagina this muscular band can be so studied that any interruptions in its continuity can be noted. This can often be graphically demonstrated by placing a wax phallus in the vagina and asking the woman to contract the pelvic floor and noting the indenture.

This led me to believe that almost every woman during her confinement suffers injuries from which she does not recover, and that immediate suture of apparent lacerations does not restore pelvic support in the vast majority of cases. Certainly repair work attempted on a bed, without proper assistance, retractors or a good light, is little more than a farce so far as restoring the function of the pelvic floor is concerned.

I do not wish to be understood as not favoring immediate suture. Such operative procedure is not only necessary to prevent infection, to restore sphincteric action and pudendal symmetry, but accurate readjustment to the normal position of the musculature is essential for the full restoration of pelvic support, is attainable to the fullest degree only with the immediate operation or, at most, operation within the first few days. The muscle and its fascia at once begin to retract and atrophy so that a secondary operation, however well done, can not restore function to the same extent. An efficient immediate or intermediate operation is possible only with the patient on the table, with good light, retractors and assistance. Careful examination of the parts must be made, and the original anatomic elements united. Suturing the superficial rents in the skin and mucous

membrane, passing through a promiscuous mass of tissue beneath and uniting structures of a dissimilar nature will not restore the pelvic floor nor prevent vaginal prolapse. Who would attempt to cure hernia by simply suturing together the skin over the abdominal ring, and pelvic herniation is practically what happens when the muscular and fascial structures of the pelvic diaphragm are impaired.

Furthermore, my observation teaches me that, even after a careful immediate suture, a considerable percentage of cases will require a secondary operation; for, unless the tear in the vaginal mucous membrane and that in the musculature is at the same point, the sutures will not make a union of proper structures. When the puborectalis has been lacerated at a different point from that of the skin I have not hesitated to cut down and suture its ends with buried sutures.

#### ABDOMINAL PTOSIS—RETROVERSION.

Whether by the inefficiency of immediate suture or its omission, or the lack of proper secondary repair, where tissues of a dissimilar nature are united in a cicatricial mass, and original anatomic structures left apart, normal physiologic support is not secured. Prolapse and telescoping of the vagina and uterine retroversion naturally follows. Further than this, gravity and intra-abdominal pressure leads to ptosis of the viscera and tugging on the normal peritoneal ligaments of the liver, stomach, kidneys and intestines. It is a well-known fact that little pain is produced in operations within the abdomen under local anesthesia if the peritoneal attachments of the organs, especially the bowels, are not pulled on. Even under anesthesia we readily notice increased disturbance of the heart and respiration the minute we begin pulling on the peritoneal processes. A very little relaxation of the pelvic floor would allow sufficient tension to be placed on the peritoneal ligaments (which are the true supports) of the uterus, bowels, kidneys and stomach to produce the symptoms of splanchnoptosis. Intra-abdominal pressure is the result principally of muscular contraction and gravity, to which is added, especially in women, faulty dress. Woman's dress is almost as trying on the pelvic diaphragm as parturition, but with the two combined is it any wonder that women are ailing?

The startling frequency with which visceroptosis is met in neurasthenic conditions in women is well known. Neurasthenia is much less common in men, but those I have had experience with have been where there was ptosis of one or more of the abdominal viscera.

Led by the teachings of Theilhaber, Winter, Landau, Freudenberg, and later of Pfannenstiel and Wormser, we are becoming more and more cognizant of the fact that uncomplicated retrodisplacements of the uterus give rise to few symptoms; and yet in nearly every medical society meeting there is a paper or discussion on some pet operation for retroplaced uteri. There are some 50 operations or devices for overcoming retrodisplacement, which, to my mind, shows the utter futility of these operations *per se* in relieving symptoms. Early in my experience I was struck with my inability to cure my patients of symptoms supposed to be due to retroversion. I then began to keep fuller records of the after-history, and I found that few patients were cured or even benefited. Most of these patients passed from observation, but I have the records of 48 cases on which to base my conclusions. Later I began to do more thorough work on the pelvic floor, independently of or in connection with the versions, as the individual case seemed to de-



mand, to correct visceral ptosis and to keep the organs in position by external support, gymnastics and proper dress and posture; in other words, I followed up my cases, and the results have been eminently satisfactory.

A normally developed uterus that is not infected, that is movable and is not in a condition of prolapse so as to pull on its peritoneal ligaments will not produce symptoms, no matter what position it occupies. On the other hand, a traumatized, infected or fixed uterus will cause symptoms, no matter in what position it is placed; and this is true of the abdominal and pelvic viscera as a whole. As soon as any viscus becomes infected or injured or drags on its attachments, its blood and lymph circulations are interfered with and it has a tendency to become fixed. This fixation interferes with peristalsis and adds trauma to the nerve supply and irritation to the nerve centers.

Puerperal lesions of the pelvic floor, vagina and cervix produce nerve irritation and lead to infection of the uterus, tubes, ovaries, broad ligament and pelvic peritoneum, either by continuity of tissue or through the lymphatic circulation. When the uterus is infected, heavy and traumatized and its pelvic-floor support diminished, it recedes into the pelvis, pulls on its intraperitoneal ligaments and forms adhesions with surrounding structures. Taken as a whole, very few women escape infection after abortion or delivery at term, not necessarily of a severe type, but so mild as often to create little notice at the time. Later there will be cicatricial contractions in and around the uterus, and corresponding symptoms follow. I have observed many cases of retroversion in young women that never produced symptoms until pelvic-floor relaxation occurred, unless infected by the gonococcus or pregnancy ensued with its consequences. As first pointed out by Schultze, the position of the uterus is that of mobile equilibrium and is pathologic only when restricted in its freedom of movement. This wide range of physiologic mobility is maintained principally by the pelvic floor and pelvic peritoneum. The so-called uterine ligaments are normally in a state of relaxation, and simply resist excessive movement. Consequently, those operations are the most successful that inflict the least injury on the peritoneum, produce fewer adhesions and allow most physiologic mobility.

#### CONSERVATIVE OPERATIONS ON OVARIES.

Another source of failure after intrapelvic operations is the so-called conservative operations on ovaries. It is admitted by all that the influence of the ovary on the growth, development and very likely the life of the woman is very important; that in all operations about the pelvis it is advisable to conserve all the ovarian tissue possible; that the uterus is merely a fetal receptacle and, in health, has no influence on the normal cycle of a woman's life. Furthermore, it is admitted, I believe, that the vast majority of the destructive lesions of the ovaries have their inception in metritic processes, engendered by the introduction from without of certain micro-organisms known to have a deleterious influence. It is very much of a question whether, after a uterus once becomes thoroughly infected, it ever quite regains its normal condition. Especially is this so of gonococcal infection. Postabortive and postpuerperal sepsis, while more frequently recovered from or more amenable to treatment, often leave a train of pelvic symptoms due primarily to the infection. From this source the ovaries become involved either by continuity of tissue through the corporeal endometrium

and the Fallopian tubes or by way of the lymph stream. According to Porier, the lymphatic vessels of the uterus form four or five trunks which appear beneath the cornua. These vessels at first follow the terminal segment of the uterine artery, then pass beneath the ovary, where they are joined by vessels from this gland. Then they run in the suspensory ligament of the ovary, and with the blood vessels surround the ovary, in their passage to the lumbar glands.

Consequently, in those infective processes in which the question comes up, at the time of operation, regarding the necessity of sacrificing one or both ovaries, in part or whole, or the removal of one ovary and part of the other, and it becomes very much of a question after removing one ovary whether it is possible to save the other.

Under such circumstances we will be much more likely to conserve ovarian tissue by doing a supravaginal amputation of the uterus and excising the Fallopian tubes and the accompanying lymphatic trunks than by doing conservative work on the ovaries alone and leaving the uterus. Furthermore, in those cases in which it becomes necessary to perform a double salpingo-oöphorectomy for septic conditions, there is no question in my mind as to the advisability of removing the uterus at the same time. This has been my practice for several years, and my results have been eminently satisfactory. Leaving a uterus, the source of pelvic pains, leucorrhea and infection, will render other operative procedures of doubtful utility. After the ovaries are gone, there is little, besides sentiment connected with the uterus, of value. Besides, the hysterectomy allows us to do cleaner and better work, with fewer postoperative adhesions to cause pain, intestinal obstruction, reflex and general disturbances, and failure to effect a cure.

It is my intention to follow up this subject pertaining to other abdominal operations in future papers.

#### DISCUSSION.

DR. J. H. CARSTENS, Detroit, said that too often patients are operated on and for various reasons are not cured. Once in a while the operation is a poor one, or the technic is poor and complications arise, or union is not perfect and adhesions form, or something else happens, or there is shock or some other condition which causes great suffering. The principal reason is that physicians do not make a correct diagnosis. Because the patient is a woman, it is taken for granted that the trouble is in her uterus, ovaries, tubes or perineum. Physicians are apt to forget that women have general ptosis of the abdomen, that they may have floating kidneys, gallstones, appendicitis, syphilis, neurasthenia, and many other things, just like men. They neglect to look for these things and the result is that operations are not successful. Dr. Carstens urged the necessity of a more thorough diagnosis and a more thorough systematic investigation of every case. Many patients are hurriedly taken to a gynecologist for operation. Sometimes there is a fibroid or a cirrhotic ovary, or an ovarian tumor which is causing pain; the gynecologist finds that condition and thinks that it ought to be removed, that it causes some of the symptoms, which probably is true. It is removed, not because the woman's life is in danger, but because she is suffering. The patient comes back later, but is not cured of some of her symptoms. She may have had gallstones. The family physician may have overlooked the nature of her trouble or he may not have told the operator of her attacks of pain. Perhaps she takes improper food; therefore gynecologists must be more thorough in the examination of a patient. Often the general practitioner takes the patient to the gynecologist and promises her relief. Dr. Carstens does not promise his patients everything, because if they do not get the promised relief the operator is blamed.

DR. D. H. CRAIG, Boston, said that Dr. Carsten's remarks



can be epitomized as follows: 1, Inefficient operating; 2, insufficient operating; 3, excessive operating; 4, insufficient preparation; 5, insufficient convalescence. If gynecologists will take cognizance of these five factors in every case it will help to do away with failures in the majority of cases. The length, troublesomeness and seriousness of convalescence are in exact inverse proportion to the time the operator spends in getting his patient ready for operation. Adequate preparation means shorter and better convalescence. Hasty preparation means protracted convalescence, and frequently it means the drifting of the patient into a state of discouragement, and the operator is credited with a failure. Did the gynecologist pay sufficient attention to the preparation of the patients morally, mentally and physically, he would go far toward avoiding failures.

DR. J. T. WALLS, Portland, Ore., declared that lacerations following parturition are frequently overlooked; such patients should have early attention after confinement. If the physician knows there is an injury he should advise its early repair, because malignancy is likely to set in. Dr. Walls has found few cases of cancer of the cervix that could not be traced to an old laceration. Small lacerations should not be overlooked, as they frequently produce much systemic disturbance, and he makes it a rule to repair all lacerations when he has an opportunity. In cases of long standing the uterus should first be curetted, and the patient given time to recuperate and the endometrium to become normal before doing a trachelorrhaphy. The patient should be kept quiet until union is complete. Dr. Walls avoids using tampons of any kind; he prefers instead the use of antiseptic gelatin suppositories, using them at night only; he has the patient insert the suppository herself. This, he finds, serves the double purpose of tampon and douche. In the morning he has the patient cleanse the parts externally by the use of warm soapsuds, using a cloth, omitting the douche entirely.

DR. V. J. HAWKINS, St. Paul, Minn., said that no matter how much the cervix is lacerated, if it is covered by normal mucous membrane no symptoms will arise unless there is an infection. So far as consultants are concerned, patients should not be taken to the surgeon for the purpose of having a certain operation performed. If a patient of Dr. Hawkins is not getting along well, he asks for the privilege of a consultation, thus placing both himself and the surgeon in a good position, because their opinions of the case may differ. There is so much chance for a difference of opinion that it is unwise to tell patients that one will call in a surgeon to have a certain operation performed. That might not be the cause of the trouble. Dr. Hawkins said that the surgeon should not expect that every case brings with it a large fee; nor should he imagine that because the physician does not tell him everything, that he does not know. In many of these cases the trouble is caused by autointoxication or malnutrition, and that must be gotten rid of before results can be obtained. Physicians should get away from the belief that lacerations of the cervix cause cancer or other serious trouble, unless there is an infection.

DR. D. C. NEWMAN, Spokane, Wash., stated that in his experience these lacerations of the cervix rarely become covered with normal mucous membrane. They may be patched up for a while, but they soon become infected and then there is trouble. Dr. Newman thinks that Dr. Carstens hit the nail on the head when he said that the reasons these operations are a failure is because gynecologists do not treat the patient, but only the uterus and appendages.

DR. W. E. GROUND said that it is important to follow up these patients after operation, teaching them how to live, to dress, and even how to stand and to walk, if the best results are expected.

**Proprietary Preparations with Incompatibilities.**—But let me warn you to place no faith in the pharmaceutical monstrosities which are said to contain pepsin combined with pancreatin, with which it is positively incompatible, nor those in which it is combined with wines or any preparation of alcohol which, except in the weakest dilutions, interfere with its action.—Boardman Reed.

## ETIOLOGY AND TREATMENT OF SO-CALLED ENDOMETRITIS.\*

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It is with a feeling of great diffidence that I bring before this section such a common-place subject as endometritis, but I feel justified in doing so from the fact that, taking at random six different modern text-books, I find given twenty-seven different kinds of endometritis; out of these twenty-seven varieties, there is no one variety which is mentioned in each text-book. There are three varieties (exfoliating, gonorrheal and septic) which are mentioned in four; four varieties (atrophic, hypertrophic, simple chronic and fungous or fungoid) in three; eight varieties (hemorrhagic, hyperplastic, glandular, interstitial, polypoid, simple, tuberculous and senile) in two, and ten varieties (catarrhal, decidual, menstrual, diphtheritic, infectious, syphilitic, vaginal, puerperal, putrid and villous-degeneration) mentioned once each in six different text-books. If gynecologists were earnest, serious students to-day and just beginning their gynecologic studies, they would throw up their hands in despair at twenty-seven different diseased conditions of one small tissue, each entitled to a separate pathology, symptomatology, diagnosis, prognosis and treatment; for these terms, strictly speaking, are not interchangeable. I have particularly tried to avoid using different terms that might mean the same thing, or I might have added several varieties more. If these twenty-seven varieties of endometritis really exist, they should be described in each text-book; if they do not, they should be cut out.

I do not wish to take up time with a description of the gross or minute anatomy of the endometrium, but will call attention to the fact that it differs materially from any other structure in the body; that it is not a true mucous membrane; that it is a glandular structure intimately connected with the muscular tissue of the uterus, and, therefore, is tremendously influenced by any changes which take place in the uterus; that the endometrium of the body and that of the cervix are histologically different, and that I am speaking particularly of that of the body. Its main function is undoubtedly connected with the development of the fertilized ovum. The endometrium is by nature a hemorrhagic tissue, as is proved by the flow of the menstrual period which is merely the result of an overcongested tissue and is Nature's remedy for its relief. This structure is not normally cast off in its entirety at each menstrual epoch and then renovated, nor is it even disintegrated to any considerable extent, as many would have us believe.

In regard to the pathology of the endometrium, I would like to quote, in the first place, from a text-book that was written over twenty years ago by one whom I believe is as justly entitled to be called the father of gynecology as J. Marion Sims, and whose student I had the honor to be when I was an interne at the Women's Hospital in the state of New York, Dr. T. Addis Emmet:

It is all important in this relation to understand the difference between passive congestion, which is generally venous, and inflammation, which begins as a stasis in the arterial capillaries. These terms are usually regarded as synonymous, but as erroneously as many others are which are used in uterine terminology. Inflammation always involves an infiltration of cellular elements into the parts, or a multiplica-

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-ninth Annual Session, July, 1905.



tion of those already there; and this product may be recognized by an almost superficial inspection if it has not been absorbed. But we look in vain, after death, for any evidence of metritis or endometritis, or for ulceration of the cervix, as it is termed, for neither of the conditions so-called is inflammatory. On the contrary, in the conditions in which these are supposed to exist, the tissues are blanched, the blood from the capillaries having passed into the larger vessels as the heart failed to keep up the supply; and there is to be detected neither loss of tissue on the surface of the mucous membrane beyond the epithelium, if even to that extent, nor any hyperplasia in the organ itself. Inflammation, strictly speaking, can exist only in an acute form, although its products may remain for an indefinite period. Therefore, the term chronic inflammation applied to the uterus is a misnomer, and only serves to give erroneous impressions of the pathology and treatment of uterine diseases. Inflammation of the uterine body never occurs except after parturition, and those conditions which are commonly held to be the direct results of inflammation are due wholly to obstructed circulation in the organ, caused by pathologic processes in the cervix and neighboring parts. In this way the formation of flexures, many displacements, and the so-called uterine hyperplasias, with their attendant leucorrhea, are to be accounted for.

We shall have made a great advance in solving the problem as to the true pathology of many supposed uterine diseases when we seek for the cause outside the uterine limits.

In the second place, I will quote from a more modern author and at the same time one who is as well known, Dr. Howard Kelly:

Acute endometritis is generally found in acute septic processes involving the entire genital tract, but on account of the predominating symptoms of the other organs it is usually overlooked. Under any circumstances it is a rare affection.

Chronic endometritis is also rather rare. The prevailing habit of describing all scrapings, particularly because of their abundance in some cases, as examples of endometritis, is greatly to be deplored. It interferes with our getting any satisfactory idea as to the frequency of the real affection and tends to encourage unnecessary operating. The so-called "fungoid endometritis" is not a pathologic entity at all, and the name ought to be expunged from gynecologic works.

Chronic endometritis is oftenest associated with old cases of pyosalpinx; it is rarely ever found in the ordinary scrapings. The slight liability of the uterine mucosa to this affection may be ascribed to two factors: In the first place, the tendency of pus-containing tubes is to complete closure at the uterine end, and so shutting off one avenue of infection, and, in the second place, the form and position of the uterine canal is such as to afford good drainage.

After quoting two such eminent authorities on this subject, it leaves but little for me to say; but I can not help but add that a true endometritis can only exist as the result of a direct irritant to that structure, be it in the form of a microbial invasion or otherwise, conditions that rarely occur. The endometrium, owing to its intimate relations with the uterus, already alluded to, naturally will partake of any of its circulatory disturbances. The circulation of the uterus may have been interfered with, the uterus may be infected, inflammatory conditions of the appendages may affect it, it may be the home of new growths, and in all these conditions the endometrium will surely be affected, but does not represent a diseased condition by itself.

As to treatment, there is only one successful one, and that is the removal of the cause when it can be discovered. Local measures aimed at the endometrium proper will be of no avail. Scraping out parts of the endometrium with a eurette will not cure a lacerated cervix, a subinvolution, a displacement, pus-tubes, a new growth, an infection nor even a virginal or senile endometritis, whatever these terms may mean.

I have said little or nothing about a condition which,

perhaps, some of you may have in mind, and that is gonorrheal endometritis, and it is because I am in doubt as to the existence of a gonorrheal infection of the endometrium, on account of the lack of evidence. One of the text-books from which I quoted my varieties of endometritis assures us that such a condition is very common; that it frequently attacks the muscular structure of the uterus, and even produces abscess of the uterine walls. How any one can make such a statement I do not know. That the gonococcus frequently attacks the cervical endometrium is a well-established fact, but, as I have already said, I am only speaking of the endometrium of the body of the uterus, I will admit that this is a disputed point.

I have only attempted to treat this subject in a very general way, as it would be impossible to take up and to discuss each and every author's point of view and his reasons for classifying endometritis as he does, nor do I wish to deny him his right to his individual opinion. When it comes to teaching students, however, it seems to me that they have a right to the knowledge of the facts in the case, and that there should be some concerted effort on the part of teachers to learn something of the true etiology and pathology of endometritis, the knowledge alone of which will lead to a rational treatment of this condition.

#### DISCUSSION.

DR. H. O. MARCY, Boston said that the utricular glands of the uterus have a function far greater than is usually supposed, and less damage is done in their curettement than would be the case were it not for the fact that their deeper portions are deeply imbedded in the connective tissue layers of the uterus. But for that curetting would do irreparable damage. Shedding of the uterine mucosa is a sort of cleaning house for the little tenant that Nature desires, and a great deal of damage and very little good may be done if physicians do not understand the physiology of these glands.

DR. ERNEST F. TUCKER said that he thinks that gynecologists are not so well versed in anatomy, physiology and pathology as they should be. Most of our text-books are written by clinicians, and it throws discredit on gynecology to have such a variety of diseases mentioned in the text-books used in the colleges. This state of affairs ought not to exist, and Dr. Tucker said that he desired to impress teachers with the necessity of taking up this matter.

### TRANSPLANTATION OF BONE FOR THE RELIEF OF SADDLE-NOSE.

WITH REPORT OF ONE CASE.\*

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SAN FRANCISCO.

In 1900, Gersuny of Vienna reported the use of paraffin injection for the relief of deformity. Since then medical literature has been full of reports of the brilliant results attained by this procedure. The original method has been modified somewhat; we have learned by experience that all cases are not amenable to this form of treatment; we have also learned that serious complications sometimes follow its use.

In this paper I wish to make a comparison and to draw conclusions between paraffin injections and plastic surgery for the relief of saddle-nose.

The selection of cases is of the greatest importance if

\* Read in the Section on Laryngology and Otolaryngology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



good cosmetic effect are to follow paraffin injections. I can not do better than to repeat what Paget<sup>1</sup> says:

It is important that the skin of the nose be free, loose, soft, healthy and abundant, so that you can raise it a full fold between your finger and thumb. If it is rigid, set and strained, so that you can not well raise it off the frame of the nose, you can hardly raise it or keep it raised with paraffin.

Especially if the skin be scarred, and thin, and adherent, stuck down here and there to what is left of the deeper structures, the case is wholly unfavorable and almost impracticable, as everything depends on the state of the skin. It is all a matter of tension; if the skin be stiff and not loose, it will not submit to be raised. It will retaliate on the paraffin. The freeing of adhesions by the use of a tenotomy knife has not been sufficiently satisfactory to be recommended.

The complications that may arise from the use of paraffin injections are many. They have been enumerated so many times that I will not go over the list, but will speak of the more important ones later.

Some of the complications may be eliminated by carrying out in detail every feature of the operation. As is said for plastic surgery, the execution of the minutiae is that which makes a good or bad result.

Downie<sup>2</sup> performed an experiment that is interesting. He injected paraffin deep into the breast of a patient, in whom the breast was to be removed a week later. Careful sections were made; the paraffin appeared almost entirely in the deeper portions of the subcutaneous fat, distributed in blocks of varying size, the largest being about that of a pea. The masses are distinctly lobulated, more irregular, with rounded processes occupying apparently in every case a position between collections of adipose tissue which had been displaced by them.

It is inferred that the paraffin had made its way along the lines of connective tissue trabeculae between the fat-containing cells. He further says that, from the fact that the infiltration of the paraffin is definite and tolerably intimate, it is difficult to believe that its position would subsequently alter to any extent, although its absorption is possible. He also injected molten paraffin into various parts of artificially warmed cadaver; in each instance the paraffin solidified in mass deep in either the cellular or the muscular tissue; an altogether different result to that obtained when the paraffin was injected into the living subject.

These experiments are worthy of more careful investigation. Downie says that the paraffin may be absorbed; if it is absorbed, how does this come about? Is it digested, so to speak, or is it carried off in smaller particles, which may or may not produce trouble, depending largely on the tissue involved and the amount that happens to accumulate in a given place. I am inclined to the former theory and believe that the paraffin is digested and absorbed. If the paraffin were carried in mass, we would sometimes have emboli following. In all the cases with which I am familiar, the embolus followed almost immediately. This is a very important point to determine, because it would aid us materially in learning something definite of the ultimate outcome of paraffin injections.

#### SUMMARY OF CASES IN THE LITERATURE.

A. W. Morton<sup>3</sup> made some valuable observations with paraffin at 109 F. At the end of one month, globules of paraffin were surrounded by a capsule of embryonic tissue; at the end of the second month, connective tissue

had increased and new blood vessels were permeating the mass. The masses of paraffin had grown smaller and were surrounded by embryonic tissue which had penetrated the paraffin. At the end of the third month, there was a vast increase of new tissue, connective, fibrous and embryonic, with a decrease of the paraffin. At the end of the fourth month, the spaces that were filled with paraffin were entirely filled by embryonic tissue.

If these findings can be relied on, they are very important, as they add to definite knowledge, at the same time producing just the condition we would most wish for. Morton does not offer any theory as to how and why the paraffin disappears or why the new tissue is produced. If the theory of digestion or chemical change is correct, there is sufficient cause for the formation of the new tissue.

Bradley<sup>4</sup> reports a case in which paraffin remained as a foreign body after traveling in the tissue and gave rise to deformity. On operation he found a large fibrinous cicatrix, but no paraffin.

Smurthwaite<sup>5</sup> reports the results of experiments on dogs with the injection of paraffin. Two months following the injection, no paraffin could be found; fibrous connective tissue was present in the injected area.

Comstock, of Minnesota, in some experiments on rabbits, found that the danger of embolism was greater as the meltingpoint was lower. On the other hand, Eckstein's paraffin with a melting point of 136 F. causes a good deal of local inflammation, but no cases of embolism have been reported following his method. It is said that if embolism were to follow this method, it would probably be due to the heat.

The complications that are more likely to follow hot injections are abscess and glazing and thickening of the skin. It is generally conceded that the greatest danger in the use of paraffin injections is from emboli, but the mode of their production is not fully appreciated. It is a fact that most of the cases of embolism have occurred when the melting point of the paraffin was below 110 F. On the other hand, it will be interesting to note the frequency with which embolism follows the injection of mercurial preparations suspended in liquid oil.

Hartung<sup>6</sup> reports one case in 8,000 intermuscular injections. Moeller<sup>7</sup> observed embolism 28 times in 3,835 cases; he then changed from intermuscular to subcutaneous injections and found no embolus in 240 injections. Neisser<sup>8</sup> had one embolus in 900 cases, and Epstein had seven in 8,292 subcutaneous injections. Paget says that 1 per cent. of all cases of paraffin injection are followed by embolism. Pfannenstiel<sup>9</sup> reports a case of pulmonary embolism; the paraffin was at temperature of 115 F. Leiser<sup>10</sup> reports a case of thrombosis of the ophthalmic vein. Hurd and Hulden<sup>11</sup> report an embolism of the central artery of the retina following the injection of paraffin at 114 F. Paget<sup>12</sup> reports four cases in which paraffin injections were followed by chronic inflammatory thickening; in three of the four cases it was necessary to undo what had been done at the cost of a scar. Spicer<sup>13</sup> reports a case of paraffin getting into the eyelids. Smith<sup>14</sup> reports two cases of paraffin being

4. Bradley: Brit. Med. Jour., Nov. 5, 1904.

5. Smurthwaite: Brit. Med. Jour., Nov. 5, 1904.

6. Hartung: Arch. f. Dermat. u. Syphilis, vol. ii, 1889.

7. Moeller: Arch. f. Dermat. u. Syphilis, vol. ii, 1889.

8. Neisser: Arch. f. Dermat. u. Syphilis, vol. ii, 1889.

9. Pfannenstiel: Centralb. f. Gyn., 1902.

10. Leiser: Dents. med. Wochft., April 3, 1903.

11. Hurd and Hulden: Med. Record, July 11, 1903.

12. Paget: Brit. Med. Jour., Sept. 13, 1903.

13. Spicer: Lancet, Jan. 25, 1902.

14. Smith: New York Med. Journal, May 17, 1902.

1. Paget: Brit. Med. Jour., Oct. 29, 1904.

2. Downie: Brit. Med. Jour., Nov. 8, 1902.

3. A. W. Morton: American Medicine, Oct. 24, 1903.



carried to the inner canthus of the eye and one in which it was carried to the nasal cavity.

Brady,<sup>15</sup> after the lapse of six months, had to do a secondary operation on account of the paraffin being misplaced. On cutting down he found a mass of newly-formed connective tissue, fibrocartilaginous in consistency. Barker<sup>16</sup> reports a fatal case in which the melting point of the paraffin was below 110 F. M. Lejaris<sup>17</sup> reports a case in which, three months after a paraffin injection, there was a rapidly-developing swelling of the nose, the upper eyelids, and the left under lid. By making small incisions, minute particles of paraffin were removed. The swelling recurred again and it was necessary to remove small particles. In addition to these cases, I have collected from unofficial sources one case of blindness in both eyes and four cases of blindness in one eye.

In Paget's last report of 70 cases he states that in some cases the result is fairly satisfactory and in some he has failed to do much good. In a few cases he is sorry he ever meddled. He concludes his article by saying that plastic surgery would have been better in some of the cases.

#### CONCLUSIONS FROM STUDY OF REPORTED CASES.

1. From the foregoing complications, I do not think we are justified in assuming the risk of possible blindness for the correction of nasal deformities.

2. Plastic surgery should be recommended when possible because of the foregoing complications.

3. If paraffin injections are used at all, the cases should be selected, the paraffin should have a melting point above 115 F., and a screw-piston syringe, as recommended by Smith, should be used, so that by each complete turn of the piston a definite quantity will be introduced.

4. We do not know positively what becomes of the paraffin, but in the greatest number of experiments it has disappeared, leaving connective tissue. It is my notion that the development of the new tissue is due to a ferment that destroys the paraffin and produces new connective tissue.

5. I am satisfied that only a small number of the accidents have been reported that have followed the use of paraffin, as I am familiar with two cases in my own city; in one there was complete blindness in one eye; in the other partial blindness of one eye.

#### PLASTIC SURGERY.<sup>18</sup>

The operation for saddle-nose has a twofold purpose in view: Restoration of the bridge of the nose and the lowering of the cartilaginous part of the nose. According to König, the operation consists of lowering the tip of the nose by a transverse incision at the deepest part of the depression and filling in the defect by a flap from the forehead that carries with it the outer table of bone. This is afterwards covered by a larger flap, also taken from the forehead. Israel has modified this operation, improving the cosmetic effect. He takes a flap of skin and bone from the forehead with a narrow pedicle. Secondary quadrangular flaps are formed from the skin that has been freely loosened from the nose. Helferich has modified König's operation in a similar way. I consider the operation as practiced by Schimmelbusch the best of all the various modifications of König's operation. The frontal flap is cut so that the end is very broad, containing a plate of bone wider than it is long.

The narrow pedicle consists of skin only; the large defect in the forehead can be remedied by the displacement of a large curved flap from the scalp. The flap of skin and bone is not transplanted at once into its new place, but is covered with gauze and held in a horizontal position by means of adhesive plaster for several weeks until it granulates well, giving plenty of time for necrotic pieces to be cast off and for the periosteum and bone to be firmly united. The operation is completed by freshening the edges of the flap and removing the granulations. The bony plate is sawed through lengthwise exactly along the middle, so that it can be set up like the ridge of a roof, with its skin surface internally; so shaped it is transplanted into the defect. The latter is formed by splitting the nose in its entire length and freeing down to the entire pyriform aperture. The connections of the soft parts with the bone are severed and the skin is dissected off to the sides. The old nasal skin, separated from the sides, covers only a part of the new bridge at its base. After about three weeks, the pedicle is severed and spread out over the freshened region of the glabella so that it lies in its original position. After several subsequent operations the skin may be gradually drawn over the newly-formed frame so that eventually only linear scars remain. Excellent and permanent results have been obtained from these various modifications of König's operation. The one just described is the most difficult and the most extensive. When we consider, however, that only a linear scar remains on the forehead, and that by replacing the pedicle a normal shape is given to the root of the nose and the glabella, we are justified in this procedure.

After it was found that the displaced bone formed a satisfactory and permanent support for the bridge of the nose, its transplantation in a more simple way was considered, because of the bad cosmetic effects from some of the plastic operations. Israel transplanted a piece of bone from the crest of the tibia. He freed the soft parts of the nose by a longitudinal incision and placed the bone under the skin, which he undermined from the edges of the wound. He has repeatedly succeeded in bringing about a good cosmetic effect in this way. De Ruyter and others have employed decalcified pieces of bone, platinum and silver, but not satisfactorily.

Wier<sup>19</sup> describes an operation in which he used the breast bone of a duck, making three incisions starting from the nasal bones, one on either side of the nose down to the alæ nasi; the third down the center. The bone remained in for three weeks, when one end came through the inside of the nose. One-half was removed and later the other, which he claims was disturbed by the removal of the first part. He says he will try it again.

Grafting of bones from other individuals has been practiced by Macewen and Ponet. I can not find a description of it in the literature. Booth<sup>20</sup> describes a superficial operation for saddle-nose of traumatic or congenital origin. He makes a linear incision to the tip of the nose, elevating the nasal bones and then separating the tissue on either side to a point corresponding to the compressor muscle. With catgut he gathers up the tissue, crossing the bridge; he carries out the same procedure on the other side. Tension on the suture will fill in the depression; the outer wound is closed by subcutaneous sutures. It seems to me that this is a very simple operation and likely to yield good results in selected cases.

Berens,<sup>21</sup> in a very recent publication, describes in

15. Brady: Australian Med. Gazette, May 20, 1903.

16. Barker: Lancet, March 21, 1903.

17. M. Lejaris: Lancet, June 6, 1903; from Societe de Chirurgie.

18. System of Practical Surgery by von Bergman and Bull, vol. 1.

19. Wier: New York Med. Jour., Oct. 22, 1903.

20. Booth: Amer. Med. Jour., May, N. Y., Med. Jour., April, 1901.

21. Berens: Ann. of Otol., Rhin. and Laryng., September, 1904.



detail how he has overcome saddle-nose of traumatic or congenital origin by loosening the nasal bones and fracturing the septum in various directions, raising the depression and holding it in place by means of splints. I can not well understand how this can be done satisfactorily, as in traumatic or congenital conditions the bones and cartilage have assumed such position that when fractured and elevated into the new position to overcome the deformity they will not maintain the extra weight put on them, and it would be very hard to put a tampon so tightly that it would maintain this elevation. If this can be accomplished, however, it is probably the best of all the operations for saddle-nose of traumatic or congenital origin.

#### CONCLUSIONS IN REGARD TO PLASTIC SURGERY.

The conclusions in regard to plastic surgery of the nose are hard to define. In the first place, all cases of

of possible loss of life or of vision and other minor complications, while with plastic surgery the surgeon works on better established principles.

*Patient.*—Male, aged 27, woodsman by occupation.

*History.*—The patient had a perfectly straight nose prior to an accident which happened two years ago, the limb of a falling tree striking him across the nose. The bridge of the nose was broken, producing the characteristic deformity. The patient had considerable hemorrhage from the nose for several days, and could not breathe through the nose for four weeks. The camp surgeon could not do anything for him, so after about two years he presented himself at the San Francisco Polyclinic.

*Examination.*—It was found that the injury was confined entirely to the anterior part of the cartilaginous septum, with a possible severing of the union of the nasal bones. The cartilage was fractured in such a way that either side which formed the support for the bridge of the nose turned into the nasal cavities, producing more or less obstruction.

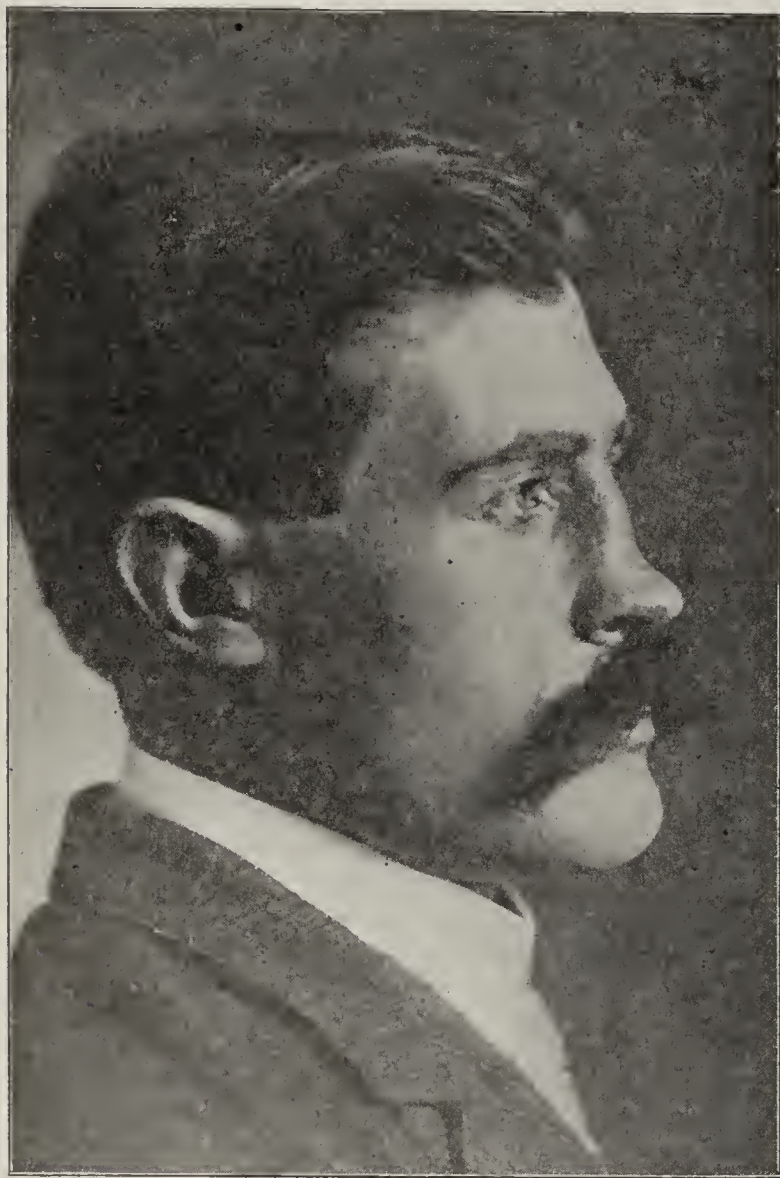


Fig. 1.—Patient before operation.



Fig. 2.—Patient after operation. The nose is not absolutely straight, but there is no deformity.

saddle-nose can be corrected by bone implantation, the cosmetic effect depending somewhat on the condition present prior to operation. Second, cases of traumatic or congenital origin are by natural selection more amenable to this form of treatment than cases that have an entire destruction of the bony and cartilaginous septum. In case of failure by bone implantation, one of the various modifications of König's operation may be tried; especially that of Schimmelbusch, as here described. Third, there are no serious complications, the cosmetic effect depending largely on the operating surgeon.

The deductions that must be drawn from the various conclusions lead one unhesitatingly to decide in favor of plastic surgery rather than paraffin injections. The production of new tissue by paraffin injections to overcome a deformity is almost ideal, but there is the uncertainty

*Operation.*—This obstruction was first corrected, and then the operation was done for the transplantation of bone. The field of the two incisions was scrupulously cleaned 24 hours before operation, and a bi-chlorid of mercury dressing applied. An incision starting just below the union of the nasal bones was carried well into the tip of the nose, cutting down to the cartilage proper, separating the perichondrium in the hope that the implanted bone would form union at this place. At either end of the incision, the skin and fascia were undermined so that the bone could not be displaced. The skin and fascia from the sides were likewise dissected loose as these tissues were drawn tight over the bridge. This was done to lessen the tension on the implanted bone, as well as to assist in restoring the bridge of the nose. At this point I proceeded to remove the piece of bone from the crest of the tibia. The piece removed was about two inches long and the thickness of half a leadpencil. With this bone I removed more than enough periosteum to cover it, trimmed the edges with a pair of



scissors, and placed it in a normal salt solution. Uncovering the wound in the nose, I adapted the bone to the cavity that had been made for it, and closed the wound by deep sutures. The periosteum of the tibia was sutured with cat-gut, and the skin with silk. There was not a drop of pus from either wound.

*Remarks.*—Before doing this operation I looked up some of the literature on plastic surgery of the nose, and concluded I would try to do this operation by a simpler method. I found that the implantation of bone from the lower animals had not been entirely satisfactory, and I decided to use a piece of bone from the patient himself, and the most desirable was that of the spine of the tibia. At the end of five weeks the bone was in place, and I intended to report the case as an original operation, but in the review of additional literature I found that my identical operation had been satisfactorily done before. It is now five months since the operation, and I have every reason to believe that the bone will remain in place permanently, provided it has sufficient nourishment; if not, it will atrophy with the possible formation of new connective tissue, which would be more ideal than at present. As stated before, I had hoped the bone would unite, but it did not. Since then it has become apparent that had it united a fracture would have followed the slightest traumatism.

The photographs show that there is not quite sufficient elevation to make an absolutely straight nose. Had the bone been larger, this would have been entirely overcome. In all cases of saddle-nose there is an apparent widening and in some instances a real widening of the base of the nose. This is overcome by lifting the bridge with a lowering of the tip; and this can be brought about by the length and thickness of the bone implanted.

This Israel modification of König's operation is in its infancy. With good surgical principles adapted to it, the use of bone implantation for the correction of saddle-nose will surpass all other methods of treatment for this condition.

606 Sutter Street.

#### DISCUSSION.

DR. W. S. ANDERSON, Detroit, said that when paraffin injection was first advocated he took the matter up, thinking possibly that it would be found satisfactory in the correction of many deformities of the nose. When he commenced his work there was little literature on the subject and he did considerable experimenting. He very soon found its limitations. The procedure seemed very simple, but the technic he found difficult and the results not altogether satisfactory. In saddle noses the skin frequently is not freely movable, so in many cases the paraffin will go everywhere except where it is wanted. Nevertheless, in a few cases Dr. Anderson got very good results, and in no case did he have a result that was positively bad; he did not make anyone worse. Since reading of the cases of blindness following this apparently simple operation he has hesitated to use the method. Such a result would be a very serious thing for the patient. Since this method is used for the cosmetic effect rather than as a lifesaving procedure, physicians ought not to take any risk. The first case in which he used it was that of a woman who had had for many years a typical saddle nose as the result of syphilitic necrosis. The result was very satisfactory, indeed. In that case the paraffin was used three or four years ago. He used it in another case in which a man was crushed under a beam and the nose was flattened out. A general surgeon did something toward repair, and later Dr. Anderson operated under a general anesthetic. He refractured the nose until it was very movable and raised up the whole organ. He used a urethral steel sound to raise it up and got very good results. He then did several operations under cocaine to give better breathing capacity and finally injected the paraffin. This was done in November, and during the first cold spell the patient came in and said that his nose felt all the time as if it had "a chunk of ice on it." The paraffin was outlined in white, due to imperfect circulation. These symptoms all passed away after a few months when the circulation was re-established.

DR. OTTO T. FREER, Chicago, said that he has refractured noses that have been broken some two or three weeks before the resetting and in which the fragments have reunited in a faulty position, and he has seldom found the releasing of the broken pieces or their molding into the desired form difficult after this comparatively short interval. He has used the steel sound, as Dr. Anderson describes, in lifting up the bridge of the nose. The result, nevertheless, somewhat disappointed him, for in spite of tamponing the nose often would not stay in shape and some deformity would recur. Dr. Freer described briefly Dr. Robertson's method of operating in cases in which the nasal bones are driven backward between the nasal processes of the superior maxillary bone. A vertical incision is made in the center of the nasal bridge and the nasal bones are chiseled loose from the nasal processes of the frontal bone and lifted up, after the septum has been incised. The nasal bones are then fastened to the frontal bones with a wire attached to the frontal bone above the origin of the nasal bones. The wire is passed under the nasal bones and by tightening it these bones are lifted up into place; Dr. Robertson leaves the wire in place.

DR. H. FOSTER, Kansas City, Mo., stated that when paraffin first came into use for the correction of deformity he tried it, using the hard paraffin boiling at about 150 F. He had difficulty in getting the paraffin into the tissues. He then read an article by Smith recommending melting paraffin at 110 F., and since using this he has had no difficulty. He believes that bad results are often due to the physician not being aseptic in the operation. While the rhinologist need not go into the details of asepsis like the general surgeon, they should boil the instruments and be as careful as possible in operations on the nose. In ten or fifteen cases Dr. Foster has had excellent results from the use of paraffin with a melting point at about 115 F. Dr. Roe of Rochester has frequently elevated the nose with wires, etc., with most excellent results. In some cases paraffin is ideal. In many cases of saddle nose from specific causes it is useful. It is better to use too little than too much paraffin. Physicians certainly must take some risk in these operations. Some objection could be raised to almost any operation. Dr. Foster declared that it is puzzling to know how paraffin may cause blindness. He has only seen the account of two cases of blindness attributed to paraffin in the records he has looked up. The physician should be careful in his technic; with absolute cleanliness this is an ideal operation. Many of these patients have cicatrices. The point of the syringe should not be introduced too deeply, and then by holding the finger at the inner canthus of the eye the paraffin is not likely to get into the inner canthus.

DR. W. W. PENNELL, Mount Vernon, Ohio, said that he treated a broken nose about six months ago. A man was skating on roller skates and went against a pillar and smashed his nose. Dr. Pennell replaced the bones, put in a rubber tube on either side and above that a smaller tube, which he kept in for a couple of weeks, replacing them from time to time. The result has been a very good nose without any particular deformity.

DR. ROBERT C. MYLES, New York, said that paraffin should always be injected cold. Formerly it was injected warm, but this has been abandoned because, in cooling, melted paraffin becomes hard in the syringe at the circumference, while it remains soft and warm in the center. Anyone who has had experience with warm paraffin knows how readily it diffuses. It is doubtful whether any difficulty would be experienced by the injection of small quantities of hard paraffin, 110 degrees or over, into the tissues, say three injections to a moderate saddle-back nose. Dr. Myles said that the injection of large quantities of warm paraffin has probably been responsible for the injuries to the eye, brain, kidneys and other parts of the body.

DR. CULLEN F. WELTY said that probably Dr. Roe has done more plastic surgery of the nose than any one in the United States. He has good results. The descriptions of his operations are complicated and sometimes hard to follow. Dr. Welty repeated that so long as there is danger of producing an embolism with loss of vision and possibly life, physicians are not justified in using this procedure for the correction of a



deformity. He is thoroughly convinced that many of the unsuccessful cases have not been reported. As soon as a paraffin is obtained that will not cause complications there will be an ideal condition both from a pathologic standpoint and from that of cosmetic effect.

## THE DIAGNOSIS OF INTRACRANIAL COMPLICATIONS OF SUPPURATIVE EAR DISEASE.\*

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As a preface to the body of the paper, the following brief statistics on the subject may be quoted:

Hassler states that of 81,684 ear cases treated there were 116 deaths due to intracranial extension. Of these 48 died of sinus thrombosis, 28 of cerebral abscess and 40 of meningitis.

Köerner reports that in 115 necropsies after death from ear extension, 41 died from sinus thrombosis, 43 from brain abscess and 31 from meningitis.

In an exhaustive article on the statistics of this subject, Pitt reports that of 9,000 autopsies made in the hospitals of London, the records representing the consecutive ones, and therefore was for deaths from all diseases, just as they naturally occurred, 57 were due to suppurations in the temporal bone, or one such death in every 158 running hospital cases, distributed as follows: 48 died of sinus thrombosis, 28 died of cerebral abscess, 40 died of meningitis.

Köerner of Rostock, who has compiled most extensive statistics, shows that more than six of every 1,000 deaths from ear diseases are the result of brain abscess.

This frequency of otitic brain abscess and sinus thrombosis justifies the presentation of the main features indicative of the presence of such complication. The symptoms of intracranial involvement are so obscure throughout the earlier, and often the greater, part of their course as to remain entirely unsuspected by the attendant until a time when the extension is so great as to render the help of the physician of no avail; or what is equally unfortunate, the symptoms representing the intracranial involvement may be entirely mistaken for other ailments, and the serious nature of the trouble not comprehended until too late to be of any service to the patient. In view of the fact that, when untreated, infection of the cerebral contents proves almost without exception fatal, but that when early recognition of the invasion is made and prompt surgical measures taken for relief, about half of all cases promptly and satisfactorily recover, no pains should be spared in any suspected case to investigate and interpret every symptom at its earliest development, and to properly record the same, to the end that when sufficient evidence is present to justify it, surgical measures may not be delayed.

The latest pathology of brain and sinus infection points clearly to the fact that the entrance of the virus into the cranial cavity is through some one of the several open sinuses which practically surround the base of the brain, viz., the mastoid antra, middle ears, ethmoidal cells, frontal sinuses, antra of Highmore, and sphenoidal sinuses. Those who treat the diseases of the upper air tract find that the above-mentioned cavities are suppurating with great frequency, and often their mucosæ are polypoid; the bony walls are also often denuded of their mucous lining, and not infrequently areas of bony necrosis are found connecting a cavity directly with the cranial structures, thus permitting the free entrance of septic sinus contents directly into the cranium.

In the diagnosis, then, of any intracranial complication, the previous and present history of the case as

concerns these open sinuses becomes of the utmost importance, since practically all statistics agree that suppuration in these localities has been found in the majority of all autopsies in which brain abscess, sinus thrombosis and meningitis have been found. Nor is it necessary that the patient give a present history of suppuration, because, and especially is this true as pertains to the ear, the statement may be made by the patient or his friends that, whereas there was once a discharge, lately the suppuration has apparently wholly ceased; that, therefore, no thought of connecting the former running ear with the present trouble has been entertained, and can only be found out by careful questioning and thorough examination of the parts. I lay great stress on this fact of the denial of ear discharge, because such denial was made in three cases of brain abscess which I have seen, in which operation proved the presence of chronic aural suppuration, necrosis and cholesteatoma. In these cases the pathologic conditions present were not productive of large amounts of pus, and the trivial quantity appearing in the external auditory meatus was readily dried into crusts which were easily mistaken for hardened ear wax. It should, therefore, be stated that no diagnosis should ever be regarded entirely satisfactory that does not include a thorough inspection of all the sinuses, and especially those of the ear. Since the symptoms of the two principal infective diseases under consideration vary very greatly, each will be considered by itself. It should be known that the symptoms of meningitis may complicate either those of brain abscess or sinus thrombosis, and so complicate and mask the real trouble as to render exact diagnosis difficult or impossible. It is also possible in any case that serous accumulations due to tubercle or that the pressure of a brain tumor may cause localizing phenomena of such nature as to render exact diagnosis most difficult.

### SINUS PHLEBITIS AND THROMBOSIS.

The cause of this ailment may be briefly stated to be an infection of the vein arising from wounds about the head and neck, deep infections of the neck, infections of the tonsils, the nasal accessory sinuses, erysipelas and suppurations in the temporal bone, which latter cause is regarded by otologists as by far the most frequent of all.

The symptoms of sinus thrombosis are, in the later stages, most pronounced and usually unmistakable, the result of the general pyemic condition of the patient at this time. It is of the utmost importance, however, to the success of the surgery of this most fatal malady that a diagnosis shall be made before the disease has so poisoned the patient as to present symptoms which would be easily understood by even the indifferent diagnostician, because early diagnosis plus competent surgical interference equals commendable results, whereas late diagnosis plus either the most skillful surgery, or no surgery, is apt to result in disaster. The early recognition of the extension of any septic condition to the intracranial structures is usually difficult, and this fact has been spoken of as the weak point in the history of intracranial disease. In the very beginning of sinus thrombosis, when the thrombus is yet incomplete, and before disintegration has set in, exact diagnosis is usually impossible. However, a discharging ear can be found in nearly every case, and, when present, there has almost certainly been a complicating mastoiditis with its well-known symptoms. There may be suspicions of chilliness or even rigor, together with moderate rise of tem-

\* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



perature, pain and tenderness, but all these could be entirely accounted for by the presence of the ear and mastoid diseases. The patient appears, however, to be suffering from a more depressing ailment than mere suppurative otitis, complicated by simple mastoid inflammation, and when these latter ailments are and have been persistently and incurably present, exploration of the mastoid is entirely justified, and a complete mastoid operation becomes, therefore, a diagnostic measure of first value in the earlier stages of a suspected sinus involvement. If such involvement be found not present, the operation is a prophylactic measure of greatest importance, as I have had frequent opportunity to observe in the very considerable number of cases in which, during the operation, I have found the bone carious or necrosed over the sinus, which later was covered with necrotic granulations and bathed in pus, thus rendering it certain that, without the free drainage afforded by the mastoid operation, the sinus must soon have become infected, thrombosed and putrid.

In the second stage the thrombosed sinus begins to soften and disintegrate, and septic portions are swept into the general circulation. The symptoms indicative of this fact, while more easily interpreted than those of the earlier stage, are by no means pathognomonic, and may yet be very misleading. The condition presented is one both general and local—general, due to pyemia, and local, resulting from the circulatory disturbances both inside and outside the cranium, that are incident to the blocking of so large a sinus. Headache, vomiting and dizziness are commonly found, but are such constant concomitants of brain abscess that of themselves they could scarcely be counted as valuable diagnostic aids. Outside the skull the occurrence of the following symptoms should be noted, if present, since they have valuable diagnostic bearing: swelling or edema behind the mastoid and over the entrance of the mastoid vein; swelling along the course of the internal jugular; edema of the eyelid of the same side. The fundus of the eye should be examined, but circulatory changes in the depths of the eye are by no means constant, for in 35 cases marked eye disturbances could be detected in only 9. Hansen found diagnostic evidence of lateral sinus thrombosis present in the fundus in only 3 of 8 cases. Köerner found only 1 in 5 cases. Jansen found choked disc rarely present in simple thrombosis. By far the most characteristic symptoms are the high temperature, with remissions, and the septic chills. The latter, although the most constant, are not invariably present, and Whiting records the entire absence of rigors in 18 cases, and 48 are noted as having had but one. However, there is usually at least one chill in the twenty-four hours, and this is quickly followed by a rise in temperature to 103 to 104 or even 106, the fever remitting markedly, during which time the most profuse and exhausting perspiration occurs.

All or even a majority of the above symptoms are scarcely present in any one case, but if only a few of them are noted in any patient who has a chronic discharging ear, or who has an acute discharge that has pursued a violent course with undue lack of recuperative powers, the involvement of the vein should be thought of. The most accurate observation of all symptoms should at once be instituted and recorded, to the end that an amount of information may be obtained sufficiently early on which to base a positive diagnosis before the hopeless stage of metastasis has been reached.

Diagnosis in the final stage of the disease should not

be difficult, but a diagnosis made at this late period is neither commendable nor useful. Septic emboli have been found lodgment in the lung, producing septic pneumonia, with its harassing dry cough and oppression in the chest; or possibly the emboli have been carried to more distant parts, resulting in multiple metastatic abscesses and death.

Sinus thrombosis may be mistaken for malaria, typhoid fever, acute tuberculosis, and in children for acute digestive disturbances. In some instances the differential diagnosis is not readily made. However, proper energy in using the diagnostic measures now at the command of the profession will seldom fail to clear up the most difficult case in ample time to permit of the successful employment of one of the most triumphant of all surgical procedures, viz., exposure of the lateral sinus and internal jugular vein throughout their courses in so far as found diseased, the removal of their septic contents, and at the same time ligating the channels of entrance for further septic material into the general circulation.

#### SYMPTOMS OF BRAIN ABSCESS.

The symptoms of this ailment, like those of sinus thrombosis, are preceded and nearly always accompanied by a suppurating ear. The fact that the patient and his friends may deny the presence of such a discharge should never deter the diagnostician from making the most rigid examination of the condition of the fundus of the ear and ascertaining for himself, first hand and to an exact certainty, the actual condition of the middle ear and its surrounding cells. Every means of examination known to the otologist that will help in the accuracy of this examination should be used, to the end that the information thus gained is positive, and, therefore, of first importance and greatest value in connection with other symptoms which may be present and indicative of brain abscess.

Brain abscess may result from either acute or chronic suppurative otitis, and the symptoms in this respect vary considerably. I have seen three acute cases, in all of which the ear ailment from the beginning was severe, the pain excessive and the patient unusually prostrated within a short time. In so far as was noted by careful observation, no symptom arose during the course of the otitis which could have been pathognomonic of the occurrence of brain extension, and it was, therefore, not known how early in the history of the ear disease that the abscess of the brain began. The ear symptoms in no case showed any signs of improvement at any time, and the pain about the ear and over the temple was much worse than would usually be expected in uncomplicated ear cases. In one, the worst of the three, this pain was intense and persistent and, being unaccounted for otherwise, was attributed to suppuration in the mastoid cells, and, although there was no pain, tenderness or swelling behind the ear, the mastoid operation was performed, pus in abundance was found in the cells, and assurances given the patient that the cause of the pain had been removed. Such promise was without sufficient knowledge of the case, the pain continuing unabated. Two days later paralysis of the arm of the opposite side, vomiting, unequal pupils, subnormal temperature and unconsciousness developed with great rapidity and so markedly that the diagnosis of brain abscess was made with little difficulty and, as proven by operation, with absolute certainty.

The two other cases were less severe as to pain, mastoiditis was present in each by the tenth day, and symptoms of brain irritation and pressure followed rapidly.



Rigors were not prominent features. Moderate elevation of temperature was at first present, followed by subnormal. Likewise an accelerated pulse, which later was very slow. Headache was present in all, and in each was far forward and about the brow. Each case at some time vomited. Only one of the three had any irregularity of pupil or marked paralysis of any muscle or group of muscles. The reflexes were highly exaggerated in each. The diagnosis of brain abscess was made on the following points: (1) A case of acute otitis media suppurativa, violent in every respect. (2) The headache, one-sided and about the orbital process. (3) Subnormal temperature and pulse. (4) Exaggerated reflexes. (5) Vomiting. (6) Exploratory operation.

If the abscess is the result of chronic suppuration within the temporal bone, the primary disease may have preceded the brain abscess only a few months, or the ear may have been discharging many years. There is usually very little evidence in or about the ear itself, further than the discharge, to warn either the physician or his patient of the approach or existence of serious intracranial disease. Many recorded cases show that the patient has followed his usual occupation often up to the day, or even the hour, that he is stricken down with the severe and fatal complication. Postmortem examination has demonstrated the fact that these abscesses must have existed for a long time, their presence being absolutely unsuspected by any one. It is believed, however, that greater care as to the examination of the ear disease, and of the local and general symptoms produced by the brain extension, would have made it possible to have reached a diagnosis of the true ailment before the fatal symptoms were present and at a time when well-applied surgery would have been worth while. It is doubtful if the physician who stands idly by as the attendant of one of these cases and permits the malady to go on to a fatal issue without recognizing its nature can lay claim to better management than could the Eddyite who denies the existence of all disease.

The symptoms of brain abscess in the earlier stages are like those of sinus thrombosis in the respect that they are often very indefinite. There is, however, probably enough evidence present in the majority of cases to cause the attendant to suspect the existence of brain trouble, and, if he be alert as a diagnostician, to cause him to give the closest heed to each symptom as it develops, and to interpret and properly record the same. Hemisphericity is seldom or never wanting, appearing as an early symptom and persisting throughout. It is seldom complained of over the site of the abscess, and may be quite a distance from it, as in one of my cases in whom the pain was persistent and severe over the region of the frontal sinus of the same side of the head. Such a persistent headache in connection with a foul-smelling ear, in which necrotic bone, granulations and cholesteatoma is discovered to be present, should not fail in any case to cause the medical attendant to think of brain abscess. Irritable disposition of the individual has also been noted as an early symptom, but is usually most prominently spoken of after other and graver symptoms have developed, those observing it earlier thinking little of it at the time. I believe, as an early symptom and taken in connection with those mentioned above, that it has good diagnostic value. The temperature is either normal or slightly elevated in the beginning, but as the abscess enlarges and brain pressure becomes a prominent symptom there is almost certainly a subnormal body heat, and this fact becomes sooner or later a most valuable diagnostic one.

Accompanying the subnormal temperature, the pulse is greatly slowed, running as low as 60, 50 or even 45 per minute. These circulatory and calorific disturbances may occasionally be accompanied by rigors, but while a chill may occur at some time during the disease it is certainly not to be compared in diagnostic value to that of sinus thrombosis.

Vomiting is a symptom almost certain to be noted at some time during the progress of this disease. It comes on in many cases sufficiently early to become of very great value, provided it is recognized as a symptom in connection with others occurring at the same time. It has been my privilege to be present on many occasions when the vomiting occurred, and the term "projectile," used to describe it, is not misapplied. However, in the earliest stages there may be retching and the presence of bile in such amounts as to mislead the physician into a diagnosis of intestinal or liver ailment. One such case in which the vomiting was persistent was diagnosed "irritation of the pneumogastric nerve," and this after consultation, and by medical gentlemen of good training.

The fundus of the eye furnishes evidence which, taken in connection with other symptoms, has important bearings. Such eye changes have been found in about one-half of all the brain abscesses in which careful examination was made.

## PECULIAR SYMPTOMS FOLLOWING A RADICAL OPERATION.\*

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BUFFALO.

*Patient.*—Dr. N. C. H., Buffalo, N. Y., consulted me during her student years regarding a fetid discharge from the left ear. I found a large perforation in the drumhead and carious bone wherever the probe reached. She received local treatment four weeks, when the discharge stopped. After several years she called on me again, complaining of unbearable pain in the ear. She was then under the care of Dr. Buswell for myocarditis. She had a pronounced regurgitant murmur and often had severe pain in the region of the heart; this occasionally kept her awake until 4 or 5 o'clock in the morning, and when that did not trouble her the pain in the ear would take its place. I consulted Dr. Buswell and was advised that he would get her ready for operation. I put this off as long as possible, but, as the pain in the ear became unbearable, she insisted on an early operation.

The previous history of the case will give an idea of the amount of destruction which had taken place without any marked symptoms. At the age of four weeks, the patient had suppuration of the right middle ear, which continued for seven months. There was no further trouble until the age of 21, while attending lectures at the Buffalo Medical College. There had been no discharge since, but more or less constant pain. By advice of friends she consulted a prominent specialist of New York City, who saw her five times during her stay. He advised her to allow no one, under any circumstances, to operate on that ear. I knew nothing about the New York visit at the time I operated, a week later.

*Operation.*—On May 12 she entered the Sisters' Hospital. On account of the condition of her heart, Dr. Hoover tried to anesthetize her with nitrous oxid and oxygen, but after a half hour's trial this was abandoned and ether substituted. Dr. Buswell took charge of the anesthetic, but after another tedious trial, had to abandon it for chloroform, to which she readily responded. I then did a complete radical operation and found the mastoid cells and accessory cavity filled with granulations and debris, but no pus. The ear was then dressed and the patient put to bed. She soon regained con-

\* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



sciousness, but had considerable pain, and at 9 p. m. was given ¼ grain morphin hypodermically. She slept intermittently about five hours during the night, vomited green fluid at 4 in the morning, and several times during the next few days. She slept at intervals, but always complained of pain after waking.

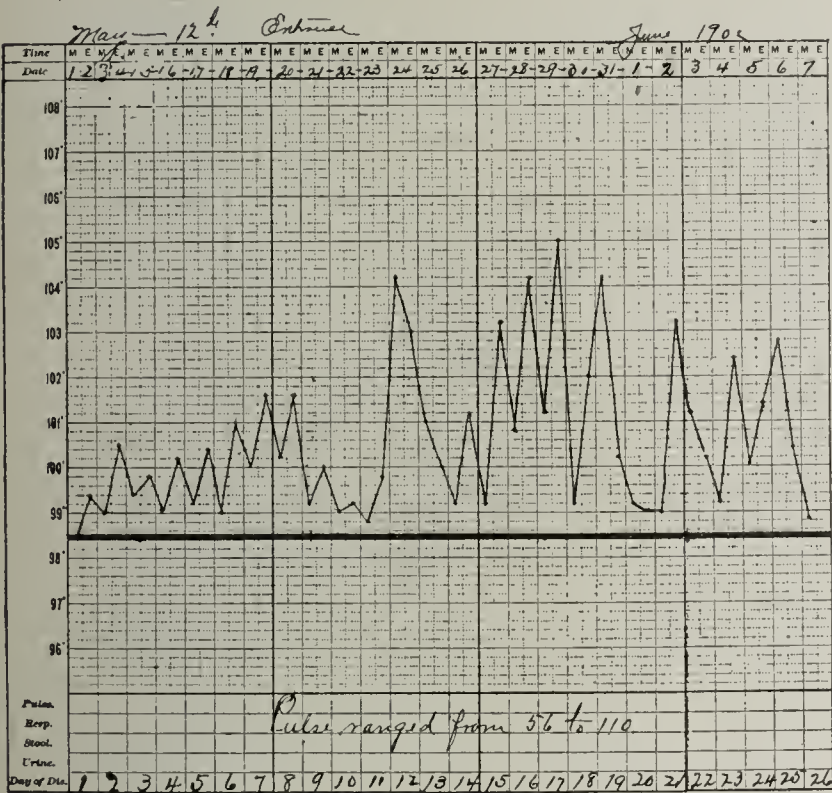
*Postoperative History.*—Two days after operation the dressing was changed on account of pain. The ear looked very well. The urine was examined and the specific gravity was found to be 1028, otherwise the urine was normal; indican was present. The wound was dressed again May 17 and 18; pain was constantly present.

May 18: The patient sat up forty-five minutes; she was restless the whole night following and morphin 1/6 grain was given.

May 20: Patient slept well.

May 21: Patient slept very little before 4 a. m.

May 28: A twenty-four hours' sample of urine, tested by Dr. Brown of the Sisters' Hospital, showed specific gravity 1007, indican slight, urea 59 per cent., a large number of epithelial cells, a few bacteria and pus cells; the reaction was neutral.



May 25: On account of the vacillating temperature, a blood count was made by Dr. Wixen: Leucocytes, 13,300; red corpuscles, 5,500,000.

May 24: The temperature suddenly took a jump to 104.4 and kept rising and dropping until June 1, reaching 105, May 29.

May 26: There was pain in the region of the heart; at 11 p. m. she had a slight chill and was restless all night. Twenty-four hours' sample of urine showed: Color pale, reaction neutral, appearance cloudy; specific gravity 1005, urea 29 per cent., a large number of epithelial cells and many bacteria.

Examination of the eyes by Dr. Hubbell: Fundus, both eyes, normal except perhaps abnormal fullness of central retinal veins and long branches; no optic neuritis. Pupillary reaction to light normal; vision not disturbed.

*Consultation and Subsequent History.*—Having decided, in consultation with Drs. Henry Buswell and Edward Meyer, that there was a sinus phlebitis with probable thrombosis, arrangements were made to operate next day, June 1. On the day before there was a slight chill and nervous twitching of the limbs. Dr. Hubbell again examined the eyes June 1. He found great fullness of the retinal veins in both eyes. On the evening of June 1, the time when we had intended to operate, the temperature did not go much above 101, then dropped to 99.4. This led us to postpone active interference for a short time. The following day the temperature jumped to 104.4, then dropped to 99. This was followed by a rise to

103.4, declining again the following day. It rose again June 4 to 102.6.

On June 3 she slept all night; on June 4 she had a slight chill; on June 5 and 6 she had pain in the region of the heart. On June 7 the temperature dropped to 98, and after that never rose higher than 100.4 except on the day she left the hospital, when it was 104. Urinalyses were frequently made.

*Blood Examinations:* Frequent examinations were made of the blood, the last one on June 6, the day of the final regular rise in temperature, this time by Dr. Charles S. Jewett. He found leucocytes 9,000.

DIFFERENTIAL COUNT.		Per cent.
Small lymphocytes	.....	5.5
Small mononuclear and transitionals	.....	2.5
Polymorphonuclear neutrophiles	.....	92.0
Eosinophiles	.....	0.0
		100

While there is no numerical leucocytosis, the differential count is highly suggestive of an inflammatory reaction. The stained specimen shows no other abnormalities.

During the rise and fall of temperature, the patient's pulse varied from 56 to 110. She was markedly neurotic, which fact caused us to hesitate before exploring the sinus, and the result seemed to show the wisdom of this precaution. She was able to leave the hospital June 15, the thirty-fourth day after the operation. During the following year there were times when she suffered considerable pain in the ear, but not sufficient to call for opiates. The temperature I have never found normal; however, she has very much improved in general health. One point in this connection is of considerable interest. The doctor was perfectly apathetic regarding the outcome of the operation, knowing, with her crippled heart, the risk she was taking; in fact, rather urging us on when we contemplated opening the sinus. She has now gained in flesh, sleeps much better, and the ear is practically well.

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DISCUSSION

ON PAPERS BY DRS. BARNHILL AND COTT.

DR. HILL HASTINGS, Los Angeles, said that he has seen several cases with intracranial symptoms in which nothing was found either at operation or autopsy. In one case he did a simple mastoid operation and there developed in about a week paralysis of the external rectus of the eye on the same side as the operation. It worried him considerably because he had not heard of a similar case and had rather suspected an intracranial involvement. The patient had also a good deal of dizziness both before and after the mastoid operation, and the discharge from the middle ear continued after the operation. Those three things made Dr. Hastings suspect intracranial involvement. After three or four days he concluded to convert the mastoid operation into a radical operation, and then he found a fistula through the inner wall of the inner ear, through which pus escaped. The patient made an uneventful recovery. Dr. Hastings did not think it wise to go into the brain unless there were stronger indications. He could find nothing similar in Politzer, nor was the complication present in 300 cases that he had observed for some time. His attention was called later to an article in which a writer (Gradenigo) reported several cases of acute suppurative otitis media in which paralysis of the external rectus occurred. The paralysis passed off and the author had concluded that it was due to a localized meningitis at the tip of the petrous portion of the temporal bone, which had involved the nerve. It is an intracranial symptom that worried Dr. Hastings a great deal, since he thought possibly he had a brain abscess to deal with. He has seen several cases in children in which there were very active meningeal symptoms that passed off without serious trouble. He had one case that he practically gave up. The child had active meningitis. It could not nurse, was unconseious, had paroxysms of twitching and regu-



lar spasms. He kept the child in a mustard bath for several hours, and it subsequently recovered. Politzer mentions headache in the orbital region as a very valuable sign of abscess of the brain. His chief indications are slow pulse, yawning and increasing dizziness with headache. Dr. Hastings had one case of brain abscess in the temporo-sphenoidal lobe, with severe pain referred to the orbital region, which immediately subsided on cleaning out the abscess cavity. The abscess recurred after six weeks. He did not keep it open long enough and the woman was later seized with the same symptoms and the old cavity was opened up and found to be filled up again with pus. The patient complained of the same old pain in the orbital region. Those are very important symptoms. Dr. Hastings had not seen paralysis of the external rectus before. The fact that there was pus in the urine in Dr. Cott's case indicates that that may have had something to do with the irregular fever. Again, it may have been a malarial case. The fact that the sinus was not uncovered and examined makes it difficult to prove anything about it. It seems to Dr. Hastings that physicians should always look at the sinus in such cases. Almost any general surgeon would regard that as a proper procedure. If it is inflamed and there is serious doubt, it should be opened. A thrombus should not be left behind to break down and cause sepsis.

DR. GEORGE L. RICHARDS, Fall River, Mass., said he has had some rather unfortunate experiences with brain abscess. He does not think there are any symptoms or combinations of symptoms that are pathognomonic of brain abscess. There may even be no symptoms at all prior to the most serious manifestations. A case that came under his observation illustrates this latter point. A man of middle age, with a history of an old purulent otitis media, was admitted to the eye and ear department of a general hospital where there was no distinctively aural surgeon. The visiting surgeon ordered a mild wash with which to wash out the ear, and after a day or two, as the man was much better and the discharge practically stopped, he wished to go home. He was discharged by the interne at his own request, and left the hospital the latter part of the afternoon of the day of his discharge. He did not reach his home that night, but was found the next day at noon in a swamp, unconscious and hemiplegic. Dr. Richards was called by the surgeon, and after opening a sclerosed mastoid and finding nothing to account for the symptoms, he trephined above the ear and made the old classical operation that the surgeons do. The dura did not pulsate and an incision was made about a quarter of an inch into the brain substance and from one to two ounces of the foulest smelling pus was evacuated. There was some improvement in the general symptoms for a day or two, but death occurred on the fourth day. Dr. Richards asked how could anybody, no matter how trained as an aurist or how conversant with the symptoms of brain abscess, have made a diagnosis in such a case. Yet no doubt that abscess had been in existence for days or perhaps weeks.

DR. C. F. WELTY, San Francisco, declared that by a process of elimination with the various means at our disposal it may be possible to clear up many doubtful cases of cerebral complications. Of course there are some cases that can not be diagnosed at all; if there are, it seems to Dr. Welty more of a guess than a diagnosis based on rational conclusions. He was visiting one of the most noted ear hospitals, and making the rounds with the surgeon in charge, when he said: "Doctor, I have an intuition that this patient has a cerebellar abscess; we will operate in the morning." The patient was operated on the following morning; no abscess was found. Two days later some pus was discovered coming from a previous incision that had been made through the dura, which communicated with a large abscess cavity in the cerebrum. At the time Dr. Welty asked the professor about this intuitive feeling in this case, and his reply was that sooner or later all otologists who operate, experience the same. In this particular case there was a slight indisposition on the part of the patient; otherwise he was perfectly comfortable for a patient who had been operated on a short time previously. The question when to operate, in Dr. Welty's opinion, is much more easily decided. Practically all patients with cerebral

complications die if not operated on; we also know that to decide that a case is meningitis does not make it so. Dr. Welty has seen a number of meningitis patients operated on; of course they die. He has also seen a few cases that happened to be brain abscess, and some few of these patients got well. He saw one patient get well from a meningitis, which had been diagnosed and demonstrated by lumbar puncture, and he believes that there are some eighteen on record. In cerebral complications the earlier the operation the more chance the patient has of ultimate recovery. It is a conceded fact that most of the cerebral complications come from chronic suppuration of the middle ear. Dr. Welty asked if anyone could give him any plausible reason why an ear should be allowed to discharge for years when it can be cured by radical operation and the danger of cerebral complications absolutely eliminated. He estimates that 15 per cent. of all patients with chronic suppuration of the middle ear die from cerebral complications if they are not operated on at all. This estimate is based on a series of operative cases that would have terminated fatally had the process not been interfered with.

DR. W. S. BRYANT, New York, said that Dr. Barnhill emphasized an important point, that is, that the ears should be examined periodically whether there is a discharge or not, just as careful people have their teeth examined regularly. They do not wait till they have lost their teeth before consulting their dentist. In that way a great deal of deafness and suppuration can be avoided. The patient's statement regarding discharge is often worthless. In all chronic purulent ears Dr. Bryant thinks that the mastoid antrum is involved, and the mastoid cells, and if there is any question as to any complication following this involvement, the mastoid operation is indicated. The general practitioner should be instructed so that he can recognize suppuration, at any rate, and then he can recommend the patient to go to a specialist. It is too much to expect the general practitioner to make a diagnosis of cerebral conditions that puzzle those who make a specialty of this class of work. Occasionally there is paresis of the external rectus; this may follow in chronic cases and occasionally it has been observed in acute cases. Dr. Bryant has seen it last about nine months after a radical operation was performed.

DR. A. DEVILBISS, Toledo, Ohio, stated that in probably no other class of cases there are fewer pathognomonic symptoms indicating whether or not operation is advisable. Recently he was called as an expert witness in a case of supposed murder by a saloon man. A man staggered into the saloon and was pushed over. He was taken to the hospital. Dr. Devilbiss was called to see the case to consider operation for a supposed fracture of the skull. Unfortunately, he got there too late; the man was already dead. He suggested a postmortem, since there would probably be a trial, and this revealed a brain abscess. Dr. Devilbiss examined the ear and found otitis media and pus in the ear at the time, and undoubtedly the brain abscess was the result of mastoid trouble. These operations, if made by careful hands, by men who have studied the cadaver well and who have had sufficient instruction, are not very dangerous, and he thinks it is due these patients to have the operation done when there is a chronic otitis media, especially when there are symptoms of mastoid involvement.

DR. GEORGE L. RICHARDS, Fall River, Mass., asked whether or not the operator shall look at the sinus. When he has reached the diseased bone and all the cells have been opened, Dr. Richards believes that it is unwise and unsurgical to go further and to uncover the lateral sinus. In the more destructive suppurative conditions, especially in children, when the granulations have been cleared off with the curette or otherwise, and a sinus is found that is apparently healthy, he hesitates to open it. He used to do so a few years ago just to see if the blood would pulsate, but now he leaves the lateral sinus alone unless he has definite symptoms to lead him to open it.

DR. KASPAR PISCHEL, San Francisco, called attention to lumbar puncture, which in doubtful cases may give valuable information regarding the presence of meningeal affection.



DR. FRANK W. HILSCHER, Spokane, Wash., said that several deaths have occurred in his practice because the diagnosis was not made sufficiently early. If these cases could be recognized before it is too late, it would be a step in advance. There are many cases of brain abscess that go on for months or possibly for years without symptoms or with so few symptoms that they are not discovered. He saw a case a few years ago, in a patient who was a physician, in which there was a brain abscess that involved a large portion of the brain. A sphenoiditis and ethmoiditis had broken through into the fore-brain and the whole fore-brain was involved. The patient had been ill more or less with ill-defined symptoms, mostly pain and headache. He had not seen a rhinologist or otologist, except the very first man he went to, who recognized the trouble in the nose and insisted on operating. The physician was very much annoyed because the rhinologist seemed anxious to do surgery in his nose. He went to others, none of whom recognized the true condition, and after a lapse of about three years he fell into Dr. Hilscher's hands. The patient died while he was under observation, without an operation or anything having been done. The only symptom in that case, except headache, was a sort of mental incompetency. Another patient was in the hospital about six weeks, supposed to be suffering from typhoid fever. He had no symptom referable to the ear until two days before Dr. Hilscher saw him. He then began to have an otorrhea from the left ear. Dr. Hilscher dressed his ear in the ordinary way and it readily healed, but his temperature curve was characteristic; it had never been a typical typhoid fever curve. A short time before Dr. Hilscher saw the patient the temperature had been 104, and then it was reduced to 95 or 93. Then it rose again. That led him to suspect a thrombosis of the lateral sinus and perhaps a brain abscess; but the diagnosis was not clear, since the man had never complained of the ear before and there was no tenderness over the mastoid, and particularly since the otorrhea stopped after one or two dressings. However, because of the presence of the fever and the emaciated condition of the patient, and the fact that he could eat and drink almost nothing, Dr. Hilscher made an exploratory examination. He found the mastoid largely destroyed; lateral and sinus thrombosis, and quite a large abscess of the brain. The patient was so reduced that the operation had to be stopped before it was completed. Dr. Hilscher expected to complete the operation at another time, but the patient never rallied sufficiently. In another case, a young man had otorrhea for a number of years, and there were no brain symptoms until suddenly one day he could no longer keep his balance. He was taken home and treated by a general practitioner for a while. A short while before he died Dr. Hilscher saw him and made a diagnosis. An operation for abscess of the cerebellum was done, but he died.

DR. W. W. MURPHY, Los Angeles, related the history of a case that came under his observation. The patient was a young woman from Chicago, on whom a radical operation had been done. Three subsequent operations were done, at each of which some portions of the necrotic cranium had been removed. The patient had gone to Los Angeles for her health. While there she was sleepless and had headache and some fever. She came under Dr. Murphy's observation and he called in Dr. Hastings, because of the gravity of some of the symptoms. They found a little sinus in the roof of the canal and some oozing of pus. Considering the history of the case and the number of operations the patient had undergone, they thought there was probably a brain abscess. They directed her to go back to the surgeon in Chicago who had operated before, and she did so. After the operation the surgeon wrote that there was no evidence of cerebral abscess. He had probed around as much as he thought best without finding an abscess. In a day or two Drs. Murphy and Hastings received a letter stating that the abscess had broken through, and the patient died.

DR. G. P. POND, San Francisco, said that if physicians would look more carefully at the symptoms, instead of taking the patient's word, so many of these cases would not go on to a fatal termination without the otologist knowing anything about it. For instance, in the case of the man who went

out of the hospital and the next day was found in a marsh, if he had been examined more carefully some evidence of pus would probably have been found. If otologists examined the eye, looked for areas of anesthesia or changes in nerve reflexes, they might often find symptoms that would give valuable clues.

DR. G. A. LELAND, Boston, said that as one studies individual cases there are so many symptoms that may be obscure or left out, that it has been his experience that even the neurologists themselves who are working continually in this field, seem to be at sea. A case in point occurred at the City Hospital in Boston recently. Death suddenly came on the seventh day after exenteration for chronic suppurative ears. An eminent neurologist said it was due to cerebral hemorrhage; Dr. Leland's diagnosis was probable rupture of a latent abscess; autopsy showed encephalitis. This case, he said, calls to mind others in which the postmortem findings have thoroughly upset the diagnosis. He agreed with Dr. Barnhill that otologists should endeavor to find something more definite on this subject, and said that to this end they must work together with the neurologists and alienists, and must also attempt to induce the general practitioners to put these cases of chronic suppuration immediately into the hands of the aurist. He advised educating the people so that autopsies can be readily obtained. It is common as well as aggravating that ignorant relatives refuse an autopsy frequently for no other reason apparently than to exercise a little brief authority, or to malignantly block the doctor.

DR. S. L. LEDBETTER, Birmingham, Ala., said that a patient came to the hospital clinic, recently, complaining of suppurative otitis media of three weeks' duration. On operation, pus was found in the mastoid cells in the antrum, a subdural abscess in the middle fossa, and an abscess lying between the bone and the lateral sinus, so it was only a question of a short while before he would have had serious trouble. A year ago Dr. Ledbetter had a patient start out with an acute inflammation of both ears and with high temperature from the beginning. On the second day he opened both drums and the discharge lasted two or three days. He tapped the drums a second time without result. There was no further discharge. The temperature continued to go up and on the seventh day he opened the mastoid on one side and found pus all through the cells. The pus had extended to the dura. Intracranial complications, he said, are frequently found when least expected.

DR. ROBERT C. MYLES, New York, said that if all the patients who have been operated on by prominent surgeons as well as by tyros, could be collected it would be found that in many cases there was no intracranial abscess. He agreed with Dr. Leland as to the necessity of educating people to permit autopsies in these cases. Dr. Myles said that he has seen a number of cases in which autopsy proved nothing, and that if people could be educated to permit autopsies in cases in which intracranial disease had not been found in patients by the operator, it would be possible to solve many of these problems.

DR. JOHN F. BARNHILL declared that anyone who attempts to look up the literature, when he has a patient for whom he is anxious to do the very best he possibly can, will be surprised to find how little of real value has been written since MacEwen's time. There are very many papers, excellent in nature, and many short reports, but there is no modern treatise on the subject that seems really helpful. Dr. Whiting, in the preface to his recent book, promises an early treatise on the subject, and Dr. Barnhill hopes it may be such as one would expect from a man of his ability and experience. No one should open the cranial cavity without the strongest diagnostic reason, because such an act must never be lightly regarded by the surgeon. If there is not present trouble which requires such an operation, it is quite possible that the operator may cause a death. Dr. Barnhill said it is always highly dangerous to open the cranial cavity; to do so unnecessarily, exposes the patient to a risk that should not be taken except in the presence of grave danger. It has been his practice, when first seeing one of these cases,



unless there are symptoms present that seem to be imperative, to watch, to record the temperature and pulse carefully, and to examine all the secretions; in other words, to go into it as carefully and thoroughly as modern medicine admits. All the early symptoms must be recognized and interpreted, the dizziness, the ear that has possibly ceased to discharge, the headaches and other recorded symptoms that should not be allowed to go unnoticed. If there is a little pus at the bottom of the ear that smells badly; if the patient has a headache on the same side of the head, which may be over the eye; if he has vomited and had restless nights, then the case should be observed most carefully, and the observations recorded and weighed before the cranium is opened. The experience of all men, whose experience justifies their speaking and writing, is the same, viz., that there are cases that seem to be symptomless. Dr. Barnhill asked if they are not symptomless only because physicians do not recognize the symptoms. It seems almost inconceivable that a four-ounce abscess may be present in the brain without symptoms. Frequently, it seems, the patient becomes accustomed to a certain amount of pain so that he no longer complains. Some individuals will tolerate, for instance, a tack in the foot half an inch long without complaining, or an individual will long endure an ulcerated tooth without complaint. Such a person may have symptoms of abscess of which he has ceased to complain. He recalled the case of a boy 8 years old in whom an operation evacuated at least four ounces of foul-smelling pus from the temporo-sphenoidal lobe. An examination of the limiting membrane of the abscess proved it to be of great thickness, and therefore that the suppuration was of long duration. This boy had been in school making good grades almost up to the time of the operation. His mentality had been unusually keen, and until a few days before the operation little complaint had been made further than that there was a discharging ear. Careful inquiry, however, elicited the statement that at times the patient had been dizzy, had suffered from one-sided headache and had vomited. Such attacks had readily subsided, and were attributed to derangement of the digestion. The presence of so much pus for so long a time, and with so few noticeable symptoms seems to Dr. Barnhill remarkable, and he believes that in this, as in all such cases, there are present, possibly from the beginning, more indications of the disease than are usually noticed by those in attendance. The otologist who is in a position to know the lurking dangers that are hidden in the suppurating sinuses that lie about the base of the brain on all proper occasions, should emphasize the importance of watchfulness during such ailment that graver symptoms may be earlier recognized. He does not deem it wise to operate for intracranial disease without the advice of a skilled neurologist, who is better able, in most instances, to interpret more accurately the reflexes that are present and thus be of very practical aid in locating the seat of the disease in the brain. It has been said that the neurologist has made so many mistakes as to the presence and location of the disease that his advice has proved of little assistance, but Dr. Barnhill has found quite the opposite, and will continue to avail himself of the neurologist's skillful assistance in such cases. Whether or not the surgeon should explore the lateral sinus in a case in which the contents of this channel are suspected to be infected, is one which should be given the most careful consideration in any case, and, in his opinion, unless symptoms be present that are quite indicative of the presence of such trouble, the sinus should not be opened, because if not diseased, such surgical procedure would add unnecessarily to the dangers of the case, since in entering the sinus the operator must go through a wound that is infected, and although every antiseptic precaution be taken, infection of some part of the sinus contents is probable; indeed, this unfortunate occurrence has been several times reported.

DR. GEORGE F. COTT said that the cases referred to in which at operation nothing was found, possibly were due to uremia or something else. He thinks that they have occurred invariably in the practice of general surgeons and not in that of otologists. In 50 cases Dr. Cott has opened the skull ten times. When it comes to a question of trouble caused

by the ear, and the otologist is in doubt, it is a good thing to call in the neurologist. Brain abscess may be present months or even years without symptoms. In one case, in which he did a radical operation, he found a sinus leading into the brain, he slit open the brain one-half inch and curetted, and the patient made a good recovery. Seven months afterward Dr. Cott found a large brain abscess, from which the patient, a woman, again apparently recovered; a few months later it again occurred and she died. Apparently she had no symptoms of brain abscess. These symptoms followed a radical operation. One should not hesitate to open the skull when there is some reason for doing so. Within a very few months Dr. Cott has had to operate on a patient who was treated for six weeks for typhoid fever. There was thrombus from the torcular to the bulb and an epidural abscess; the boy died. There are many cases due to irritation of the dura, pachymeningitis or adhesive inflammation between the skull and dura. There is practically no danger in opening up such cases under asepsis. If there are pronounced symptoms, one need not necessarily explore the brain; if symptoms are present and the patient apparently will not live long, one should not hesitate to explore. Dr. Cott has had good results in every case except the one of brain abscess.

## TREATMENT OF ACTINOMYCOSIS AND BLASTOMYCOSIS WITH COPPER SALTS.\*

ARTHUR DEAN BEVAN, M.D.

CHICAGO.

I desire to make a very brief preliminary report on the subject of the treatment of cases of actinomyces and incidentally blastomycosis with copper salts. I do this at this time because I believe that, on account of the rather limited number of cases of actinomyces and blastomycosis that come to one man, collective statistics of a trial of this method of treatment will do more to give us early definite and positive knowledge of its value than can be obtained by limiting it simply to the treatment of the few cases that come to my service.

Last year we had a half dozen cases of actinomyces in my service, and since that time, at the Presbyterian Hospital, there have been a number of others, both in my service and in the service of Dr. Billings and other attending men. We have found, as others have, in connection with the treatment of actinomyces, that the iodid salts had very definite and very positive effects, and we have been successful in curing circumscribed lesions, especially about the mouth and the tongue and the neck, with iodid of potash combined with the x-ray, using the iodid, as has been emphasized by Dr. Ochsner, in an intermittent way, that is, giving the iodid of potash for a period, then discontinuing it, and then giving it again. We have noted this fact, that although marked impressions were made by the iodid salts on all cases of actinomyces, that nevertheless the cases of abdominal actinomyces and of lung actinomyces were fatal in a large percentage of instances. Probably 70 per cent. of cases of abdominal actinomyces are fatal, and probably 90 per cent. of lung actinomyces are fatal in spite of the iodid treatment.

I want to refer to some of the cases which I reported last year. One patient with abdominal involvement, whom I reported as greatly improved under the iodid, has since died with a very definite brain lesion. I have no doubt, although we are unable to obtain a postmortem, that it was a ray fungus lesion of the brain. In one of our lung cases, on the other hand, there has been apparently a surprising recovery, and I want to make a statement in regard to that case. The patient whom I

\* Read before the Chicago Medical Society, 1905.



showed last year, at which time we found ray fungi in the sputum, was treated for a long time with iodid, using as high as 180 grains a day, with distinct improvement. Later a lesion of the testicle developed, which was opened, and found to be a chronic abscess, but no ray fungi were found by the operator, who opened this accumulation of pus, although it is fair to presume that it was a ray fungus lesion. The iodid was discontinued in May. The man was poor and very anxious to support his family by returning to his work. After returning to his work, which brought him out in fresh air most of the time, he improved steadily. A few days ago, when I saw him, we found no active evidence whatever of the process. In actinomycosis, as in tuberculosis and in many other lesions, a most important factor in overcoming the disease is undoubtedly the increased resisting power of the individual, and I think that factor should be considered in all of these cases. In spite of our iodid treatment, which has been so successful in local lesions, we have not been able to save most of our patients with lung involvement and our abdominal cases of actinomycosis. Because of that fact we have been looking out for some other method of treatment.

It is a well-known fact that the ray fungus occurs normally as a rust on grain. Within the last few years there has been a good deal of work done by scientific agriculturists with the use of copper in destroying parasites of vegetables. You are all familiar, I have no doubt, with a number of articles that have appeared in scientific journals and the lay press, showing the great destructive effect of copper in minute solutions in reservoirs of water, destroying the algæ and low forms of vegetable life. The ordinary rusts on grain can be readily destroyed by minute solutions of copper sulphate. The sulphate seems to be the most powerful of the copper salts. It is a very destructive agent to vegetable parasites and is well borne by animal organisms. My attention was called to these facts, and inasmuch as the ray fungus occurs in nature as a rust on grain, I thought it might be worth while to experiment with copper as a treatment of ray fungus in the human being. We have done this now in several cases. In one case we began with one-quarter of a grain of copper sulphate, three times a day, then increased it to half a grain, and we have given some of our patients as high as one grain, three times a day. The irrigation is made with a 1 per cent. solution of copper sulphate.

The French chemists (especially in connection with the subject of the possibility of chronic poisoning from the use of copper as a dye in canned vegetables, peas, etc.) have done much work to determine the toxicity of copper used internally for a considerable period, and have shown that copper sulphate can be used in doses of from two to eight grains a day, for six months at a time, without any deleterious effect to the individual. This was an important point to determine before making an extended trial of the salts. Copper occurs as a normal constituent in small amounts in the higher animal form, in some low animal forms as the oyster, it occurs in large amounts. Copper is readily absorbed by the stomach and intestines.

The so-called brass poisoning, which has been extensively discussed, is not due to the copper apparently, but to some other elements which enter into the brass. In addition to the use of copper in actinomycosis, I might state that we have used copper salts in two cases of blastomycosis. It is now a well-established fact (a suggestion which I made at the time of the report of the first case of blastomycosis in the West by Dr. Hyde, Dr. Hektoen and myself) that the iodid salts are curative

in blastomycosis. The iodid of potash has a very powerful effect, used internally, on cases of blastomycosis. Many of these cases have been cured with iodid alone. For the superficial cases, the ordinary treatment of blastomycosis to-day is the combined use of the iodid and the *x*-ray. Possibly, as has been shown by some experiments conducted by Professor Haines and myself, the *x*-ray may produce a more powerful effect or rather the iodid may produce a more powerful effect in combination with the *x*-ray, because, as we have shown, free iodine is given off as a result of the action of the *x*-ray on iodid solutions. It has been found, however, that some of these cases resist the *x*-ray and the iodid treatment, and this is especially so with cases of general blastomycosis. I have been informed by Dr. Oliver Ormsby, who has seen so many of these cases of general blastomycosis, that they have all been fatal in spite of the iodid treatment. Therefore, we can not consider the iodid as a successful means of treating general blastomycosis, no matter how successful it has been in the cutaneous cases combined with the *x*-ray. Inasmuch as copper salts seem to have such an effect on actinomycosis, I thought we might use it in blastomycosis, and we have employed it in several cases.

#### ILLUSTRATIVE CASES.

The effect of the copper salts is shown in one patient with extensive blastomycosis. This man came from a western city, with extensive blastomycosis involving the entire dorsum of both hands, and we have been treating him with the copper salts. We have used the copper internally in one-quarter grain doses, three times a day, and later in half-grain doses, three times a day, and are using the copper sulphate as a wash in 1 per cent. solution. This right hand has almost entirely cleared up. It was a very serious, extensive lesion at first. The other hand is not as clean. There is still a lesion at one point which is suppurating, but there has been no extension, and very marked improvement under the copper treatment.

Another case is one of abdominal actinomycosis. Most of these cases are probably secondary to a ray fungus lesion, either of the appendix or of the cecum. The patient developed an enormous lesion which filled the entire pelvis. He was operated on, and an abscess cavity opened, fistulæ were found extending in all directions. The patient was placed on large doses of iodid of potash, and in spite of this treatment suppuration continued and fistulæ continued to develop. About six weeks ago I placed him on copper sulphate, using the sulphate of copper internally and as an irrigation. At the time the iodid was used we employed the *x*-ray, and there is a distinct coloring from the use of the *x*-ray on the skin of the abdomen. We had repeated demonstrations of the pathology. The ray fungus could be found in the pus at almost any time. There was extensive infiltration of the recti muscles by the process; fistulæ were developing at all times, and now this process has almost entirely cleared up under the copper treatment. The patient has gained twenty pounds in weight since the first of September (six weeks) under this treatment.

Now, I do not want to create an erroneous impression in regard to this treatment. We are simply experimenting with it, and I submit it to you with these results. I present the treatment as one that seems to have a logical basis and seems to have produced marked curative effects. As I have stated, I think a collective experimentation on our cases of actinomycosis and blastomycosis should be undertaken in order to determine the value of copper as a cure for these conditions.

It may be possible that as in syphilis, where certain cases are better handled with the mixed treatment of mercury and the iodine salts, so in actinomycosis and blastomycosis it may be shown by further trial that the mixed treatment of copper and iodine salts may be in certain cases the most effective.



## REPORT OF TWO CASES OF TYPHOID FEVER, WITH PERFORATION AND OPERATION.\*

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Sanitarium, at Baguio.

BENGUET, P. I.

A mild epidemic of typhoid fever occurred in this mountain settlement during the dry season just passed. There were seven cases in all, five of the patients being members of a gang of Japanese carpenters who lived on the lower floor of the servants' barracks of the Civil Government Sanitarium. The upper floor was occupied by Chinese and by native Filipino servants, but no case of typhoid occurred in the building, besides the five Japanese. The origin of the infection of the carpenters is uncertain, but it is probable that the first patient contracted the disease in one of the neighboring road-camps and that the flies, of which there was a plague during the dry months, carried the infection from his dejecta to the food of his companions. A general infection of the water or food supply of the neighborhood doubtless would have affected a larger proportion of the forty or fifty carpenters messing together, and many Filipinos would have been exposed.

One of the two patients concerned in this report was a Japanese carpenter; the other was a native Igorrote, a private in the local detachment of constabulary. The latter lived and messed in the constabulary quarters about one-quarter of a mile from the Japanese barracks, together with about thirty Igorrote and Ilocano comrades, and, as no other case developed there, it is fair to assume that he was infected at some other place, probably in the lowland road camps which he visited on duty from ten to fifteen days before he was admitted to the sanitarium.

Of the seven cases of typhoid fever, four were uncomplicated and rather mild in character; one was complicated by long-continued hyperpyrexia and parotitis; two were complicated by intestinal perforation and peritonitis, and the following is a brief résumé of their history:

**CASE 1.**—Typhoid fever; perforation about fifteenth day of disease; operation; death.

**Patient.**—Guteng, Igorrote constabulary soldier, about 25 years old, was admitted to Civil Sanitarium, Baguio, Feb. 24, 1905.

**History.**—History of illness previous to date of admission unknown, except that he had been indisposed for several days, but had persisted in doing duty about the quarters. He had visited laborers' camps in the lowlands ten or twelve days before admission to the sanitarium.

**Course of the Disease.**—February 24, his temperature reached 105, pulse 104, and he had roseola on the back. The spleen was somewhat enlarged.

February 27, there was mild delirium during the day, and at night the patient left his bed and attempted to leave the ward. There was moderate diarrhea.

March 3, the case proceeded uneventfully, with tendency to delirium, until early this morning, when the patient gave evidence of severe pain in the bladder and penis immediately after passing urine. At 8 a. m., when I examined him, he was suffering from shock, was chilly, pulse thin and 120 and face pinched. The abdominal recti were very rigid. The abdomen was tender, but not markedly so.

The patient was stimulated with strychnin and brandy hypodermically, heat locally, enemata of hot water and brandy and warm saline transfusions. There was no improvement or prospect of reaction by 4 p. m.

**Operation.**—At 4:30 p. m., ten and a half hours after the first symptoms, laparotomy was performed. Ether was the

anesthetic used. An incision was made in the median line, one and a half inches long. Several ounces of flocculent serum escaped. There was no fecal odor. There was intense hemorrhagic peritonitis, the intestines having a mahogany red color. I examined about three feet of the ileum without finding the perforation. The pulse was too rapid and feeble to count, and death on the operating table seemed imminent. In view of the desperate condition of the patient, the character of the peritonitis and the possibility of the peritonitis being non-perforative, I decided to desist from the search for a perforation. I irrigated the peritoneum with hot saline solution and left the abdominal cavity full of it, and closed the abdominal wound with sutures, including all tissues. The pulse and general condition were better for half an hour after operation than all day, but soon declined again. The patient was left on the table and given high enemata of hot water and brandy. There was no reaction to hypodermies of adrenalin chlorid, one to twenty-five thousand, 30 minims and later 60 minims every fifteen minutes. The patient died at 9 p. m., about four hours after the operation.

**Autopsy.**—A partial autopsy was performed at 10 p. m. A perforation of the ileum was found in a coil of the intestine just above the bladder. The ulcer of the mucous membrane was about one-half inch in diameter, but the opening in the visceral peritoneum was small and apparently plugged with exudate. Several punched-out ulcers of the ileum were found reaching to the muscular coat. There was intense general hemorrhagic peritonitis, with large patches of plastic exudate.

**CASE 2.**—Typhoid fever; apyrexia; relapse; perforation on thirty-fifth day of disease; operation; recovery.

**Patient.**—Musiaka, a Japanese carpenter, about 25 years old, was admitted to Civil Sanitarium, Feb. 8, 1905, with a history of having been ill in the Japanese quarters with chills and fever for four days. There was no diarrhea.

**Course of the Disease.**—February 8, temperature 101.4, pulse 82, otherwise negative.

February 12, there was a diffuse rash on body, probably due to quinin; no splenic enlargement. Blood was sent to Manila for Widal test. Temperature gradually rose in afternoon to 103.2.

February 13, diazo reaction positive. Two roseolar macules were found on back.

February 14, several roseolar macules appeared on back and chest.

February 16, diazo test again positive; spleen normal.

February 19, Widal test of February 12 reported negative.

February 26, no fever for eight days. Patient sat up in chair for a short time. Evening temperature was 101.8.

March 10, temperature increasing daily, reaching from 104 to 104.5 in evening. The nervous system of the patient was much affected.

March 17, patient was groaning with pain about 4 a. m., when the nurse called me. The pain was referred to the region of the bladder, where patient kept his hand pressed. There was tenderness over the entire abdomen, but not marked. There was also board-like rigidity of the recti. Pulse was dicrotic. After consulting with Dr. Snyder, U. S. N., and Dr. Tormey, of Manila, who were guests at the sanitarium, immediate operation was decided on.

**Operation.**—March 11, 8:40 a. m., four hours and forty minutes after first symptoms manifested, Dr. Tormey gave ether. A median incision, one and a half inches in length, was made. A small amount of turbid fluid escaped; there was no fecal odor; there was a beginning peritonitis, and small areas ( $\frac{1}{2}$  inch in diameter) of exudate on the ileum at regular intervals where the coils were in contact with the perforation. Over the bladder was found a perforation of the ileum; the opening into the peritoneal coat of intestine was one-quarter inch in diameter; the gut was red and much indurated for about one inch of its length, and the peritoneal coat was friable. I closed the perforation with interrupted silk sutures (Lembert), irrigated the intestine before returning it to the abdominal cavity, and then flushed the abdominal cavity. I left a small gauze drain reaching to vesicorectal fold, and closed the abdominal wound with silkworm gut, including all layers of tissue, and leaving lower angle of wound open for drainage.

**Result.**—March 12, the temperature dropped to 99.4 in fif-

\* Read before the Manila Medical Society, 1905.



teen hours. General condition was improved. I removed gauze drain at 9:30 a. m. and inserted a fresh one.

March 13, patient was semicomatose, with fluttering of lids and contraction of flexors of hands and fingers. There was no tympanitis nor tenderness over the abdomen. There was no nausea. He began to take nourishment, clear chicken broth. The nervous condition improved during the afternoon.

March 14, patient passed a good night. He had some stupor and nervous symptoms in the morning, but they were less marked. A fresh crop of large roseolar macules, one-quarter inch in diameter, appeared on face, body and legs.

March 15, there was slight tympanites and a discharge of serous fluid from wound.

March 20, patient improving rapidly; small stitch abscess.

March 27, no fever since March 21; wound healed perfectly.

April 11, no fever for twenty days, but very constipated; patient began to sit up; no abdominal discomfort.

May 2, patient was discharged, cured, and was advised to wear a flannel binder, as a support, for several months.

The observation and treatment of these two cases, with but little aid from the few text-books at hand, have led me to the following opinions concerning the technic and the relative time of the operation for perforation; also concerning the pathology of perforation and the symptomatology of perforation proper in relation to that of the resulting peritonitis.

Since my first notes on the operations I have read two excellent reports on similar cases, one a report of 19 cases by Dr. Morris Manges,<sup>1</sup> and the other a report of 12 cases by Dr. George L. Hays.<sup>2</sup>

The conclusions of these authors confirm some of my half-formed conclusions and shed light on some of the obscure features of this most interesting and desperate complication of typhoid.

If these reports had reached me two months earlier than they did, I should have proceeded with the treatment of my two cases with much clearer ideas of both the pathology and surgery of the condition and with proportionately greater peace of mind. The general text-book, surgical or medical, is inadequate and unsatisfactory and, as Dr. Manges aptly remarks, "the lore which lies buried in society reports, hospital bulletins and medical journals is not the working stuff which reaches the general practitioner and guides him in the darkness and despair which envelope these gloomy hours" (of recognizing and treating perforation). How shall we determine the degree of shock that would make it advisable to postpone operative interference in these cases?

The "American Text-book of Surgery" advises as follows:

"He (the surgeon) should operate as quickly as possible, but not during marked shock if it is present. In this case he must wait, but only a reasonable time, for the rally, hurrying the reaction, etc."

In Case 1, while waiting for the patient to rally, I delayed longer than I should in the future. The patient never, in fact, rallied from the shock, but after the operation was finally performed his condition improved slightly for about an hour. In future, I should operate as soon as possible after establishing a diagnosis, except in case of extremest shock or of imminent death.

Rapid cleansing of the peritoneal cavity and the absorption of warm salt solution left in the abdomen should aid in relieving the shock. Rapid closure of the perforation, using local anesthesia or ether as a general anesthetic, should not add so much to the existing shock as would the unrelieved and progressive peritonitis and septic intoxication.

Case 1 emphasizes the difficulties offered by such complications as delirium, stupor or obtunded sensibility due to any cause, for such conditions may veil the symptoms of perforation and peritonitis until they have progressed too far to be susceptible of relief.

It will be noted that in Case 2 the operation was begun about five hours after the first symptoms of perforation were manifested. In both cases, about an inch of the intestine adjoining the large perforating ulcer was greatly inflamed and indurated and all the intestinal tissue was friable. Owing to the danger of the sutures cutting through and of the development of other perforations in the same area, I was impressed with the possible advisability of performing enterectomy under such conditions.

I am still inclined to believe that such an operation performed by a rapid and skillful operator would give the patient the best chance of recovery in a condition like that in Case 2, in which shock was moderate and the peritonitis incipient, by preventing the possibility of a secondary perforation from that area at least and perhaps diminishing typhoid intoxication by the removal of a large ulcerating nidus of the disease.

I note that Dr. Hays meets the danger of the rupture of sutures closing the perforation by anchoring that portion of the intestine to the upper angle of the abdominal wound.

Concerning the symptomatology, both cases presented typical and convincing symptoms of peritonitis from the first moment when complaint of pain gained the attention of the attendants.

The first patient was delirious and the time of the beginning of his pain was uncertain, but early in the morning of the day of operation he cried out frequently during efforts to urinate, and examination revealed undoubted signs of peritonitis. In both cases, the pain was referred to the region of the bladder, and to the penis in one case; there was marked rigidity of both abdominal recti muscles in both cases; there was tenderness over the entire abdomen, but especially the hypogastric region; in Case 1 the patient suffered from great shock, sweating and chill, with rapid intermittent pulse, pinched face, pallor; in Case 2 the patient had moderate shock; poisoning of the nerve centers in his case being usually evidenced by twitching of the muscles of arms and face and by a rapid fluttering of the eyelids, much like that observed in certain cases of hysteria.

I was impressed by the fact that there must have been an interval of many hours between actual perforation and the acute symptoms of peritonitis in Case 1 and a considerable interval in Case 2. In the latter case, there was a large opening into the intestine, giving evidence of a necrotic process of several hours' duration. In the former case, there was an advanced general peritonitis, and even in Case 2 there was a well-marked local peritonitis, with patches of exudate on the coils of the intestine in contact with the perforated ulcer.

It may be stated, therefore, that in both cases the symptoms calling attention to the perforation were due to secondary peritonitis and not to the actual rupture of the intestine.

In this connection, the following statement made by the "American Text-book of Surgery" appears to me to be misleading, namely: "When perforation occurs, the individual passes into a state of profound shock." This is true in a sense, but the passage into the state of shock is slow and proceeds *pari passu* with the septic peritonitis.

Dr. Morris Manges, in his report, makes the following

1. The Journal A. M. A., April 1, 1905, p. 1016.

2. The Journal A. M. A., April 22, 1905, p. 1265.



pertinent statement: "It also becomes easy of comprehension that most physicians expect too many and too pronounced symptoms for an early diagnosis of perforation, for the appearance of which they often sacrifice the golden time for successful operative interference, since the fact is so often overlooked and so seldom understood that the perforation itself causes little shock and may even afford temporary relief."

Shattuck, Warren and Cobb<sup>3</sup> state that "early warning pains, earlier by a definite number of hours than the severe symptoms, occurred in 14 out of 21 cases of perforation reported by them."

All these facts emphasize the necessity of frequent careful palpation of the abdomen by the physician to determine at the earliest possible moment the occurrence of perforation before the resultant infection, peritonitis and shock have had a chance to proceed far in their development. Equally important is an alert and intelligent nurse, instructed to be on the lookout for the earliest symptoms of the complication.

## Special Article

### IMMUNITY.

#### CHAPTER XXXI.

##### ACTINOMYCOSIS.

Actinomycosis is a chronic infectious disease of man and animals, the lesions of which present, characteristically, a central mass of purulent and necrotic material containing colonies of "ray fungi," about or through which is disposed an abundant growth of granulation or fibrous tissue. In young or rapidly progressing lesions the amount of purulent material is large, while in older lesions well formed connective tissue is more conspicuous. The disease prevails especially among cattle, although it is met occasionally in the horse, hog, sheep, dog, cat and other animals; man is infected not infrequently.

Although the threads of fungi had been found in diseases resembling actinomycosis in 1845 and later, Bollinger, in 1877, gave the first accurate description of the disease in cattle, and in 1878 J. Israel described it as a new disease in man. A short time later Ponfick demonstrated the identity of bovine and human actinomycosis.

The specific organism, *Actinomyces bovis et hominis*, on culture media consists of a mass of delicate threads which exhibit

**The Fungus.** "true branching" and which, to a certain extent, segment to form "spores." The radially arranged groups of cells which occur as macroscopic granules in the pus of the actinomycotic abscess, and which gave to the organism the name of the "ray fungus," are essentially a manifestation of parasitic existence; they are not formed in cultures. Each granule represents a colony of organisms the members of which possess club-shaped extremities, and in the center of the mass and extending from it are many of the delicate threads found in cultures of the organism. It grows on various culture media, often as a mold, and stains by Gram's method.

The actinomyces is an organism of considerable resistance. Cultures remain alive for one year or more when in a dried condition and the spores in one instance germinated after having been preserved for six years. A temperature of 80 C. for fifteen

**Resistance.** minutes kills the spores (Bérard and Nicolas). When suspended in bouillon spores are killed in fifteen hours by direct sunlight, but when thoroughly dried, approximately ten days' exposure produced no injury.

Attempts to place the actinomyces in a botanic system have resulted in many differences of opinion. By some investigators they are considered as an independent family midway between the hyphomycetes and the schizomycetes (bacteria), others place them under the hyphomycetes in the group of the strep-

tothrix, while still others consider them as pleomorphic bacteria placing them in the group cladothrix. Petruschky recognizes actinomyces, streptothrix, cladothrix and leptothrix as genera in the family trichomycetes, the latter belonging to the order hyphomycetes. Biological variations which have been encountered have led to the recognition of several species of actinomyces, among which are a number of non-pathogenic forms. Wright limits the term actinomyces to those strains which produce colonies of clubshaped organisms in animal tissues.

Many attempts have been made to transmit actinomycosis to animals by inoculating them with the diseased tissues of animals and man, and with pure cultures

**Artificial Infection.** obtained from these tissues. Although a number of experimenters have reported positive results, by far the greatest number of

the attempts have been fruitless. Probably Wright has been more successful than others in producing actinomycotic lesions in rabbits and guinea-pigs by the inoculation of pure cultures. Colonies of club-shaped organisms developed with considerable uniformity. In many instances the infection remains localized, not causing the progressive and destructive changes which actinomycosis produces when it occurs naturally.

The organism has been found on grains, straws and other kinds of feed, and such bodies are commonly discovered in the

initial lesion of the disease. Usually in cat-

**Transmission and Infection Atria.** tle, and frequently in man, infection is accomplished by their implantation in the soft parts of the mouth (gums, tongue), or in carious teeth. Transmission of the disease to

man by eating the meat of actinomycotic cattle has not been noted. In man the disease is primary in internal organs (lungs, intestines, liver, brain, etc.) in a large percentage of the cases, whereas "lumpy jaw" is rare. The disease extends locally by the gradual involvement of adjacent tissues, which in time become occupied by sinuses, abscesses and masses of connective tissue. Numerous "spores" and bacillus-like cells, having their source in the fungous threads, abound in the vicinity of a colony. The occurrence of such forms in leucocytes and other large mononuclear cells has led some to the view that the micro-organisms may be carried to neighboring tissues or to distant parts as cell inclusions. In cattle the disease usually is more chronic than in man, more fibrous tissue is formed and metastases in internal organs are less frequent. In man the lesions are more purulent in character, large abscesses sometimes form as in the liver, and metastases in visceral organs are more common. Cases of general actinomycosis are occasionally met with in both cattle and man.

Little can be said in the way of prophylaxis against actinomycosis. Knowing the part that infected grains, straws, etc.,

**Prophylaxis.** play in instituting infection, the practice of biting or chewing grains or of using straws as toothpicks, evidently is one which affords opportunity for infection. The presence of carious teeth has often been suggested as a predisposing condition for infection.

Practically nothing is known concerning the degree to which susceptibility to actinomycosis prevails, and the question of immunity to the disease remains unexplored.

**Immunity and Susceptibility.** The inability to reproduce the infection in animals at will renders impossible the systematic study of these questions. The pres-

ence of large numbers of polymorphonuclear leucocytes in the vicinity of the organisms suggests, but does not prove, that they may have some influence in combating the infection. Surely the abundant mass of connective tissue which develops about the abscesses and sinuses aids in confining the process to a definite region.

That the iodid of potassium has a curative influence on some cases of actinomycosis seems to have been well demonstrated. The principles by which it produces its effects are unknown.

#### MADURA FOOT.

Mycetoma, or Madura foot, resembles actinomycosis in the formation of abscesses, sinuses and granulation tissue, but it shows a peculiar predilection for the foot, which probably is



explained by the greater exposure of this part to infection.

This disease differs from actinomycosis in that the course is more chronic and it is never accompanied by generalized infection.

The bones are not involved so frequently as in actinomyces. Granules similar to those of actinomyces are found in the cells, which, however, do not assume the pronounced club shape seen in colonies of the ray fungus.

Two varieties of the disease are known, one in which the granules are brown or black and another in which they are white or yellowish; the latter is encountered much more frequently than the former.

Pure cultures of the organism, which is called *Streptothrix maduræ* (Vineent), were first obtained by Vincent in 1894, and have been studied by a number of observers since that time. It bears a close resemblance to the actinomyces and by some is considered a variety of this organism. Differences between the black and white varieties are not clearly set forth. The disease occurs in southern Asiatic countries, in northern Africa, and in the United States (rare).

#### INFECTIONS BY STREPTOTHRIX, CLADOTHRIX AND LEPTOTHRIX.

Cultures of streptothrix, differing from the actinomyces, have been obtained from the lungs in a number of instances and in various countries. They have been found in such lesions as bronchopneumonia, or more extensive consolidation of the lungs, and in cases of empyema. In other instances organisms which have been classed as streptothrix or eladothrix have been cultivated from processes which resembled actinomyces.

Noeard considers a streptothrix as the cause of *farcin du bœuf* (farcy of cattle), a disease encountered especially in the countries of southern Europe, and similar organisms have been cultivated from suppurating or granulomatous foci in other animals.

*Leptothrix buccalis*, a thread-like organism which does not form branches and, hence, is not an actinomyces nor a streptothrix, is frequently found as a saprophytic organism in the mouth cavity, and a similar fungus, *Leptothrix vaginalis*, has been encountered in the vagina. Although organisms of this type are relatively harmless, they have occasionally been found in diseased conditions of the tonsils and pharynx.

### Clinical Notes

#### A PRELIMINARY REPORT ON THE SPIROCHÆTA PALLIDA.

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AND

EDGAR G. BALLENGER, M.D.

ATLANTA, GA.

Having demonstrated the *Spirochæta pallida* in eight specimens taken from two chancres and a mucous patch, we desire to make a preliminary report of our findings, which were shown at the Atlanta Society of Medicine on Oct. 5, 1905.

The *Spirochæta pallida* was described by Schaudinn and Hoffmann last spring, and it is claimed that it is found constantly in the primary and secondary lesions of syphilis and may be an etiologic factor of importance. Whether or not it is the cause of syphilis remains to be seen, for it has not yet been isolated and cultivated and, of course, there must be a long series of cases by a number of observers before any conclusions can be drawn. The fact that these micro-organisms have been found by reliable independent workers in primary and secondary lesions and by Metchnikoff and Roux in monkeys inoculated with syphilis, and have not been found in any other lesions, seems to justify us in the belief that they may be the cause of this disease.

The stain that gave the best result was Giemsa's eosin and azur i and azur ii. With this stain the organisms appeared a translucent pinkish-red of high refractive character.

They were best shown in slides where the red cells were of a light slate-green and the white cells well outlined in deep purple.

In length these organisms vary from one to six times the diameter of a red blood corpuscle and have many small curves, giving them a corkscrew shape, which is well marked in nearly every specimen. In thickness they appear a little narrower than a tubercle bacillus. In many cases there are very few spirochætæ, and, being very pale, they are difficult to find, while in other cases they are plentiful. One specimen showed nine in one field.

This organism may be differentiated from the *Spirochæta refringens*, which is larger, thicker, stains a deep blue and has much wider and less numerous curves. After once seeing the *Spirochæta pallida* it can not be easily mistaken for either the *Spirochæta refringens* or tissue shreds. In the beginning, however, the elimination of certain tissue shreds caused us considerable difficulty.

#### CLINICAL REPORTS OF SOME OF THE RARER FORMS OF HYSTERIA.\*

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CASE 1.—Hilda M., aged 4, was admitted to the St. Joseph's Hospital of Pittsburg October, 1904.

*History.*—Mother died of tuberculosis; father healthy. She has always been delicate. She had typhoid fever at the age of 2½ years. Has a very bad temper, which is partially inherited. She has lived at various places, and has never been controlled. At times she is a lovely child, but when in a fit of temper nothing will induce her to smile. She is very thin, pale and delicate looking. She is poorly developed, with some marks of degeneracy.

The accompanying chart will show the hyperpyrexia suffered during one of the nervous attacks to which she is subject.

CASE 2.—Katie H., aged 24, who had always lived at home; domestic; came to me in October, 1904.

*History.*—She has had stomach trouble and neuralgic headaches for two years. Three years ago she had a severe fright, followed in twenty-four hours by a heavy weight in the back, which traveled up the spine rapidly. The right arm became very heavy and its use was lost. There was a continual rotary movement to and fro (pronation and supination), with abduction and adduction of the elbow at the rate of 120 per minute, which lasted about a week. It stopped for two or three months, when it returned from another scare, which lasted a day or two. She was free for about a year. Since then she has had frequent attacks. They last from a few hours to two or three days. She has attacks in the leg and face. At times she has attacks in the left arm, when the elbow is flexed, the hand raised with a striking motion, very rapid. There is no pain with these attacks. When there is quiet in the limbs there are likely to be attacks of pain in the head and pain and heaviness in the back. She sleeps well. The motion may or may not cease while sleeping.

*Examination.*—Knee jerks present. No ankle clonus. Pupils react. Right shoulder seemed to be atrophied over the collar bone, and the upper edge of the pectoralis muscle during an attack in which I saw her. This appearance, however, disappeared when the motor attack passed off. The inner border of the scapula was prominent above and below. This also disappeared when the attack passed off. No puncta found. When the motion ceases, the use of the hand is normal. She has to sit crooked, spine flexed to left, and lean on the left elbow, or there seems to be an irritation at the os cervix. There is no mental trouble.

An attack of decided severity which occurred in my office with motor involvement of the entire right side and the left arm, lasting one-half hour, promptly disappeared on the sug-

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



gestion that it would be train time in twenty-five minutes. She arose, arranged her toilet within ten minutes and went to the train.

The attacks cause her no fears, and she discusses them as being trivial. Both she and her mother think the attacks have made no inroads on her health, nor is there left any motor disability between attacks. The amount of force expended in an attack is very great, with no apparent fatigue.

CASE 3.—H. K., aged 29, came to America from England at the age of 4 years.

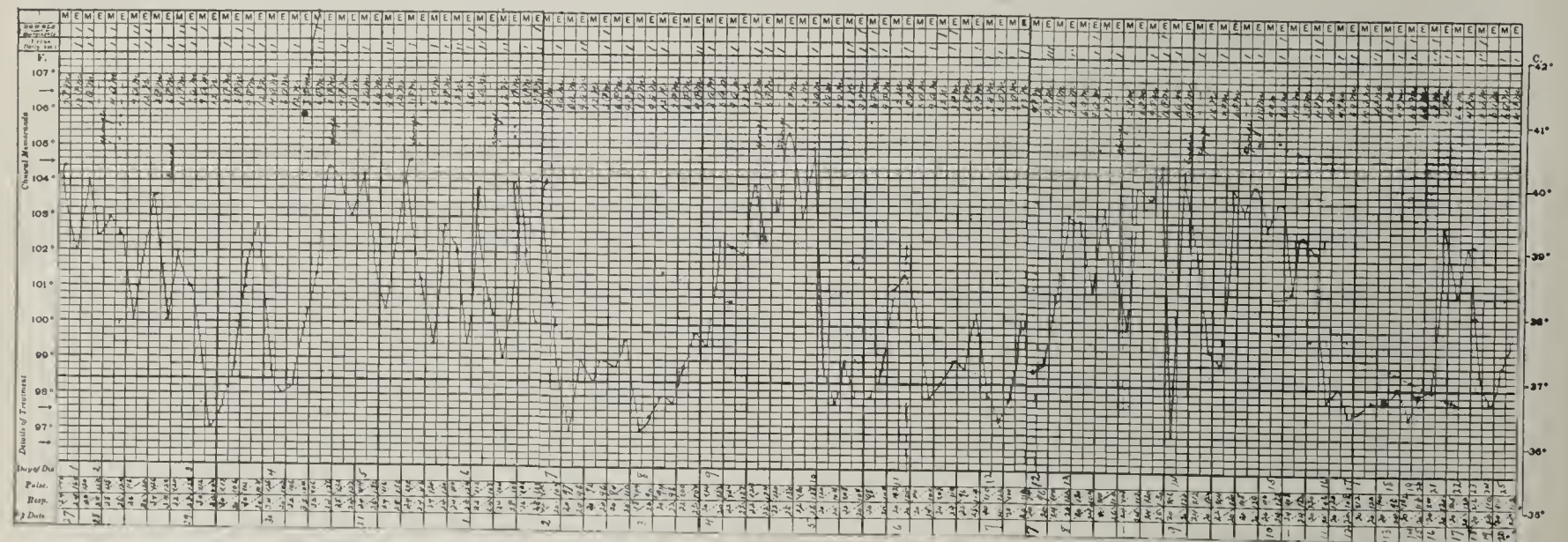
*History.*—Parents living, one brother died of consumption at the age of 17 years. Otherwise the family history is negative. The sister next to him is very infantile; has a defect in her speech; rarely menstruates, and has some marks of degeneracy. His personal history showed no serious illness up to January, 1900, when he fell, striking the back of his head against a post, and being rendered senseless for half an hour. He was under a doctor's care for two weeks. Six months later he had a peculiar convulsive attack, in which there was a rhythmic spasmodic jerking of the diaphragm at the rate of 180 a minute. He has had eight of these attacks which last sometimes for eighteen or twenty hours. The attacks are always the same. In his attacks the amount of force expended is great without apparent exhaustion. Perspiration is excessive.

*Examination.*—The palate is highly arched, eyes small, abnormally shaped, balls prominent, pupils equal, reflexes normal.

occur in the male and in very young children. I have seen the temperature go above 118 degrees in two adult females (reported at the Denver session, 1898), but in a child the highest was between 105 and 106. This was the one above reported. Such children are likely to have bad tempers, with little desire to control them.

Another form, hysteria agitans (motor hysteria, major hysteria), is seen mostly in the adult male or female. These attacks I have found to occur mostly in persons of a very unstable nervous system, often with degenerative stigmata. An attack may follow anything that weighs heavily on the mind. It may be confined to a group of muscles, a hemi-hysteria, or it may be a general attack. The motions may be to and fro, rotary or otherwise. The body, supine position, may perform all kinds of twitchings, abdominal motions, spasmodic jerkings of the diaphragm, similar to hicough, rapid facial gyrations, rubbing the feet together, falling out of bed, etc. These motions may be very much modified if the attention of the patient can be engaged.

The movements are rhythmical, without apparent fatigue, though they may be violent and extend through hours of duration. It is possible by restraint to control the movements to a limited degree.



Dr. W. H. Kirk has kindly furnished the report of the eyes which follows:

Vision: O. D. 20/40 —.  
O. S. 20/40 —.  
Correction: O. D. + 50 sph. = + 75 cyl. x 90° = 20/20 —.  
O. S. + 50 sph. = + 75 cyl. x 90° = 20/20 —.

In the right eye the disc is slightly swollen and the vessels are very full, with hyperemic condition of the retina. The tension is normal, muscles in good condition, eye ball very prominent.

In the left eye the disc and vessels are swollen and very hyperemic. When examined over one year ago the choroid was in good condition, but on this examination, July 3, 1905, there is a slight choroiditis in the lower half of the eye, which does not seem to give him any trouble. The retina is in a fair condition, slightly congested, tension normal, eye very prominent, muscles in good condition.

Feb. 11, 1905, Pershing reported: The characteristic movement is a rhythmical oscillation affecting one part. In these two cases it was rapid, although it may be slow and apparently deliberate. If it had been organic other evidences of the reflexes would certainly have given some indications. The movements were somewhat grouped and the motions rhythmical, with no apparent fatigue, although the amount of force expended was very great. They were not controlled by restraint. Attention seems to aggravate the movements.

Krafft-Ebbing, in 1900, reported a case of hysteria simulating paralysis agitans.

Hysterical hyperpyrexia is usually found in the adult female from 18 to 40 years of age. It may, however,

In Case 3 I have seen no signs of fatigue after 17 hours of continuous motion of intense degree.

The patient perspires excessively. The motions are usually controlled by hyosein hydrobromate. I have not known the patient to have an attack when not working. He does much better when idle.

The following interesting questions arise:  
Is there an irritating product formed within the cortical neurons?

Is there a paralyzing product within the cortical neurons?

Is there an irritating body or product in the plasma which bathes the nerve cell?

Is there an increase in the formation of cytotoxins?

Is there a decrease in the elimination of the metabolic waste product?

### A CASE OF FOREIGN BODY IN A BRONCHUS.\*

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*Patient.*—On March 19, 1905, I was called to a neighboring town to see T. G., a boy, aged 5 years and 7 months, who, for the past twelve days, had suffered with a bad cough and an irregular fever, ranging from 99 in the morning to 104 in the

\* Read before the Med. Soc. of the District of Columbia.



evening. He seemed cheerful and free from pain, but there was a frequent cough, consisting of two or three expiratory efforts. The temperature was 105; the pulse, 120, and the respirations, 60 a minute.

*Examination.*—The expansion was markedly diminished on the right side of the chest. The voice was too weak to allow of the detection of any differences in tactile fremitus, but there was certainly no increase over any area. Percussion showed a slightly higher pitch over the entire right lung, but only one small area of dullness extending from the angle of the scapula down to the liver. This area was oval and about 6 cm. wide at the broadest part. Over it the breath sounds were very faint and there was no increase in fremitus (an atelectatic area?). The respiratory murmur over the entire right chest was very faint and in marked contrast to the puerile breathing on the left. A sonorous r le could be heard in various localities over the right chest, but there were no fine r les anywhere. The leucocyte count was 42,000.

*History.*—The condition was at first quite puzzling, but it seemed clear when the following history was obtained:

On March 7, twelve days previously, the child, while eating peanuts, laughed and at once had a violent choking spell. The paroxysm continued until, while jumping up and down to shake off his overcoat, he said he felt something slip down and was at once relieved. He seemed much exhausted and slept for an hour. A physician was called, but found nothing abnormal. Immediately after his departure, however, a loud, wheezing noise developed in the chest which was noticed by the child himself and by those about him. That night the boy slept well and the next day he was as bright as usual, but toward evening he seemed sick and his temperature was found to be 101. From that time he had fever of a hectic type.

The second paroxysmal coughing attack occurred one week after the accident, it lasted about twenty minutes, was very violent and was accompanied by the free expectoration of mucus. The next day there was another paroxysm not lasting quite so long.

*Course of the Disease.*—The history, physical signs and symptoms all pointed to a foreign body in the right main bronchus.

On March 21, the child was brought to Washington. He stood the trip fairly well, but was much exhausted and seemed very sick all day.

Dr. Charles W. Richardson saw him with me and confirmed my findings as to the physical signs and also concurred in the opinion that there was a foreign body in one of the bronchial tubes of the right lung.

The question of an immediate tracheotomy was seriously considered, but abandoned in favor of bronchoscopy, and an instrument was telegraphed for.

March 24: The small area of dullness was unchanged, a loud, cooing r le could be heard on expiration all over the right chest. The respiratory murmur was much weaker on the right, especially anteriorly, and in the axillary region. Behind, the breath sounds were more nearly alike on the two sides. There was no tubular breathing anywhere.

March 25: The boy had the fourth coughing paroxysm since the accident. It lasted several minutes and was accompanied by hemoptysis. He was thoroughly exhausted afterward and at once went to sleep. Numerous large r les appeared which could be heard all the evening.

March 26: At noon the child had a violent coughing paroxysm lasting twenty minutes. Blood was expectorated and he complained of pain over the upper chest. Exhaustion was marked. When seen three hours later, the breathing was rather stridulous and air seemed to enter both lungs about equally. The object had evidently shifted its position. He was pale and his condition was such that I called Dr. Richardson, but before his arrival, at 4 o'clock, the physical signs had again changed to those so often before noted. The foreign body had dropped back to its original position.

March 27: R les were heard at the bases of both lungs posteriorly. Air entered the upper right lobe freely, while the breath sounds were scarcely audible over the two lower lobes. Over the fifth rib in the parasternal line there was a tubular sound to the breathing.

The bronchoscope having at last arrived, Dr. Richardson

tried, under chloroform, to introduce the smallest tube (7 mm.) through the larynx. This proved to be impossible and the child's condition at that time did not justify a tracheotomy.

March 28: We were greatly encouraged by the condition. Air seemed to enter the right lung freely, and the dull area had apparently decreased somewhat. The foreign body had evidently shifted its position, and we hoped it might have been dislodged and coughed up.

March 31: The temperature, which had been nearly normal for six days, began to rise. Numerous r les appeared over both lungs.

April 3: Temperature was hectic. There was still an area of impaired resonance below the right scapula. Cooing r les were heard on both sides posteriorly. There was a tendency to sweat at night.

April 4: The temperature was 103; pulse, 120; respiration, 32. Dr. J. D. Thomas found only a suspicion of tubular breathing over the lower right axillary line.

April 10: The temperature had been ranging between 98 and 104. The cough was troublesome. There were large, cooing r les all over both lungs, but less air seemed to be entering the lower right lobe.

As there was no longer anything by which we could definitely locate the foreign body, we did not feel justified in attempting further operative interference. There seemed nothing to do but to wait and to hope for spontaneous expulsion. Some observations which I concluded shortly after this time also made me hope for ultimate recovery. I found that the ordinary entire cooked peanut kernel, when totally submerged for twenty-six days, crumbled on pressure in much the same way that a piece of bread would when thoroughly wet. The same was true, though to a lesser degree, of pieces of the kernel which were kept wet, but at the same time exposed to the air, while an unbroken half-kernel, under the latter conditions, was still quite firm at the end of the period.

April 15: There had been an improvement. The temperature, though still hectic, was not so high, and the boy had been able to go out to drive. The motion of walking, however, made his cough more troublesome.

Examination on this date showed less expansion on the right side and less air entering the upper and middle lobes until after coughing, when the sounds became more normal.

April 18: The following note was made: "There is no difference in the amount of air entering the two lungs. If the foreign body is still present it does not, to any extent, obstruct any important bronchus. A cooing r le can be heard on either side on deep breathing. There is no dullness. The cough is less frequent and he seems quite like himself."

April 21: Because I did not think that the x-ray would show a nut, I did not consider it wise to give him the extra exposure of a trip to a laboratory until this time.

*X-Ray Examination.*—The examination was made by Dr. Charles F. Stokes. The fluoroscope showed a distinct shadow just to the right of the sternum, which in a radiograph was found to be opposite the fourth and fifth ribs anteriorly. This shadow, I am convinced, indicated a small area of infiltration set up by the presence of the foreign body. The boy gradually improved, the temperature became normal May 20 and has since remained so, the cough disappeared, and at a subsequent fluoroscopic examination by Dr. Stokes, one month later, no shadow was seen. The peanut had disintegrated and had been coughed up, most likely in small pieces, and the inflammatory products had been absorbed.

*Remarks.*—The fact that the *corpus delicti* never actually came to light naturally raises the question as to the accuracy of the diagnosis. It is well known, however, that children seldom expectorate, and this child in particular never did, except on the several occasions noted above, when mucus and blood were propelled from his mouth by the violence of the expulsive efforts rather than of his own volition. Therefore, the peanut may have been coughed up and swallowed.

The facts that his illness dated from the time that he choked while eating peanuts, and that the symptoms and physical signs were absolutely characteristic of a foreign body in a bronchus, I think, fully justify the diagnosis.

1315 New Hampshire Avenue.



# THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, NOVEMBER 11, 1905.

## OYSTERS AND TYPHOID FEVER.

Industrial developments are continually giving rise to new and previously unsuspected opportunities for infection, and the task of the modern sanitarian is plainly one calling for eternal vigilance. The rigorous exclusion of sewage from some public water supplies and the filtration of others has diminished measurably the danger of typhoid-fever infection from drinking water, but while these reforms have been vigorously urged, another source of typhoid fever has been steadily increasing in importance. Over 25,000,000 bushels of oysters, valued at about \$12,500,000, were marketed in the United States in 1902. The location of oyster beds in sewage-polluted estuaries is evidently a matter for real concern. It is sufficient to recall the mode of feeding of the oyster and the large amount of water that may pass through its gills to realize the extent of the danger. Professor Brooks, the distinguished Johns Hopkins zoologist, has said: "I think it is hardly an exaggeration to say that every drop of water that enters the Chesapeake Bay from the Susquehanna River has a good chance to be filtered through the gills of an oyster before it reaches the ocean."

In some localities it is a common custom among oyster dealers to place oysters shortly before marketing in the brackish water of creeks or bays for the purpose of "fattening." This somewhat delusive process of "fattening" consists in the osmotic absorption of water by the oyster removed from the salt water to the less dense brackish or fresh water, and results in an increased bulk and a lighter color. Should the water in which the oyster is put to be bloated and bleached chance to be polluted with sewage, it is easy to see how infection may result. Unfortunately, the localities chosen by the oyster men for fattening are likely to be selected on grounds of convenience rather than safety.

The nature and scope of the oyster problem on the sanitary side is well set forth in a recent paper by Fuller,<sup>1</sup> who discusses broadly both the evidence derived from a study of epidemics and local conditions, and also the bacterial and experimental data. In the case of one well-known British health resort cited by this author, there is evidence that over 37 per cent. of the total cases of typhoid fever occurring in a period of eight years were due to the consumption of oysters and other polluted shellfish.

In Great Britain, various official bodies have taken up the subject with the zeal usually shown in that country in the prosecution of sanitary reforms. In certain respects the satisfactory regulation and control of the shellfish industries presents numerous difficulties, and the problem is a complicated one. The fourth report of the Royal Commission on Sewage Disposal recommends the establishment of a new central authority equipped to investigate all phases and standing in direct relation to the proper executive bodies.

Among the recent experimental researches on the oyster question may be mentioned the work of Klein,<sup>2</sup> who points out that the longer persistence of *B. typhosus* in oysters out of water makes such oysters far more dangerous than if they were kept in water. It is further stated that infected oysters cleanse themselves quickly if put into sea water, and the suggestion is made that oysters be placed in a vessel of clear sea water and the water changed about once a day for several consecutive days. The practical limitations of such a mode of procedure hardly need exposition. The writer asserts that another shellfish, the cockle, is more dangerous than the oyster, as "it appears to offer to the *B. typhosus* even facilities for increase." This latter observation is so out of line with previous experience regarding the behavior of the typhoid bacillus outside of the human body as to need confirmation.

It is unfortunate that the situation in the United States in regard to the oyster industry is not one in which a central control can be well exercised. Consumers of raw oysters at present are quite at the mercy of oyster dealers, presumably of varying degrees of intelligence and conscientiousness. There should be some means of preventing the distribution of sewage-saturated oysters in any part of the country. Is this not something that the Public Health and Marine-Hospital Service should take up?

## THE PATENT MEDICINE CONSPIRACY AGAINST THE FREEDOM OF THE PRESS.

A flood of brilliant illumination has been thrown on the methods by which proposed public health legislation has been defeated, but coincidentally a heavy shadow is cast over the boasted freedom of the American press. "The fighting of public health legislation is the primary object and chief activity, the *raison d'être*, of the Proprietary Association." "The younger Pierce stated explicitly the agency responsible for the defeat of this public health legislation: 'We must not forget to place the honor where due for our uniform success in defeating class legislation directed against our legitimate pursuits. The American Newspaper Publishers' Association has rendered us valuable aid, . . . and we can hardly overestimate the power brought to bear at Washington by individual newspapers.'" "They printed

2. Report to Worshipful Company of Fishmongers, London, 1905. THE JOURNAL, March 25, 1905, p. 907.

1. Jour. of Franklin Institute, 1905.



scores of bitterly partisan editorials against the public health bill and against its authors personally, . . . and even in the persons of editors and owners went up to the state house and lobbied personally against the bill." "And of this one hundred millions which the people of the United States pay for patent medicines yearly, fully forty millions goes to the newspapers."

Graphic and alarming as they are, the above extracts from the article, "The Patent Medicine Conspiracy Against the Freedom of the Press," in *Collier's Weekly* for November 4, give but an imperfect suggestion of the degradation laid bare therein. Even though he blush for the shackled press, whose owners and editors are shown to obey every order (and it is order, not request) of the Proprietary Association of America, every physician in the United States should read and preserve the article quoted from, and should place its evidence before the public. Aside from a few noteworthy exceptions, no agency of our time stands more in need of reform than does the press, and it is clear that pressure of public sentiment, aroused and fostered by physicians, is the only means by which this can be accomplished.

Fortunately, according to our thoroughly informed authority, "for the past the newspapers, in spite of these plain contracts of silence, must be acquitted of any very grave complicity. The very existence of the machine that uses and directs them has been a carefully guarded secret." In future, however, all will know why any paper opposes pure food and drug legislation. It must not be forgotten, either, that to a large number of newspapers this is a matter of life or death, for without the revenue from nostrum advertisements many of them must cease to exist. Full credit, too, is due to the newspapers of North Dakota, where alone there was flat disobedience to the orders of the Proprietary Association of America, and where, in consequence, a law was passed requiring nostrum labels to tell the true contents of the bottle or package. Since July 1 of this year nearly all nostrum advertisements have been withdrawn from the North Dakota papers, and the real struggle is proceeding.

The assertions and conclusions of the *Collier's* article are fully supported and confirmed by reproduced correspondence and proceedings and by photographed contracts and letters. The conclusions are indubitable. But let us beware of any pride of fancied superiority, at least until our own house is set in order. In the future, as in the past, evidence will be presented in these columns to demonstrate that the medical press is far from being free from similar control. Indeed, with few exceptions, the medical press is similarly subsidized by those proprietary manufacturers, who for the present confine their attention, actually or professedly, to the medical profession. Advertising contracts usually employed by the exploiters of certain proprietaries contain a clause requiring the editor, during the term of the contract, to publish free of additional charge one or more "original

articles" concerning the products advertised. It is clear, then, that while we set out to initiate the reform of the lay press, it is essential that we rid ourselves of some of our own sins.

#### A NEGLECTED SOURCE OF TYPHOID BACILLI.

Many years ago Blackstein and Welch observed that after intravenous injection of typhoid bacilli in rabbits, bacilli may be recovered from the bile long after they have disappeared from the other organs. Since then we have learned that typhoid bacilli commonly find their way into the bile and the gall bladder in the course of typhoid fever, and that they may become the nuclei of biliary calculi and the cause of suppurative cholecystitis. In many instances, the bile has been found to be swarming with bacilli months and even years after the typhoidal attack.

While we have recognized the etiologic significance of their condition insofar as cholecystitis and cholelithiasis are concerned, it would seem that the hygienic significance of the gall bladder as a lurking place for bacilli has not been generally realized. It stands to reason that in a person so affected typhoid bacilli must pass into the intestinal contents and perchance be excreted in the stools. We have here, then, a hitherto somewhat unsuspected "bacillus carrier," which may become the source of sporadic as well as of epidemic typhoid.

The necessity of careful examination of the urine with regard to post-typhoidal bacilluria is more or less generally recognized, but hardly any stress has been laid on the possible hygienic dangers of the carriers of bacilli in their bile. We need careful observations as to the duration of the persistence of typhoid bacilli in the feces of typhoid convalescents, so as to learn more definitely the part played by bacillary bile invasion. When our knowledge in regard to this point is more complete than now, it may be possible to institute a more effective prophylaxis than the present, which is based almost wholly on general clinical experience rather than on comprehensive bacteriologic studies.

In the meantime, attention should be directed also to the problem of discovering some substance or method of destroying typhoid bacilli in the bile, just as the urine may be disinfected *in vivo* by means of hexamethylenamine (urotropin). At present surgical treatment of the gall bladder, which can not very well be extended to cases other than those showing indications of cholecystitis or cholelithiasis, offers the only chance for success.

It must be said that our present methods of prophylaxis against the spread of typhoid fever are somewhat lax so far as the typhoid patient as a source of dissemination of the cause of the disease is concerned. Cases of smallpox, measles, scarlet fever and diphtheria are, as a rule, isolated with great care until there is good reason to conclude that the patient no longer harbors the cause of the disease. Patients who have had typhoid fever, however, are permitted often to go abroad before it is



known whether or not the bacilli have been completely eliminated from the urine and the feces. At all events, there is still much to be desired in this respect so far as typhoid is concerned.

Concerning the route by which bacilli reach the bile in typhoid fever, there seems to be little question but that it is by way of the blood stream. The bacilli occur in the blood even in mild diseases, and recently Doerr<sup>1</sup> in repeating the experiments of Blackstein and Welch, showed that in rabbits bacilli pass into the bile only after intravenous injection, and then by way of the cystic duct, i. e., through the liver. Organisms appeared in the bile in a few hours after injection, and Doerr noted their presence there for 120 days later. Injections of colon and paratyphoid bacilli gave results similar to those obtained with typhoid bacilli.

#### THERAPEUTIC DECADENCE IN BRITAIN.

The *descensus Averni* of therapeutics is not a purely American phenomenon. In Germany and Austria pathology has made such splendid strides and has attracted so much attention that it has monopolized interest to an extent that has entailed neglect of therapeutics. The same tendency has played a minor part in this country, and to that extent has emphasized the opportunity of the drug makers and nostrum makers to become our preceptors in therapeutics.

In England the profession suffers nearly as much as we do, and largely from the same source. International comity has progressed at least far enough for us fully to sympathize with the plaint which appears in the *British Medical Journal* for Oct. 21, 1905. Our contemporary, in its editorial caption, asks: "Shall we take our therapeutics from the druggist?" Its text is a circular from an American drug firm, which instructs physicians in the several physiologic actions of the common alimentary stimulants and laxatives, all the allegations of this purgative primer being offered as an introduction to the surpassing virtues of certain "lapactic pills." In the closing paragraphs our contemporary speaks as if describing conditions in America. "We know it is said that there are practitioners who are content to take their therapeutics from advertisements which reach them through the post, and that in spite of the numerous protests we receive against the plague of druggists' circulars, especially from across the Atlantic, our waste-paper baskets overflow with them, so that it seems possible that they fulfill their immediate object, which is the sale of the articles recommended. Probably the greatest hindrance to the healthy development of rational therapeutics, not only in the profession as a whole, but in each individual member, is the influence of advertising by which particular remedies are puffed into notoriety altogether out of proportion to their merits, and the quiet voice of criticism is drowned by the brazen trumpet of the nostrum vendor."

Herein lies the secret of our decadence. The distinctions between "proprietary" and "patent" drugs are not discernible to uninterested students of the situation. The physician, like the layman, uses many a remedy because someone "says it is good" for such and such conditions. This we do even when utterly ignorant concerning the composition of the medicament and concerning the physician who writes the testimonial. Of course, in such an atmosphere rational therapeutics finds no place. The manufacturer has done much to improve the appearance and the taste of the materia medica, and has contributed something to knowledge and to exactness of dose, but along with these good things has come the assumption on his part that he is the therapeutic instructor of the profession. Having assumed this position in many instances he has led us from good old remedies in attractive form to new agents of unguessable composition, which he tells us are good, and for which he persuades us to write testimonials.

Of course, we are to blame, and we must assume the responsibility. The manufacturer should not be too severely criticised so long as we enter no protest, swallow all that the advertising literature contains and prescribe any and every kind of nostrum without even enquiring whether it is the product of a reliable manufacturing pharmacist, or of some fake and anonymous chemical company. So long as we are contented, why should they worry who are making fortunes out of our credulity?

#### A NEWSPAPER FREE FROM NOSTRUM ADS.

"Thou hast a few names, even in Sardis,  
That have not defiled their garments."

In *Collier's Weekly*, October 28, besides the illuminating article by Samuel Hopkins Adams, entitled "Peruna and the Bracers," excerpts from which we have already quoted,<sup>1</sup> a collection of letters is published, received by the management from various sources, and inspired by the first of Mr. Adams' articles. Lack of space forbids the reproduction of all these letters, interesting as they are, but one in particular deserves attention:

#### ONE RESULT OF COLLIER'S CAMPAIGN.

"THE MARINE TELEGRAM,  
"MARINE, ILLINOIS, Oct. 9, 1905.

"EDITOR *Collier's Weekly*:

"Dear Sir—The inclosed circular speaks for itself. Have been reading your articles against the patent medicine fraud, and heartily indorse the sentiment expressed. The *Telegram* has a circulation of only 500 copies per week, but the patent medicine fake can not buy space in the paper. Two years ago I canceled the last contract and am not renewing any. I am standing alone—all my exchanges are full of the 'gullible stuff,' but when such papers as yours approve and enter the fight there'll be 'something doing.' Did not intend to take up your time, but on second thought concluded to send you the circular to show you that your work is being felt. They are turning their attention even to such little fellows as we are. Keep after them, brother—they are hard hit and can't run very fast. Respectfully, L. C. HEIM, Editor *Telegram*."

1. Centralbl. f. Bakt., 1905, 39, p. 624.

1. See Pharmacology, November 4, p. 1422.



The circular to which reference is made is as follows:

"THE PRESS COMMITTEE OF THE PROPRIETARY ASSOCIATION,  
184 La Salle Street, Room 1205, Chicago, Illinois.

"To the Publisher:

"We are inclosing copy of a communication which recently appeared in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. It outlines the attack that is to be made on Proprietary Medicines.

"Believing you are interested in this matter, we also inclose for your information printed memoranda on the subject, which we hope you will read and preserve for reference.

"We should be pleased to hear from you at any time, and should you desire we can furnish you with interesting copy which briefly states the facts about patent medicines.

"The success of this agitation means the destruction of the Proprietary Medicine business, which is the system of medication now used with benefit by the great majority of the people. Yours very truly,

THE PRESS COMMITTEE,  
"A. H. BEARDSLEY, Chairman."

It is gratifying to know that an editor of a newspaper places honesty above advertising receipts and conscience above circulation. The *Marine (Ill.) Telegram* has a circulation of only five hundred copies per week, and is not afraid to say so, yet it may well be an example in business decency to the newspapers of the country, most of whose managing editors advocate strenuously, even vociferously, personal and civic decency on their editorial pages, yet admit, and even solicit, advertisements of palm readers, fortune tellers, abortionists, abortifacients, nostrum vendors and humbugs. But these journals are doubtless in the same position as one of our contemporaries, who said that "the editorial and advertising pages are entirely distinct."

#### INSURANCE AGAINST SEPSIS.

Physicians, as a rule, carry policies of accident insurance which include a clause indemnifying them for loss of time in case of septic infection arising in the course of professional duty. It is doubtful whether, when buying such a contract, physicians are as careful as they should be to determine just what hazard is covered by the "septic poisoning clause." An item in *The Spectator* (insurance), for Oct. 26, 1905, indicates that neglect of this precaution may lead to later disappointment. It seems that these clauses, so important to surgeons, physicians and dentists are variously worded, so that the amount of protection varies. Some of them provide that, to render the company liable, the production of the wound and the entrance of the poison must be simultaneous. This debars a claim for indemnity in case the infection occurred in a pre-existing abrasion, wound or hangnail. It is said that in one company's experience 90 per cent. of the claims under its septic poisoning clause have arisen from causes other than wounds suffered in operations. It is very evident that every physician who buys an accident policy with a septic poisoning clause should read the latter very carefully so as to be sure in advance just to what extent he is protected.

#### ALLEGED WHOLESALE POISONING.

One of the leading New York newspapers publishes the astonishing statement in its New Orleans correspondence that during the recent yellow-fever epidemic 3,000,000,000 of 1/100 gr. arsenic tablets were consumed in that city and vicinity as the result of the allegation of a Minnesota physician that arsenic is a preventive of yellow fever. The correspondent goes on to figure out the weight and bulk of these tablets; that they amounted to 26 tons and would fill a space of 7,000 cubic feet. The correspondent estimates that the people in and about New Orleans spent an aggregate of 2,083,409 days swallowing tablets, allowing one minute a dose. All this is soberly set down in the *New York World*, and was paid for at newspaper telegraph rates. The reader who is interested can figure out further absurdities at his leisure.

#### INCONSISTENCY OF THE BRITISH MEDICAL JOURNAL.

Elsewhere we have quoted the views of the *British Medical Journal* in regard to "the plague of circulars," and the usurpation of therapeutic teaching by the makers of drugs. It is not a little astonishing, however, to find in the advertising pages of the same issue of that publication the advertisement of the firm and the identical article whose circular drew forth the eloquent comment of our contemporary. Further investigation of its advertising pages suggests that the British Medical Association's journal is not ready to join in the movement to suppress the present evil features of the proprietary trade. In its advertising pages appear advertisements of several products that we are sure would not bear critical investigation. While objecting to the flood of circulars from American pharmacists, our contemporary clearly has no evident objection to the influence of American cash in payment for the advertising of American proprietary remedies, some of which also are widely advertised in the lay press. The present movement, however, is somewhat new, and, as in our own case, existing contracts may have to be carried out, so that our contemporary yet has time to assume a more correct position, which we have no doubt it soon will do.

**Laffont's Tuberculin-Serum Treatment of Tuberculosis.**—M. Laffont has been studying for eight years to produce a serum effective against tuberculosis, and he believes that the results he has recently obtained deserve attention. He described them before the recent international tuberculosis congress, and his report is published in the *Progrès Médical* for October 7. He combines a tuberculin produced by a new technic with an artificial tonic serum. The latter aims to invigorate the phagocytes, favor their proliferation and to increase the natural defenses of the organism. It contains in each cubic centimeter 0.5 mg. of dimethoxylated strychnin. This affects the nerve centers like strychnin without the great toxicity of the latter. He found that animals injected with this serum, after inoculation with tuberculosis, survived much longer than the controls. It gave even better results in the clinic in his experience with 134 patients. He combines this hypertonic serum with a tuberculin made according to a new principle. He reasons that the vital organs of a tuberculized animal must contain not only the microbes and their toxins, but also the products of its defensive reaction. These defensive products are encountered only in the living animal—not in bouillon cultures of the bacilli. He thus uses living animals for his culture medium, first inoculating them with tuberculosis, then invigorating them by a course of treatment with his hypertonic serum, and then killing them and using an extract of their glands and tissues for his tuberculin.



## Medical News

### CALIFORNIA.

**Mulcted for Mailing Obscene Literature.**—Dr. Lawrence L. Sherrod, San Francisco, was fined \$200 by United States District Judge De Haven October 25 for sending obscene pamphlets through the mails. He paid the fine and was discharged.

**Personal.**—Dr. Charles F. Millar has been confirmed chief surgeon of the Central Emergency Hospital, San Francisco. —Dr. Hayden M. Simmons, San Francisco, has been appointed a medical inspector of schools. —Dr. George W. Mallory, Santa Rosa, has taken a trip to New York.

### COLORADO.

**Personal.**—Dr. and Mrs. Alfred B. Blackman, Colorado Springs, have returned from Europe. —Dr. Byron C. Leavitt, Denver, is visiting in Saco, Maine.

**Pardoned.**—The state board of pardons has recommended that pardon be granted Dr. Potts, Buffalo, who is serving a sentence of twenty years in the penitentiary for murder in the second degree.

**Medical Board Resigns.**—The entire medical board of Agnes Memorial Sanatorium, Denver, consisting of Drs. Arnold Stedman, William H. Bergtold, Carroll E. Edson, John A. Wilder and Lorenzo B. Lockard, has resigned. The members state as their reason that they do not approve of the present policy of the institution.

**Warning Against Liquor Prescribing.**—The city attorney of Colorado Springs issues a warning to physicians who give prescriptions for liquor. The ordinance provides that a prescription for liquor may be given by a physician only in the regular practice of his profession. It is not within the law for a physician to give, without examination and without a fee, a prescription to any person who simply wants liquor. The fine for violation of this section of the ordinance is from \$100 to \$300.

**Vital Statistics.**—During September 819 deaths were reported in the state, equivalent to an annual death rate of 17.6 per 1,000. Typhoid fever caused 41 deaths, diphtheria 4, and scarlet fever 3. During the month there were 334 cases of typhoid fever reported, 29 of scarlet fever, 23 of diphtheria and 14 of smallpox. As compared with the previous month, September shows a decrease of one case of diphtheria, 4 cases of scarlet fever and 17 cases of smallpox, and an increase of 86 cases of typhoid fever.

### ILLINOIS.

**Cornerstone Laid.**—The cornerstone of the Taylorville Hospital was laid with appropriate ceremonies November 8. Bishop Ryan of Alton assisted in the ceremony. The building fund, so far, amounts to within \$150 of the \$10,000 required.

**Personal.**—Dr. Martin W. Cushing, Joliet, had another severe attack of heart disease October 30. —Dr. Frank P. Norbury, Jacksonville, has been elected vice-president of the Illinois Conference of Charities. —Dr. Alfonso C. Czibulka, Warren, has returned from an extended stay in Bridgeport, Conn.

**District Society Election.**—The Western Medical Society met at Alton October 27 in annual session, with an attendance of about forty. The following officers were re-elected: Dr. Henry W. Chapman, White Hall, president; Drs. Luther J. Harvey, Griggsville, and David W. Reid, Jacksonville, vice-presidents; Dr. Albyn L. Adams, Jacksonville, secretary and treasurer, and Drs. Thomas J. Pitner, Jacksonville; Levin H. A. Nickerson, Quincy, and Waldo Fisher, Alton, censors.

**Aesculapian Election.**—At the fifty-ninth annual session of the Aesculapian Medical Society of the Wabash Valley, held in Paris, October 26, the following officers were elected: Dr. Alesphus T. Robertson, Ashmore, president; Dr. C. E. Price, Robinson, vice-president; Dr. Harry McKennan, Paris, secretary and treasurer, and Drs. Henry E. Cushing, Champaign; Spencer M. Rice, Terre Haute, Ind.; Zachary T. Baum, Paris; Theodore N. Rafferty, Robinson, and Elmer B. Coolley, Danville, censors. Robinson was selected as the next place of meeting.

**More Asylum Changes.**—Dr. Ira O. Paul, Winnebago, who was appointed interne at the Northern Illinois Hospital for the Insane, Elgin, has declined the appointment. Dr. Edward A. Foley has resigned as first assistant physician of this institution. —Dr. Edward F. Leonard, Chicago, has been appointed physician to the Illinois Central Hospital for the Insane, Jack-

sonville, vice Dr. Louis H. Clampit, Jacksonville. Dr. Harry C. Hardt, Hospital, has succeeded Dr. Elmer L. Crouch, Mount Vernon, as assistant physician of this institution. —At the Hospital for the Incurable Insane, Bartonville, Dr. Arthur K. Stangland, Chicago, has been appointed senior assistant physician, vice Dr. A. T. Burnham.

**Diphtheria.**—Dr. Guy L. Armstrong, secretary of the Taylorville Board of Health, writes that there has existed in Taylorville, Christian County, for several weeks a mild epidemic of diphtheria, probably 100 or more cases, about 25 of which are now under quarantine. Being mild and thus far with no fatalities, the epidemic is being given too little consideration generally, many doubting the diagnosis, although it has been demonstrated in all but one instance in which cultures have been made. Until the last few days it has been confined chiefly to one community and the children attending one school—which has been closed for some time. On account of the development recently of several cases in different parts of the city in children attending the various school, all the ward schools and the public library have been ordered closed. —The Humphrey school house, near Barrington, has been closed on account of diphtheria. —Richwoods township is suffering from an epidemic of diphtheria which may necessitate the closing of the public school.

### Chicago.

**Hospital Buys Land.**—The Chicago Union Hospital has purchased the northwest corner of Wellington Avenue and Dayton Street, 90x264 feet, for \$23,000.

**Optimistic in Face of Difficulties.**—Dr. Sarah Hackett Stevenson, who was stricken with cerebral hemorrhage two years ago, has sent greetings to her friends and expressions of gratitude that she still survives on the second anniversary of her affliction.

**Coroner's Report.**—During October the coroner investigated 285 deaths, of which 52 were found to be due to natural causes; suicide claimed 35 and homicide 17. Of the suicides 16 died by shooting, 3 by hanging and 7 by poisoning. Of the latter 4 employed carbolic acid.

**Mortality for October.**—During October 2,153 deaths occurred, 51 more than during the previous month, and 256 more than for the corresponding month of last year. The annual death rate was 12.73 per 1,000. Acute intestinal diseases caused 257 deaths; consumption, 242; pneumonia, 217; violence, including suicide, 205; heart diseases, 185; Bright's disease, 163, and cancer, 116.

**Contagious Diseases.**—During October three cases of smallpox were found in Chicago, and these all in one family. —There were reported 438 cases of diphtheria during October, and 50 deaths from this disease. During the week ended November 4, 120 cases were reported, with 16 deaths, and during the previous week 113 cases, with 16 deaths. The disease is distributed about equally in the various portions of the city.

**Deaths of the Week.**—For the week ended November 4 the deaths from all causes numbered 498, 28 more than for the preceding week, and 78 more than for the corresponding week of 1904. Pneumonia heads the death list with 77, followed by violence, including suicide, with 49, heart disease with 46, Bright's disease with 41, consumption with 40, intestinal disease with 32, nervous diseases with 21, and apoplexy with 20 deaths.

**The Senn Dinner.**—The following is the program of exercises for the Senn banquet: Presentation of medallion, Dr. Joseph D. Bryant, New York City; presentation of loving-cup on behalf of Dr. Senn's former students, Dr. Lewis G. Nolte, Milwaukee; response by Dr. Senn; "American Surgery," Dr. William J. Mayo, Rochester, Minn.; "The American Medical Association," Dr. Lewis S. McMurtry, Louisville; "The Medical Man as the Patient Sees Him," Hon. George R. Peck, Chicago; "The Medical Man versus the Surgeon," Dr. John A. Witherpoon, Nashville, Tenn.; "American Medical Literature," Dr. Charles A. L. Reed, Cincinnati; short reminiscences, anecdotes, etc., by Drs. Jacob Lang, Milwaukee; Edward Boeckmann, St. Paul; Fernand Henrotin, Daniel R. Brower, William E. Quine and others. Guests will assemble at the Fine Arts entrance to the Auditorium at 6:30 p. m., November 11.

### INDIANA.

**Fire Loss.**—A fire in the library of the home of Dr. Benjamin F. Bye, Indianapolis, although of short duration, caused a loss of \$2,500.

**Fever Epidemic.**—An epidemic of typhoid fever is raging at Mount Ayr; 35 cases have been reported, with 3 deaths. —It



is reported that at Monticello there have been 10 deaths out of 15 cases.

**Physician's Murderer Sentenced.**—Alexander Kennedy, Lafayette, who shot and killed Dr. Philip J. Trese, June 17, pleaded guilty to voluntary manslaughter October 26, and was given an indeterminate sentence in the state prison.

**Clinical Society Formed.**—The staff of the Deaconess Hospital, Evansville, has organized a medical society, to be known as the Deaconess Hospital Clinical Society. Dr. Charles Knapp was elected president and Dr. Charles B. Harpole, secretary.

**District Society Meeting.**—At the semi-annual meeting of the Thirteenth District Medical Society, held at Elkhart, October 19, 70 were present. Dr. William G. Wegner, South Bend, was elected president, and Dr. John C. Fleming, Elkhart, secretary and treasurer. The next meeting will be held in South Bend.

**Cornerstone Laid.**—The cornerstone of the main building of the Methodist Hospital, Indianapolis, was laid October 25. The chief address was made by the Hon. Charles W. Fairbanks, vice-president of the United States. United States Senator Albert J. Beveridge also delivered an address. The hospital is expected to cost \$300,000.

**Personal.**—Dr. Frederick Herring, Goshen, observed his ninety-third birthday anniversary October 30.—Dr. Charles T. Bronaugh, New Ross, has returned from a trip to the Pacific Coast.—Dr. R. S. Byers, Trafalgar, was injured by a kick from a horse, October 29.—Dr. John M. Pulliam has resigned his position at the Logansport Asylum, Long Cliff, and will go into practice at Fort Wayne.—Dr. Austin Funk, New Albany, has gone to London.—Dr. James A. Comstock, Greenfield, went to Indianapolis October 24 to have an operation performed for disease of the bladder.—Dr. Clarence Kelsay, Evansville, has been appointed milk and food inspector by the board of health.—Dr. John B. Salb, Jasper, has been appointed division surgeon for the Southern Railway.

#### MARYLAND.

**Left Large Estate.**—The late Dr. George Johnson, Frederick, left an estate valued at \$100,000.

**Asylum Overcrowded.**—The Maryland Asylum and Training School for the Feeble-minded is much crowded, there being now 200 inmates, with 170 applications for admission. The visitors will apply to the legislature for appropriation for additional buildings.

**Delegates Appointed.**—The governor has appointed the following as delegates to the southern conference on immigration and quarantine at Chattanooga, Tenn., November 9 and 10: Dr. John S. Fulton, secretary of the State Board of Health, and Dr. James Bosley, health commissioner of Baltimore.

#### Baltimore.

**Births and Deaths.**—The health report for October gives 822 deaths and 810 births.

**Hospital Opened.**—The new Franklin Square Hospital will be opened about December 1, with an address by the governor.

**Plans for Hospital.**—The architects have been selected to submit a general plan for the five buildings for the Hospital for Infectious Diseases. The site, in the eastern suburbs near the city almshouse, comprises about twenty acres. One building will be erected annually, the first being for diphtheria and scarlet fever.

**Johns Hopkins Students.**—At the Johns Hopkins Medical School there are 293 regular students. The smallest class is the first year, which numbers 58, including 7 women—the largest number of women there in any year. During the session a laboratory will be opened for instruction in operative surgery on animals.

**Presentation to Hemmeter.**—On November 15, the twentieth anniversary of his doctorate, an oil portrait of himself will be presented to Dr. John C. Hemmeter by his friends. There are ninety-five subscribers. Supervising Surgeon-General Walter Wyman of the United States Public Health and Marine-Hospital Service will make the presentation, and an address will be made by Dr. Warner Holt, Washington.

#### MASSACHUSETTS.

**Bequest.**—The Women's Charity Club Hospital, Roxbury, has received a bequest of \$500 under the will of Edith G. Willard, Boston.

**Illegal Practitioner Fined.**—Hannah Ponn, Gardner, was fined \$100 in the Superior Court, Worcester, October 27, for the illegal practice of medicine.

**Another Gift for Lowell Hospital.**—Frederick F. Ayer has made another donation of \$25,000 to the Lowell General Hospital, to be expended in improvements in accordance with the plan proposed.

**Surgical Pavilion Opened.**—The Douglass Surgical Pavilion, the gift of the governor to the hospital in his home city, Brookton, was dedicated October 31 with appropriate exercises. At the same time the Wellcome H. Wales memorial ward was dedicated.

**Somerville's Donation Day.**—Somerville Hospital benefited by its donation day by cash contributions of nearly \$2,500 and quantities of clothing, food, linen and medicines. Much of the money was obtained by forming groups of five, each individual paying \$50, and the whole sum, \$250, being the amount needed to maintain a bed for a year.

**Woman's Hospital Report.**—The Free Hospital for Women, Brookline, reports that 308 patients were operated on during the past year, an increase of 20 over 1904. Dr. John Phillips Reynolds has resigned from the staff after a service of twenty-nine years. Although there are 42 beds available, only 30 can be used with the present limited nursing force.

**Personal.**—Governor Douglass has appointed Dr. Clarence F. Curley of Provincetown, medical examiner for the Third Barnstable district.—Dr. L. W. Starbird has resigned as surgeon of the Soldiers' Home.—Dr. Frederick Bogan, Boston, has been appointed assistant surgeon, with the rank of second lieutenant, N. V. M., and has been assigned to duty with the Ninth Infantry.

**Good Work of Floating Hospital.**—The Boston Floating Hospital reports that during its ten weeks' season, from July 6 to September 13, 279 patients were treated in the permanent wards. Of these 92 were discharged well, 73 improved, 23 not improved, and 91 died. The average stay of the patients was 13.76 days, a total service of 3,840 days. In the open ward 620 patients were treated, 50 trips were made down the harbor with these and on the average 47 were taken on each trip. Of these patients 35 were pronounced well, 366 improved, 216 unimproved (failed to come often enough to be benefited), 2 refused treatment, and 1 died. In the wards 140 were 6 months old or less, 65 from 6 to 12 months, 52 from 1 to 2 years, 13 from 2 to 3 years, 6 from 3 to 5 years, and 3 from 5 to 6 years. Among the day patients, including 66 transferred to the wards, 210 were under 6 months old, 227 from 6 to 12 months, and 249 over 1 year. The severity of the ward cases is marked by the fact that 26 died within 48 hours of admission.

#### MICHIGAN.

**Detention Hospital Burned.**—The Sheridan House, Jackson, which has been used as a detention hospital, burned October 20.

**Diphtheria.**—Mason County is at present suffering from a severe epidemic of diphtheria. Five deaths occurred during the last week in October and eight schools in the county have been closed.

**Self-styled Physician Imprisoned.**—"Dr." Francis Murry, Detroit, who has been annoying women in apartment houses, was found guilty October 13 and sentenced to the house of correction for ninety days.

**Work on Hospital Begun.**—Construction work has been started on the Hubbard Memorial Hospital at Bad Axe, which F. W. Hubbard is building and will present on completion as a tribute to his father, the late Langdon Hubbard.

**Sanitarium to be Hotel.**—The Alma Sanitarium has been leased for a term of years by Edward C. Mix, Missoula, Mont., and will be conducted as a health resort, open all the year around. The name of the institution has been changed to the Alma Springs Hotel.

**Medical Cases Dropped.**—The cases against "Drs." George W. King and Edward H. French, Grand Rapids, who were charged by Dr. Beverly D. Harison, secretary of the State Board of Examiners in Medicine, with having failed to take out certificates, have been dropped. King has left the city and French has promised not to practice medicine for a time.

**Personal.**—Dr. Robert H. Nelson, Hudson, has gone to Ann Arbor for operation.—Drs. Michael P. Fenelon and William A. Cotton, Escanaba, and Dr. Richard S. Forsyth, have been appointed physicians for the Delta County Hospital, Escanaba, for three years.—Dr. William J. Robinson, who was appointed city physician of Lapeer October 24, resigned October 25.—Dr. Charles W. Edmunds, Ann Arbor, has returned from Europe.—Dr. Clark R. Wilcoxson has been appointed health officer of Ypsilanti, vice Dr. Frank K. Owen, deceased.—Dr. Charles W. Yarrington, Centennial, has been appointed to the



Calumet & Heela medical staff, vice Dr. William K. West, Calumet, resigned.—Dr. Martha C. Strong, Jackson, has returned from Europe.

#### MINNESOTA.

**Hospital Association Incorporation.**—The Lutheran Hospital Association of Minneapolis filed articles of incorporation with the secretary of state October 21.

**Hospital to be Enlarged.**—The Norwegian Lutheran synod will enlarge Luther Hospital, St. Paul, which has outgrown its present quarters, by the erection of a new building to accommodate 300 patients and to cost more than \$100,000.

**Personal.**—Dr. William C. Voigt, Stillwater, was stricken with paralysis October 27.—Dr. Charles A. Lester, Wabasha, has been appointed local surgeon for the Milwaukee System, vice Dr. William F. Milligan, deceased.

**Hospital Damages Settled.**—The insurance appraisers have settled the damages sustained by the fire at St. Raphael's Hospital, St. Cloud, October 10, for \$19,388.55. The hospital will be rebuilt and will be finished before spring.

**Jury Disagrees.**—After twenty-four hours' deliberation the jury in the case of Dr. Theron H. Bly, Minneapolis, indicted on the charge of performing a fatal criminal operation on Hilda Rosen, was allowed to disagree October 25, and was dismissed.

**Chiropractic Wins Suit.**—In the damage suit of A. J. Lindquist against D. W. Reiland, a chiropractic of Duluth, a verdict was given for the defendant, the judge ruling that chiropractic is a separate school and that the testimony of regular physicians against it is not admissible as evidence.

**Red River Association Meets.**—The Red River Valley Association met October 25 at Crookston and elected the following officers: President, Dr. Malcom McKinnon, Fosston; vice-president, Dr. Jacob S. Kjelland, Crookston; secretary, Dr. Theodore Bratrud, Warren; censor, Dr. Hodgson, Crookston; and delegate to the Minnesota State Medical Society, Dr. George S. Wattam, Warren, and Dr. Halvor Holte, Crookston, alternate. The association recommended that Dr. Malcom McKinnon, Fosston, be reappointed a member of the State Board of Health and that Dr. Theodore Bratrud, Warren, be selected as a member of the State Board of Medical Examiners.

**Dispensing Physicians Must Pay Liquor Tax.**—The deputy collector of internal revenue for the Minneapolis district announces that under a ruling handed down by the Treasury Department, he will have to collect a liquor dealer's tax from every physician who compounds his own prescriptions, or who uses alcohol or alcoholic liquors in so doing. The ruling expressly states that the tax must be collected from all physicians who keep a supply for their patients of "malt tonic," whisky, port wine, blackberry brandy and similar compounds, or use the same in compounding their medicines. The fact that liquors are furnished for medicinal purposes only makes no difference as to the tax.

#### KANSAS.

**An Appeal to Kansas Physicians.**—A prominent physician of America writes us that he believes that "the profession of this country is being frightfully humbugged by the secret proprietary manufacturers, much more so than are the people by the 'patent' medicine men; and the journals of the state societies must fall in line, even though they lose part of their advertising income. One of the most important things for the profession to learn is that if it does not support the medical journals, the nostrum men stand ready to do so." Are you ready to have the advertisements of proprietary medicines cut out of this journal to the extent, say of \$500? Or, don't you care a "continental" about the whole business? One of our councilors told us the other day that our men were not yet ready to put their hands into their pockets to support a journal without patent medicine advertisements. Is this true? Are the men of Kansas so blasé, so "blunted by the long disregard of the prohibitory law," so dull of moral fiber, that the question does not appeal at all to them?—*Journal of the Kansas Medical Society*. ["What shall the answer be"? We presume that all proprietaries are not to be eliminated, but only those which do not come up to a certain standard.—EDITOR.]

#### NEW YORK.

**Consider New York City Water Plans.**—The state water supply commission considered a petition and plans for taking water from the Catskills to supply New York City on November 3. The localities affected by these plans will be given a hearing within the next three weeks.

**Hospital Gift Fair.**—The German Hospital gift fair, which has just closed, was one of the greatest successes of its kind in the history of Buffalo. It is expected that more than \$50,000 will be realized for the hospital, and with this amount many needed improvements, including a wing for private rooms and a nurses' cottage, will be made.

#### New York City.

**Ambulance Wrecked.**—An ambulance from the J. Hood Wright Hospital was wrecked recently. Both the ambulance surgeon and the driver escaped serious injury.

**Fewer Milk Dealers on Trial.**—There were only four milk dealers found guilty of selling adulterated milk by the Court of Special Sessions last week. These were fined sums varying from \$10 to \$30.

**Quarantine Lightened.**—Dr. Doty has suspended the regulation requiring vessels from southern domestic ports to stop at quarantine station for examination, except in the case of vessels from New Orleans. These will be required to stop until that city is officially declared free from yellow fever.

**Cornerstone of Hospital Laid.**—The cornerstone of the new Manhattan Eye, Ear and Throat Hospital was laid November 2 by John T. Agnew, a brother of the founder of the original institution. The new building will have a frontage of 125 feet and will be nine stories high. It will be ready for occupancy in about a year.

**Hospital Staff.**—The Philanthropic Hospital, which was recently dedicated, will have as its staff Drs. Heinrich Stern, Dexter D. Ashley, William S. Bryant, Ernesto Blasucci, George A. Crump, Julius R. Fabricius, David Flynn, D. Fredman, Victor A. Lyon, George B. McAuliffe, J. Smith Peterson, Edward C. Podvin, Thomas F. Reilly and Simon Strauss.

**Contagious Diseases.**—There were reported to the sanitary bureau of this city for the week ended October 28, 342 cases of tuberculosis, with 157 deaths; 262 cases of diphtheria, with 17 deaths; 94 cases of typhoid fever, with 19 deaths; 113 cases of measles, with 2 deaths; 61 cases of scarlet fever, with 4 deaths; 2 cases of cerebrospinal meningitis, with 5 deaths, and 85 cases of varicella.

**New Wing for Hospital.**—The new wing of St. Vincent's Hospital was formally opened November 2 by Archbishop Farley. This wing is supplied with a full equipment to accommodate 100 patients. Among the donors of funds for rooms in the new wing are John D. Crimmins, Adrian Iselin, Dr. Frederic S. Dennis, Jeremiah Campion, Mrs. James Butler and Mrs. John W. Mackay.

**Give Money for Sanatorium.**—The following contributions are reported for building a sanatorium for Hebrew children at Roekaway Park: Jacob Schiff, \$10,000; Mortimer L. Schiff, \$2,500; Adolph Lewisohn, \$2,500; Felix M. Warburg, \$1,000; Otto H. Kahn, \$1,000; Paul M. Warburg, \$500; Emanuel Lehman, \$500; Daniel Guggenheim, \$500; William Schole, \$500, and Isaac Stern, \$500. The furniture for the new building will be provided by Mrs. J. B. Greenhut.

**Brooklyn's Water Supply.**—Dr. Lederle has been at work investigating the condition of the water supply of this borough and expresses the opinion that the underground supply is pure and wholesome. The coli bacteria count was low and no intestinal bacilli were found. He thinks the epidemic of typhoid fever was not due to the water. However, about 45 per cent. of the water supply comes from the surface supply and this portion of the supply is menaced by pollution.

**Inspect Cabin Passengers Also.**—Commissioner of Immigration Watchorn has issued orders to the inspectors of the United States Public Health and Marine-Hospital Service to make thorough examination of all first-class passengers on incoming vessels. This order was prompted by the case of a man who came in the first cabin while his wife and children came in the steerage. It was discovered that this man, though diseased, managed to pass the casual examination accorded the first cabin passengers.

#### OHIO.

**New Hospital Opened.**—The new hospital at Wauseon was opened November 1.

**Health Board Abolished.**—The city council of Marysville abolished the board of health October 26 in order to settle the controversy between the board and the dairymen.

**Contagious Wards Opened.**—The new contagious hospital connected with the Toledo Hospital was formally transferred to that institution October 25. The building has two wards and is thoroughly equipped.



**Physician Exonerated.**—The suit of Frank Stroup against Dr. William J. Ritchie, Warren, in which damages of \$10,000 were claimed for alleged negligence while attending the wife of the plaintiff, was decided in favor of the defendant October 19.

**Diphtheria.**—The epidemic of diphtheria at Leetonia is now believed to be under control; there has been only one death from the disease and one new case reported in the last week. —Owing to an epidemic of diphtheria in district No. 11, the Storm's Station public school has been closed. —Diphtheria has broken out among the foreign population of Marblehead and the public schools have been closed.

**Personal.**—Dr. D. Clark Hoffman, chief surgeon of the Soldiers' Home, Dayton, has resigned, to take effect November 1, and Dr. Frank W. Roush has been appointed his successor. —Dr. John W. Murphy, Cincinnati, is seriously ill with what is believed to be an abscess of the frontal sinus. —Dr. George F. Brubaker, Springfield, has returned from a trip to the Pacific Coast. —Dr. William S. Bushnell and family, Mansfield, have gone to California for the winter. —Dr. D. R. Bookwalter, Dayton, is critically ill from tuberculosis. —Dr. George T. Harding, who has been on the staff of the Columbus State Hospital for four years, has resigned, to take effect November 15, in order to assume charge of the new National Sanatorium soon to be opened in Tacoma Park, near Washington, D. C. —Dr. Stanley R. Hutchings, Springfield, has been elected physician of the Children's Home, vice Dr. Walter N. Prince, resigned. —Dr. Sample B. McKerrihan, Portsmouth, was severely injured in a runaway accident October 26. —Dr. Walter N. Prince, Springfield, has located in Red Lodge, Mont. —Dr. John J. Murphy, Lima, suffered painful injuries in a collision between his buggy and a street car October 24.

**Pure Water for Cincinnati.**—It has been finally decided that a solution of lime and sulphate of iron be used in connection with the new filtering beds of the water works for purifying the water, and not alum. The method of purification will be as follows: From the Ohio River the water will be introduced into two large settling reservoirs and allowed to remain there for from one to three days, according to its condition. It is then drawn off from the top of the reservoirs and passed through a regulating house, where the coagulant is to be introduced in solution. Thence it flows into three coagulating basins and allowed from one to six hours to pass through the basins. Next it is passed through the filters. These latter are 28 in number, each 28 by 50 feet, each acre of which is capable of filtering from 100,000,000 to 140,000,000 gallons in twenty-four hours, as against 2,500,000 to 3,000,000 gallons in twenty-four hours by the slow sand filtration with no coagulant as is used in Germany and some portions of this country. The filtered water is collected by a piping system and delivered into a clear water basin with a capacity of 18,000,000 gallons, whence it flows into the gravity conduit or tunnel, four and one-half miles long by seven feet in diameter, which brings the water to the western pumping station, whence it is pumped into the city mains for distribution in all parts of the city. Later it may be decided to roof over the clear water basin and the Eden Park reservoir. The cost before the completion of the entire plant will be in the neighborhood of \$15,000,000.

## PENNSYLVANIA.

### Philadelphia.

**Malpractitioner Sentenced.**—"Dr." J. H. King was sentenced by Judge Sulzberger to three years in the Eastern Penitentiary October 31 for criminal malpractice committed on a young woman of Lebanon, Pa.

**Jefferson College Library.**—The annual report of the Jefferson Medical College library shows an increase during the year of 321 volumes and 100 pamphlets. The library now contains 3,315 volumes. Fifty-three current periodicals are regularly received.

**Personal.**—Dr. and Mrs. George Fales Baker will spend the winter in Europe. —Dr. Purves Stewart of England delivered a lecture to the students of the medical department of the University of Pennsylvania November 3 on "A Series of Cases of Nervous Disease."

**Beriberi at This Port.**—Out of 56 Chinamen composing the crew of the British steamer *St. George*, from Java, 8 were found to be suffering with beriberi on examination. They were, therefore, placed in the quarantine hospital at Marcus Hook, and the members of the crew were placed in detention quarters. The vessel will be thoroughly fumigated.

**College of Physicians Meeting.**—On November 13 Dr. Frank Billings, Chicago, will read a paper on "The Medical versus the Surgical Treatment of Diseases of the Stomach," and Dr. George E. Brewer, New York City, one on "The Indications for Surgical Intervention in Diseases of the Stomach, in the Absence of Symptoms of Perforation or Hemorrhage."

**Hospital Reports.**—The report of the German Hospital for the past month shows that 321 patients were admitted. There were 20 deaths during the month. In the dispensaries 4,626 patients were treated, and 3,072 of these were treated in the surgical department. —The report of the Howard Hospital for the month shows that 55 patients were admitted to the house; 150 accident cases were treated. —The Methodist Hospital admitted 70 patients and treated 563 in the different dispensaries. —The Charity Hospital treated 790 patients. —The Women's Hospital admitted 116 patients, treated 502 new patients and 1,745 old patients in the various dispensaries.

**Health Report.**—The report of the Bureau of Health for the week ended November 4 shows that the total number of deaths aggregated 394. This is a decrease of 16 from the number reported last week, and an increase of 8 over that of the corresponding week of last year. The principal causes of death were: Typhoid fever, 7; diphtheria, 10; tuberculosis, 48; cancer, 22; apoplexy, 17; heart disease, 40; acute respiratory disease, 38; enteritis (under 2 years), 17; enteritis (over 2 years), 6; Bright's disease, 34; puerperal sepsis, 4; suicide, 8, and accidents, 15. There were 178 cases of contagious disease reported, with 17 deaths, as compared with 200 cases and 22 deaths for the previous week.

**Society Meetings.**—The Philadelphia Medical Examiners' Association held its first meeting November 8. The association is composed of medical examiners, and all men doing this work are entitled to membership. The qualifications are the same as for the Philadelphia County Medical Society, but the meetings are open to all physicians. —The American Society of Tropical Medicine will meet in the College of Physicians November 17. —The special lecture arranged by a resolution of the Philadelphia County Medical Society will be delivered November 15 at the College of Physicians by Dr. A. C. Abbott, president of the Philadelphia Bureau of Health, on "The Essentials of Successful Public Health Administration."

**Opposes Contract Work.**—At a regular meeting of the Medical Society, held October 30, the following amendment to the by-laws was passed unanimously:

*Resolved*, That on and after the first day of January, 1906, no member of this society shall accept the position of club, society, lodge or organization physician, or agree, or continue to do, any medical or surgical work for any club, society, lodge or organization at a less rate than the regular or customary charges for like services rendered by other physicians for patients not members of such club, society, lodge or organization. Also that in no case shall any physician agree to attend the families of the members of such club, society, lodge or organization at half price or a less price than the regular rate. Nothing in this resolution or section of the By Laws shall be construed as preventing any member from attending the worthy poor at a less rate or to give free service to those who are too poor to pay anything, or acting as city, county or town physician, health officer, or under any political appointments. Any violation of this law shall be considered unprofessional conduct and render the member guilty thereof liable to suspension or expulsion from this society, as the society may determine.

## RHODE ISLAND.

**New Twin City Hospital.**—The board of directors of the Twin City Hospital, Pawtucket, has rented the Mark Dean estate and will remove the hospital effects to the building on that property.

**Epidemic of Diphtheria.**—There is an epidemic of diphtheria among children who have been in attendance at the Calhoun Avenue primary school, Providence, and among others in that immediate vicinity.

**Lawn Fete Receipts.**—The lawn fête at the residence of Mr. and Mrs. F. W. Vanderbilt, Newport, in August last, for the benefit of the Newport Society for the Prevention and Control of Tuberculosis, netted \$16,476 for the society.

**New Hospital for Pawtucket.**—Frank A. Sayles, Pawtucket, has announced that he will build and equip a large modern hospital as a memorial to his sister and mother. Work will be started next spring, the hospital will be complete in a year and will then be presented to the city.

**Appropriation for Hospital.**—Thirty-five thousand dollars has been appropriated by the city council for the aid of the Rhode Island Hospital, Providence, on condition that the hospital furnish twenty beds for the use and treatment of sick or injured employees of the city. Ten thousand dollars was also appropriated for St. Joseph's Hospital.



**State Examining Physicians Appointed.**—At a meeting of the board of trustees for the State Sanatorium for the Care of Consumptives, held in Providence, October 23, the following were appointed state examining physicians: Drs. Elisha D. Clarke, Woonsocket; Christopher F. Barker, Newport; Roland R. Robinson, Wakefield; John Champlin, Westerly, and Harold Metcalf, Wickford. The formal transfer and opening of the institution occurred November 1. Only residents of the state will be admitted, a minimum rate of \$5 per week will be charged, and only cases will be admitted in which there is reasonable prospect of arresting or curing the disease.

#### SOUTH DAKOTA.

**At Work on New Hospital.**—Work has commenced on the new hospital building for Mitchell, which is to be completed before July 1 next.

**Personal.**—Dr. John W. Freeman of the Homestake Hospital, Lead, is taking a vacation, his place being filled by Dr. Daniel K. Dickinson, the original founder of the hospital.

#### TENNESSEE.

**Personal.**—Dr. E. Talmage West has been made chief surgeon of the National Soldiers' Home, Johnson City, vice Dr. Frank P. Robinson, resigned.—Dr. Philander D. Sims has been appointed city physician of Chattanooga, vice Dr. J. Sinclair Dyke, to take office January 1.—Dr. and Mrs. E. R. Hochstetter, Chattanooga, have gone to California for a year.

**Will Admit Women.**—The Tennessee Medical College, Knoxville, will admit women on the same terms as men, beginning with the term opening November 1. An arrangement has been made whereby the college will receive all students desiring to study medicine from the Lincoln Memorial University, Cumberland Gap.—Dr. A. G. Kern has become professor of surgery, vice Dr. John H. Morton, who takes the chair of obstetrics.—Dr. Walter S. Nash has had added to his chair of anatomy that of clinical surgery.—The college is spending \$40,000 on a new hospital building which will soon be ready for occupancy.

#### TEXAS.

**Diphtheria.**—Diphtheria is reported to be prevalent at Tebo, Merkel and San Angelo.

**Personal.**—Dr. Benjamin M. Worsham, superintendent of the State Lunatic Asylum, Austin, has returned from New York, where he underwent a successful operation for appendicitis.—In a runaway accident October 29 Dr. Joel M. Gooch, Temple, had a rib broken.

**Hospital News.**—All Saints' Hospital, Fort Worth, was formally opened on All Saints' Day, November 1. The first floor only is ready for patients. The building will have cost when completed about \$18,000.—Plans for the new Santa Fe Hospital at Temple have been prepared. The building is to be a brick structure and will cost \$50,000.

#### VIRGINIA.

**Personal.**—Dr. J. R. Speigh, city physician of Norfolk, has been suspended for sixty days pending investigation of a case of alleged neglect of duty.—"Dr." Rives Tatum, Harrisonburg, is at present in jail for practicing medicine without a license.

**Fighting Diphtheria.**—A quarantine has been established in Brandon district, Prince George County, to stamp out the diphtheria which has existed in epidemic form for a considerable time.—The public school at Disputanta has been closed on account of the disease.

#### GENERAL.

**More Food Experiments in Washington.**—It is reported that Dr. Wiley's "poison squad" is being reorganized. This time, according to the newspapers, the volunteers will be required to subsist chiefly on cold-storage products.

**Instruction in Military Hygiene at West Point.**—It is reported that the cadets at West Point Military Academy are to be instructed in the hygienic care of troops, and in the use of medicines for ordinary ailments likely to occur in small commands.

**Information Wanted as to the Practical Lives of the Blind.**—Dr. George M. Gould, 1722 Walnut Street, Philadelphia, will be grateful for any trustworthy information as to the methods which have been devised by the blind in overcoming their disability or in gaining a livelihood. Accounts of such lives, anecdotes, references to literature, etc., will be appreciated.

**Nurses Wanted for Panama.**—The government is endeavoring to secure "competent" nurses for service in Panama. These nurses are to receive only \$50 a month, with free quarters and rations, and free transportation from New York to the Isthmus. It is said that the government's difficulty in obtaining competent women may be explained by the small salary as compared with that in the United States.

**Army Reorganization Approved.**—The Association of Military Surgeons of the United States, at its recent meeting, adopted the following resolution:

*Resolved*, That the Association of Military Surgeons of the United States hereby expresses its entire approval of and earnestly urges the enactment of the bill to increase the efficiency of the United States Army, which bill was submitted by the Secretary of War to Congress at the last session.

**Tuberculosis Exhibition.**—The American Tuberculosis Exhibition will be held from November 27 to December 9 in the American Museum of Natural History, New York City. The authorities of the museum have placed at the disposal of the committee a large hall, in which will be shown elaborate models of sanatoria, with numerous photographs and charts. The New York Department of Health will be represented by demonstration of its campaign against tuberculosis, and the tenement house department exhibit will contain accurate copies of tenement house rooms under the old and new conditions.

**Panama Hospital Internes Wanted.**—The United States Civil Service Commission announces an examination November 29-30, at the regular places of examination throughout the United States, for male hospital internes on the Isthmus of Panama. An insufficient number of eligibles resulted from the examination held January 18 for this position. Full information concerning transportation to the Isthmus, conditions of employment, etc., is contained in Form 1417, which may be obtained from the United States Civil Service Commission, Washington, D. C. Age limit, 20 to 30 years; salary, \$100 per month, with quarters, but without board and washing. Only graduates of reputable medical schools having a three years' course will be admitted to this examination.

**Honors to Professor Ostwald.**—The policy adopted by the authorities in France, Germany and this country by which there is an interchange of the services of professors of high rank in the leading universities has been continued by the sending of Prof. Wilhelm Ostwald of Leipzig to this country. He is the recognized pioneer in physical chemistry, preceding van t'Hoff and Arrhenius in his researches, and is now giving a course of lectures at Harvard University on physical chemistry. A banquet in his honor is held November 11 at Brooklyn, given by the physical science department of the Brooklyn Institute. The leading chemists in the universities east of the Alleghanies have been invited, and addresses have been promised by the president of Johns Hopkins, Prof. H. W. Wiley and F. W. Clark, both of Washington, and other chemists from Harvard and elsewhere. A large number of German-Americans who are interested in the chemical industries will also be present.

**Army Medical School.**—Col. Charles L. Heizmann, president of the United States Army Medical School, Washington, D. C., has made a report of the operations of that school, in which he says that the training of medical officers of the National Guard has so far proved unsatisfactory. He says:

At this session of the school was inaugurated the training of medical officers of the militia of the states in everything pertaining to military medicine as distinct from naval, municipal, state and civil medicine, etc., in order that, under the Dick law, they might become qualified in the emergency of war to perform all the duties of military surgeons of the national army. If my interpretation of the purpose is correct I regret to report that the result was not satisfactory. All these officers were studious and earnest, and all would have contributed to the sanitary and disciplinary education of the organizations to which they belong had they returned to them. The majority, however, developed an intention to use the school as a means of employment in the regular establishment, thus to deprive their states of their services. One succeeded in receiving a commission in the army and two secured contracts. This result is interesting in demonstrating the need of some regulation by which the purpose of the law would be fulfilled in greater part, and at the same time secure for the regular and volunteer forces the best material possible. This last point will be attained by requiring all militia medical officers who have served one year as such and who have been recommended by the governors of their respective states to pass an entrance examination similar to those exacted of line officers by the artillery school and the infantry and cavalry school.

**Yellow Fever News.**—On November 5 only seven cases of yellow fever were under treatment in New Orleans.—The surgeons who worked under Dr. J. H. White during the campaign against yellow fever, on October 25 gave him a farewell



banquet.—During the epidemic several physicians who, by reason of supposed previous attacks of yellow fever considered themselves immune, suffered infection. Consequently there is now some discussion as to immunity.—Georgia raised its quarantine on October 26.—The adjoining towns of Leeville and Côte Blanche have a joint combined population of about 950. Of these, during the six weeks' epidemic 788 had yellow fever and 104 died of the disease.—Governor Blanchard and Mayor Behrman each gave a reception to Surgeon White and his assistants at New Orleans on October 25.—The situation at Pensacola is greatly improved, though one citizen secured a court order forbidding the health officers to fumigate his residence, thus threatening the cessation of all sanitary work.—The unexpended balance of the citizens' fund at New Orleans amounts to a little over \$40,000. Publication of the detailed expenditures has made the *American* and its silly charges of graft look pretty small.—The Vicksburg epidemic is about at an end.

**Plague in Hawaii.**—Passed Assistant Surgeon Hobdy reports that two fatal cases of plague occurred in Waipahu Oahu on October 10. Waipahu is about nine miles from Honolulu; is the headquarters of one of the large sugar plantations, and is populated largely by oriental laborers. These laborers live in camp, reproducing in miniature the customs and conditions of their native land, and it is in one of these camps that five or six cases of plague have occurred during the last eighteen months. The two fatal cases mentioned occurred here in a Korean family, mother and daughter, and the bodies were cremated at the United States quarantine station October 11. The place was thoroughly cleaned up and disinfected by the local board of health, and no other cases have occurred. A third patient went into the Japanese hospital at Honolulu suffering with a supposed simple bubo, which was removed. The operator decided that the case was suspicious, and the bacteriologist to the board of health was called and pronounced the case plague. The patient was removed to the hospital for contagious diseases, where he died October 13, and the body was cremated on the same day. All possible precautions have been taken in cleaning up this man's dwelling and the hospital also. The source of infection could not be traced in any of these cases. A later cablegram from Dr. Hobdy states that another death from plague occurred October 24, and that outgoing quarantine has been instituted.

**Cholera in the Philippines.**—Dr. Heiser, chief quarantine officer, reports that while the total number of cases of cholera for the week ending September 23 is slightly in excess of those reported for the preceding week, yet the situation is not considered serious, and there is every reason to believe that the disease will be stamped out very shortly in the city of Manila. One very disquieting feature is the continued presence of cholera on the watershed of the Maraguina Valley, above the intake of the city water supply. Every effort is being made to guard against pollution, three troops of cavalry being engaged on this work. Dr. Heiser states that considerable anxiety was felt during the early part of that week on account of a report from Nueva Caceres that one case of cholera had made its appearance at that place. During the cholera outbreak of 1902 the disease appeared at Nueva Caceres almost simultaneously with its appearance at Manila, and since travel between Manila and Nueva Caceres during the present outbreak was practically impossible, except that which underwent the regular quarantine of five days, it was not likely that the disease could have been carried from Manila. Should this case have been correctly diagnosed, it would appear to afford additional evidence that the disease is endemic in the Philippines. No additional cases have occurred, however, and this fact will appear to throw considerable doubt on the diagnosis. Cholera in the provinces is still confined to about the same limits. The cases at Taytay have markedly increased until they have now reached a total of 56 cases, with 48 deaths. The total number of cases in the city of Manila since the outbreak has been 195, with 168 deaths. The number of cases in the provinces has been 260, with 213 deaths.

#### CANADA.

**Improved Sanitation for Winnipeg.**—Dr. R. M. Simpson, chairman of the Manitoba board of health, advocates for Winnipeg abolition of all box closets, a visible water supply, and a health officer and board of health independent of all aldermanic influence. By this means, he says, can that city free itself of the annual visitations of typhoid fever.

**Ontario Board of Health.**—The regular quarterly meeting of the Ontario board of health took place during the last week of September, when the prevalence of smallpox and typhoid

fever were discussed. The board has decided to advocate vaccination and revaccination before manhood or womanhood has arrived. For September the number of cases of typhoid fever was 278, with 45 deaths. There were 13 cases of smallpox and 1 death.

**Personal.**—Dr. George W. Ross, Toronto, son of the former premier of Ontario, has been elected pathologist and registrar of the Victoria Park Hospital, London, England.—Dr. Claude Freeman, formerly superintendent of the Hamilton (Ont.) City Hospital, sailed November 4 from San Francisco for Chung-King, China, where he has received a hospital appointment.—Dr. E. S. Turnbull, Branchton, Ont., has received an appointment to the staff of the Protestant Hospital for the Insane at Verdun, Quebec.—Drs. G. D. Johnson and I. Glen Campbell, Vancouver, B. C., have declined to decide for a judge whether two Japanese who are ordered deported for trachoma, are cured or not, although two other Vancouver physicians say they are and two say they are not.—Dr. J. M. Lenny, Winnipeg, has been appointed division surgeon of the new transcontinental railway, the Grand Trunk Pacific.—Dr. F. Montizambert, director general of public health at Ottawa, is making his annual tour of inspection and is at present at Victoria, B. C.—Dr. George D. Porter, Toronto, has gone to Europe for a year's hospital work.

#### FOREIGN.

**Plague in Australia.**—Two fatal cases of plague occurred at Townsville, Queensland, during September; both patients were men between 20 and 30 years of age. Two suspects are under observation.

**Yellow Fever in Mexico.**—During the week ending October 23 Dr. Wilson of the Public Health and Marine-Hospital Service reports that there were three fatal cases of yellow fever in Vera Cruz.

**Typhoid Fever in England.**—During October there was an epidemic of typhoid fever at Basingstoke, and, according to the *Lancet*, the sanitary authorities of the town are being publicly accused of neglect of duty. It is reported that there have been about 128 cases, with 6 deaths.

**Plague and Cholera in India.**—In Bengal, during the week ending September 16, there were 93 cases and 72 deaths from plague. In the whole of India, during the same period, there were 3,939 cases and 2,871 deaths. In Calcutta, during the week ending September 23, there were 38 deaths from cholera and 13 from plague.

**Physicians in City Councils.**—A large proportion of the members of the city council of Paris, France, have been making a visit to London recently, as the guests of the London city council. The French council is presided over by a physician, Dr. Brousse, who has long held the post of president of the municipal council. A few years ago the president of the London municipal council was also a physician, Dr. W. J. Collins, and it is rumored that a physician is to be the next lord mayor of London.

**Dysentery in Japan.**—It is reported that dysentery has been prevalent in various districts in Japan during the present year. *Public Health Reports* states that the total number of cases and deaths from this cause from Jan. 1 to Sept. 5, 1905, with the figures for the corresponding period of last year, are given as follows: 1905, 20,917 cases, 4,002 deaths; 1904, 11,498 cases, 2,165 deaths. Dysentery has been particularly prevalent in the neighborhood of Osaka. In Yokohama cases of dysentery have not been unusually numerous, while Kobe has suffered severely.

**Yellow Fever on the Isthmus.**—According to *Public Health Reports*, no cases of yellow fever have occurred on the Isthmus since October 4, the last reported case having occurred at Matachin on that date. Considering the thorough work of inspection being carried on, it is justifiable to infer that no cases exist at present in Panama, Colon or the Canal Zone. The last case to occur in Cristobal was reported on August 7, since which time over 200 non-immune employes have been transferred to that place from Panama; yet nothing of a suspicious nature has been observed among them. This is looked on as good evidence that no infection exists there. The most rigid inspection of all hotels, lodging houses and places of public resort has failed to reveal anything suspicious. The fumigation of such places at regular intervals continues.

**Koch Returns to Europe.**—Robert Koch has returned to Berlin after nearly a year spent in scientific research in the tropics. It is rumored that he has discovered a new intermediate host for the transmission of a cattle disease prevalent in



Africa, a special kind of tick, but no official communication from him has yet been published. One of our German exchanges comments on his return that Germany and the world owe him a debt of gratitude, as he not only discovered the germ of cholera, but taught effectual measures to stamp it out. The recent epidemic of cholera in Germany has entirely died out, it states, no new cases having been reported for some time. The amazingly small number of cases—only 281 in all, with 90 deaths—and the tranquillity of the populace, are evidences of the progress which civilization owes to Robert Koch.

**Yellow Fever in Guatemala.**—Acting Assistant Surgeon Peters reports from Livingston that a case of yellow fever occurred in a native who went to Livingston from Sarstoon, a small place on the coast. The origin of infection was easily traced, as the patient had been sleeping in a house in which, during July, there had been a number of cases of yellow fever. When informed of the nature of the disease the governor immediately gave orders to have the house fumigated, and unless there are other infected houses which have been overlooked it is not likely that the infection will spread. This is the first case of yellow fever in Livingston since July 30, 1905, therefore the infected mosquitoes have been in the house for about seventy days, as the former cases occurred about July 20, and Dr. Peters has not heard of anyone being sick in the house since then.

**Medical Substitution.**—A physician at Düsseldorf, Germany, Dr. Weisbrod, conducts an establishment for treatment of cutaneous and venereal diseases. He is assisted in his practice by an undergraduate named Rössler, who has been for years in his employ. Weisbrod has been in the habit of entrusting his patients to Rössler, giving him blank prescriptions which the latter filled out for the individual case. As this substitution was not known to the patients, they supposed they were being treated by Dr. Weisbrod instead of by the assistant. When some of the patients learned the facts they accused Dr. Weisbrod of deception and carried the case into the courts. The claim was sustained by the legal proceedings, which imposed two months' imprisonment on Weisbrod and one month's on Rössler. The judge emphasized the deception practiced and especially the point that in venereal diseases such a manner of conducting medical practice might easily do great harm.

**Surgeon Sued for Neglect by Nurse.**—Our German exchanges relate that after a certain surgeon had operated on a patient, he left her in charge of the nurse, with instructions to put hot-water bottles in the bed. The nurse was 21 years old. She used such hot bottles that they burned the patient. When the latter aroused from the anesthesia she found her legs so badly burned that they did not heal for eighteen months, and a nervous affection was left, persisting to date. Damages to the extent of \$1,000 were asked from the surgeon and nurse, and the first court decided in favor of the plaintiff, censuring the surgeon for leaving the patient in charge of such a young nurse. Appeal to a higher court resulted in the acquittal of the surgeon, the judge deciding that, as he was only in the service of the hospital, he was not responsible for the nurse supplied by the superintendent of the hospital for the case. Appeal to another court reversed this decision, the court holding the surgeon responsible, but a final appeal resulted in his acquittal at last as not being responsible for the actions of the nurse, while the full penalty was imposed on the nurse.

**Continental Anglo-American Medical Society.**—The American and English physicians residing in various cities in Europe and northern Africa associated themselves together several years ago for mutual friendship and good-fellowship, and to let the fact become known that there are reliable English-speaking physicians at various points on the continent. Once a year the members gather at Paris for an annual banquet, and the occasion is always a most delightful one. This year the banquet was held on October 5, during the same week as the Tuberculosis Congress, and the attendance reached 60 out of a total membership of 110. A number of noted guests from America and England were present. Dr. Lawrence Flick of Philadelphia responded to the toast, "America," and Sir William Hingston to "Canada." At the business meeting before the banquet, measures were discussed as to the best way of making the society known to the traveling public. The list of members is supplied each year to the consuls on the continent and to the publishers of the guide books and health resort bureaus, and copies are to be sent to leading physicians in England and America. Dr. Leonard Robinson, Paris, is the secretary.

## Pharmacology

### WAR AGAINST FAKE MEDICINES.

#### The Case of "Nature's Health Restorer," as Exposed by the Government.

Very few are aware of the work that has been done by the Postoffice Department, in connection with the chemical laboratory of the Department of Agriculture at Washington, to prevent the people being deceived by patent medicine frauds. Naturally the newspapers do not go out of their way to publish these exposures, and consequently little is heard of what is being done in this regard. On two former occasions we have published reports of such investigations, and this week we give another, using the matter as presented by the *Oil, Paint and Drug Reporter*.

The Postoffice Department, in connection with the general movement designed to bar fraudulent schemes of all kinds from the mails, has just taken action of much importance which marks a distinct advance over all attempts heretofore made to prevent the sale of fake medicines, nostrums, etc., with the aid of extravagant claims made in advertising literature circulated through the mails. A fraud order has been issued against the proprietors of a medicine known as "Nature's Health Restorer" on the ground that the claims of efficacy made are extravagant and untrue and therefore fraudulent. It is conceded by the postal authorities that the remedy is composed of standard drugs with important therapeutic properties, and that it is probably a valuable curative agent in the case of certain of the ailments for which it is advertised, and the fraud order is therefore based on the claims made for the preparation as a cure-all, which claims, the Department declares on the authority of the Department of Agriculture, can not be substantiated. It will be seen at a glance that the action of the Postoffice Department in this case is far more important than that heretofore taken with regard to medicines of any kind, and also that there are hundreds of proprietary remedies now being widely advertised and sold in large quantities that are undoubtedly open to the same objections that are raised against this particular preparation.

Through the courtesy of the Assistant Attorney General for the Postoffice Department, the *Reporter's* correspondent is enabled to present a full abstract of the report in this case, which discloses the methods employed by the department in the investigation and the character of the evidence on which the claims as to this particular remedy have been declared to be false and fraudulent. This abstract is as follows:

"The Western Medical Institute, which is owned and conducted by W. S. Burkhardt, is engaged in the manufacture and sale of a certain medicine which it styles 'Nature's Health Restorer.' The price of the medicine is \$1 for a nine months' treatment. The selling of this medicine is conducted principally, if not entirely, through the medium of the mails.

"The literature used to promote the sale of this medicine is marked Exhibit A, B, C and D. Exhibit A is the circular which accompanies the free sample to the individual. Exhibit B is the circular which accompanies the free sample to the prospective agent. On the reverse side of Exhibit A appears the following:

#### "CURE FOR CERTAIN DISEASES.

"Kidney Disease. Nature's Health Restorer. One treatment will do its duty and cure the most stubborn case.

"Liver Disease. Nature's Health Restorer will cleanse all the little blood vessels and absorbents, and thoroughly restore health.

"Rheumatism. Nature's Health Restorer will cleanse the system of the acid and restore activity.

"Erysipelas. Nature's Health Restorer will cleanse the impurities and humors of the blood, making the skin bright, clear and of a rosy hue.

"Scrofula. Nature's Health Restorer will cure this disease, positively restoring the skin to its normal condition.

"Neuralgia. Nature's Health Restorer, if taken as directed, drives all the pain away in a short space of time.

"Female Complaints. Nature's Health Restorer will cure just as sure as you take it according to directions."

"On Exhibit D is found the following: "It (Nature's Health Restorer) will positively cure rheumatism . . . nervous troubles . . . female complaints, catarrh, liver trouble, kidney disease, . . . or any blood disorders whatever."

"On Exhibit C is found the statement:

"We guarantee Nature's Health Restorer to cure all the diseases named on the treatment."

"A sample of this medicine was submitted to the Department of Agriculture for analysis and report as to whether the same would cure the conditions represented above to cure. I quote as follows from that report:

"This medicine possesses both tonic and laxative properties and is useful in cases of constipation and a condition of the system known as 'run down,' and will naturally alleviate affections resulting from the above conditions, but it will not, as a rule, cure 'kidney disease, liver disease, rheumatism, scrofula, erysipelas, neu-



ralgia" and a host of affectious grouped under "female complaints." It will not cure Bright's disease, indurated liver or tubercular infection of the lymphatic glands. The per cent. (12.39) of ash shows that it is not purely vegetable, as claimed in Exhibit No. 1 (Exhibit A). The advertising tends to deceive and mislead would-be patients.

"Sterling Ruffin, W. P. Carr and D. K. Shute, regularly licensed and practicing physicians of the District of Columbia, state that in their opinion medicines composed of the ingredients of 'Nature's Health Restorer' can not cure rheumatism, erysipelas, scrofula, catarrh, nervous disease, liver disease and blood disorders, as represented by that company. They state further, that, while the medicine might afford the same relief as that given by any laxative, as a rule no cure can be effected.

"From these statements it appears that the representations and pretenses employed by the Western Medical Institute to further the sale of 'Nature's Health Restorer' are untrue, and that the medicine is incapable of acting as the company pretends it will. A full opportunity to combat these statements was given the company, which has filed with the office the statements of Dr. A. L. Guertin of Cincinnati; statement of Dr. J. B. Ragland of Cincinnati; statement of Charles G. Merrell, chemist, of Cincinnati; testimonial of Thomas H. Wright, newspaperman of Cincinnati, and statement of W. A. Leach of Dayton, Ohio, former manager of the Western Medical Institute. Dr. Guertin states that he has been practicing medicine twenty-two years; that he has been acquainted with the medicines of the Western Medical Institute for about ten years; that he knows from experience in the use of these medicines that they are reliable remedies; that he has recommended them in cases of rheumatism, erysipelas, scrofula, catarrh, nervous diseases, female complaints, kidney and liver diseases and blood disorders, and that he knows of his own personal knowledge many cures that have been effected by these remedies. Dr. Ragland states that he has been practicing medicine for thirty-seven years; that he has been familiar with the medicines of this company for a number of years, and has found them to give universal satisfaction to people who have used them, and that they will cure kidney and liver diseases, catarrh and stomach troubles and also such diseases as are brought on by constipation of the bowels. The statement of Mr. Merrell deals with the well-known and recognized properties of the medicines forming the ingredients of 'Nature's Health Restorer.' The testimonial of Mr. Wright is to the effect that it has cured him of kidney, liver and stomach trouble. The statement of Mr. Leach is to the effect that, during the period he was connected with the company, many unsolicited testimonials were received from people who stated they had been cured of rheumatism, kidney trouble, stomach trouble, etc., by the medicine.

"These statements, submitted by the company, were forwarded to the Department of Agriculture for report thereon. The report of the Department reads in part as follows:

"Mr. Charles G. Merrell is a member of the William S. Merrell Chemical Company, which manufactures many forms of medicinal remedies. The points made by him are conceded by us and are well known to the medical profession. The ingredients employed by the Western Medical Institute in the manufacture of 'Nature's Health Restorer' are all recognized by the United States Pharmacopeia, and are known to possess valuable medicinal virtues. The statement that the advertisements of the 'Vegetable Compound,' which is understood to be the same as 'Nature's Health Restorer,' are in no way extravagant is certainly not in accord with the experience of others.

"Mr. Merrell also states that there is present in this medicine 'a proportion of terra alba.' This confirms our statement in a former letter to you to the effect that 'Nature's Health Restorer' is not purely a vegetable compound. Terra alba certainly does not have its origin in vegetables.

"I note what the two physicians say. This is diametrically opposite to the statements submitted to your department on a former date from the most reputable physicians of this city. I would suggest that the standing of these two physicians be investigated.

"Mr. Wright's statement, in my opinion, does not deserve consideration. In the first place, he can not possibly be conversant with the nature of the various diseases he enumerates, and, in the second place, he claims to have been cured of kidney, liver and stomach troubles, and from this he jumps to the conclusion that it 'can be justly recommended to cure . . . sick headache, fever and ague, catarrh and scrofula.' This conclusion is without foundation.

"The affidavit of Mr. W. A. Leach, for several years connected with the Western Medical Institute, embodies business principles, and should be considered in finally summing up this side of the case, but it contains nothing which tends to make any one versed in the art of medicine believe that 'Nature's Health Restorer' will do anything more than any other ordinary laxative medicine.

"In accordance with the suggestion of the Secretary of Agriculture that the statements and standing of the two physicians, A. L. Guertin and J. B. Ragland, be thoroughly investigated, the matter was submitted to the Inspector at Cincinnati. Drs. Ragland and Guertin admitted to the Inspector the falsity of their affidavits and retracted the statements therein made. These statements are, therefore, entitled to no credit in determining the issue whether this medicine will cure the diseases which the company represents that it will cure, and which the Department of Agriculture and Drs. Ruffin, Carr and Shute state it is incapable of curing. Even Drs. Ragland and Guertin, when interviewed by the Inspector, admitted that these medicines are incapable of making the cures represented by the company. It seems that, while this medicine possesses merit as a laxative, with some tonic properties, the representations of the company that it will cure rheumatism, erysipelas, scrofula, catarrh, nervous diseases, neuralgia, female complaints, kidney disease, liver diseases and blood disorders are wholly without warrant, and that the well-known medical properties of the ingredients of 'Nature's Health Restorer' deny its efficacy to cure those conditions. The evidence is therefore clear that the representations quoted above to the effect that this medicine will positively and certainly cure the conditions mentioned are false and fraudulent, and without warrant.

"The following representations also made by this company in the promotion of the sale of this medicine are found to be false and fraudulent:

"We have discovered one of the most valuable treatments that was ever placed within the reach of the public."

"We have labored for many years to discover this peerless remedy."

"The best, safest and most beneficial remedy known to the medical world."

"Its results are marvelous and something that has never been produced by other treatments which have been prepared by physicians known to be the best our country affords."

"Our past experience covering a number of years has taught us to regard with wonder and admiration our phenomenal success."

"These medicines . . . are priceless as the dazzling jewels in the crown of the proudest king on earth."

"Our great remedy."

"These representations, in their entirety, are calculated to create, and do create, in the mind of the reader that the medicine of the Western Medical Institute is a new discovery in the field of medicine; that it possesses unusual and extraordinary efficacy and is far superior to any medicine 'known to the medical world.' As a matter of fact, this medicine is not new, its ingredients are all well known and have been for years and are constantly used by physicians. The above representations are therefore misleading and carry a false idea to the mind of the reader. The company attempts to explain that its claim to the discovery of this medicine lies in the proportions used. The mere fact, however, that this company uses the constituents of this medicine in slightly different proportions from any others is wholly insufficient to warrant the extravagant statements noted above, and does not remove from them their misleading and deceptive character.

"The evidence in this case satisfies me that the pretenses and representations used by this company to promote the sale of this medicine are false and fraudulent, and calculated to deceive, and that the medicine will not cure the diseases that the company represents it will cure. It follows that the scheme is one devised for obtaining money through the mails on pretenses, representations and promises which are false and fraudulent within the meaning of Sections 3929 and 4041 of the Revised Statutes. I therefore recommend that fraud order be issued against the Western Medical Institute at Cincinnati."

### Wine of Cardui.

Prof. Henry Leffmann of Philadelphia writes us that on reading the remarks of Mr. Patten of the Proprietary Association, and of the Chattanooga Medicine Company, as published in THE JOURNAL two weeks ago, he decided that it would be worth while to examine a bottle of the "Wine of Cardui" put out by the companies with which Mr. Patten is connected. He says: "I bought a bottle to-day. I find that the article contains considerable alcohol. It is, therefore, of the type of 'booze' that Mr. Patten excludes from the list of true proprietaries. The label states 'this pure wine is a simple vegetable extract, without intoxicating qualities, and has proved to be the most astonishing tonic for women known to medical science.'"

"It is a turbid liquid of a dirty brownish tint, with an odor partly alcoholic and aromatic, partly disagreeable. The taste is markedly alcoholic and also nauseous. The residue on evaporation is about 7 per cent. A tablespoonful heated to boiling in a test tube gives enough alcohol promptly to produce a flame five inches long. There is no question, therefore, that this is an intoxicant in the scientific and practical sense of that term."

### Prescribing Nostrums in Indiana.

A reference to our Medicolegal Department this week will show that in Indiana they have a law providing that anyone who prescribes a drug or medicine, the true nature and composition of which he does not make known, but avows to be a secret remedy, thereby endangering the life of another person, is liable to a fine of not less than \$30 nor more than \$100, and to be imprisoned in the county jail for not less than sixty days nor more than six months. If this law means all that it appears to mean, and if it is enforced, it will have a tendency to check nostrum prescribing in Indiana.

## Association News

### NEW MEMBERS.

List of new members of the American Medical Association for the month of October:

ALABAMA.  
Eslinger, L. P., New Market.  
Lindsey, J. M., Hightower.

ARIZONA.  
Greene, W. A., Douglas.  
Melick, P. A., Williams.

ARKANSAS.  
Amls, J. C., Ft. Smith.  
Evans, E. L., Harrison.  
Stepheus, G. K., Newport.  
Stuart, J. M., McGehee.  
Thompson, E. M., Ashvale.

Tribble, A. H., Hot Springs.  
Williams, A. U., Hot Springs.

### CALIFORNIA.

Beck, H. M., San Francisco.  
Dodge, William, Los Angeles.  
Kearney, Elizabeth F., Los Angeles.  
McNab, T. R., Los Angeles.  
Sutherland, H. M., Oakland.  
Toner, J. M., San Francisco.  
Van Tassell, F. H., Sonora.  
Von Adelung, E., Oakland.  
Wheeler, J., Sacramento.



## COLORADO.

Babcock, M. L., Julesburg.  
Christy, G. H., Lafayette.  
Dodds, E. S., Pueblo.  
Lucas, W., Segunda.  
Rice, D. H., Colorado Springs.  
LeRossignol, W. J., Rifle.

## CONNECTICUT.

Brackett, A. S., Bristol.  
Ingalls, P. H., Hartford.  
Kilbourn, C. L., New Haven.  
Rose, J. H., Hartford.  
Smith, F. L., Stafford Springs.

## DISTRICT OF COLUMBIA.

Carmichael, R. B., Washington.  
Chamberlin, F. T., Washington.  
Davis, C. L., Washington.  
Harrington, F. E., Washington.  
Hodges, J. W., Washington.

## IDAHO.

Gaignord, George, Lookout.  
Steely, O. B., Pocatello.

## ILLINOIS.

Bernhardt, A. P., Chicago.  
Bertling, A. E., Chicago.  
Carlstein, J. A., Chicago.  
Gould, Henrietta, Chicago.  
Harmison, F. B., Chicago.  
Huntington, M. L., Moline.  
Morgan, C. E., Humboldt.  
Nadig, A. T., Elizabeth.  
Schalek, A., Chicago.  
Scholes, P. S., Canton.  
Shafer, H. O., Chicago.  
Sherman, W. P., Aurora.  
Simon, L. S., Chicago.  
Smith, R. O., Pittsfield.  
White, H. O., Chicago.  
Yong, J. E., Chicago.

## INDIANA.

Casebeer, J. B., Auburn.  
Chamberlain, Cameron, Indianapolis.  
Erdman, B., Indianapolis.  
Frlsz, J. A., Terre Haute.  
Hughes, W. L., Indiana Harbor.  
Linthicum, E., Evansville.  
Ramsay, J. R., Vincennes.  
Sharp, W. N., Indianapolis.  
Snyder, E. R., Troy.  
Tomlin, W. S., Indianapolis.

## IOWA.

Alderson, James, Dubuque.  
Clingan, Chas. E., Sioux City.  
McConkie, W. A., Cedar Rapids.  
Murphy, J. J., Cedar Rapids.  
Pease, Herbert, Slater.  
Purcell, B. E., Iowa Falls.  
Sibley, S. E., Sioux City.

## KANSAS.

Armstrong, J. B., Portis.  
Ball, James, Melvern.  
Blasdel, G. A., Iiaven.  
Brown, J. C., Wichita.  
Carter, L. A., Randall.  
Carter, W. W., Wathena.  
Cindas, A. L., Minneapolis.  
Flick, Flora J., Holton.  
Fonks, C. A., Kansas City.  
Fnnk, C. C., Smith Center.  
Graves, L. G., Atwood.  
Gsell, J. F., Wichita.  
Hagan, Martin, Wichita.  
Hoffman, J. Z., Wichita.  
Howell, D. W., Havana.  
Johnson, A. C., New Murdock.  
Little, Chas. F., Manhattan.  
McCluggage, J. R., Douglas.  
McGaubey, J. H., White Cloud.  
McGnire, J. W., Neodesha.  
Melugin, J. N., Atwood.  
Moorehead, J. L., Neodesha.  
O'Flyng, F. S., Seward.  
Reitzel, W. M., Cleburne.  
Ruggles, Chas. A., Stafford.  
Speirs, G. O., Ellenwood.

## KENTUCKY.

Brosheer, C. K., Middlesboro.  
Duvall, H. A., Louisville.  
Wood, Jno. K., Lakeland.

## LOUISIANA.

Edgerton, E. O., Gahagan.  
Slaughter, J. H., Monroe.

## MARYLAND.

Amberg, Samuel, Baltimore.  
Jennes, J. H., Rising Sun.  
Seegar, K. B. E., Baltimore.  
Slemmons, J. M., Baltimore.

## MASSACHUSETTS.

Alexander, Clara J., Boston.  
Atwood, F. S., Salem.  
Binney, H., Boston.  
Bolles, W. P., Boston.  
Bowker, E. M., Brookline.

Chapman, H. J., Everett.  
Cholerton, H., Somerville.  
Cntts, H. M., Brookline.  
Guild, T. E., Mattapan.  
Fay, William E., Boston.  
Flagg, E., Boston.  
Galvin, Wm., Blackinton.  
Hartwell, J. B., Boston.  
Morris, S. J., Rivers.  
O'Keefe, M. W., Boston.  
Peck, A. F., Spencer.  
Stearns, Robert T., New Bedford.

## MICHIGAN.

Eccles, R. M., Blissfield.  
Jones, F. A., Lansing.  
Langford, T. S., Jackson.  
McNamara, F. W., Detroit.  
Jackola, John, Hancock.  
Parnall, C. G., Ann Arbor.  
Van Riper, P., Beacon.  
Webster, E. H., Sault Ste. Marie.

## MINNESOTA.

Kjelland, J. S., Crookston.  
Linnemann, N. L., Duluth.  
Nippert, H. T., St. Paul.

## MISSISSIPPI.

Britt, W. L., Pochonton.  
Tabor, J. A., Scranton.  
Waldrup, M. W., Laurel.

## MISSOURI.

Abrams, W. E., Kansas City.  
Adair, T. W., Archie.  
Bardenheier, F. G. A., St. Louis.  
Bribach, B., St. Louis.  
Brockman, H. H., Elaoon.  
Bronson, T. Ira, Sedalia.  
Carpenter, E. H., Helena.  
Clapp, C. B., Moberly.  
Cotton, T. W., Van Buren.  
Gellhorn, Geo., St. Louis.  
Harris, B. W., Georgetown.  
Laning, J. H., Kansas City.  
Ormsbee, J. L., Springfield.  
Miller, W. M., Columbia.  
Porter, H. L., Seneca.  
Ramey, R. D., Garden City.  
Shelton, J. C., New Hartford.  
Smiley, F. R., Boonville.

## NEBRASKA.

Jensen, Frank, Newman Grove.  
Peter, F. J., Omaha.

## NEVADA.

Burnett, W. F., Eureka.

## NEW JERSEY.

Baker, C. F., Newark.  
Davidson, L. L., Newark.  
Kirkman, L. G., Newark.

## NEW YORK.

Christie, A. C., Clymer.  
Clarke, A. V., New York.  
Payne, P. J., Chautauqua.  
Sprague, S. E., New York.  
Swift, E. E., New York.

## NORTH CAROLINA.

Brawley, R. V., Salisbury.  
Burrus, J. T., High Point.  
Ferguson, K. M., Southern Pines.  
McKay, J. L., King's Mountain.  
West, R. M., Salisbury.

## OHIO.

Bell, A. P., Zanesville.  
Brnbaker, P. R., Bucyrus.  
Gibbon, H. B., Tiffin.  
Goldsmith, M. A., Cleveland.  
Jenkins, A. A., Cleveland.  
Keelor, T. E., Lebanon.  
Lee, J. F., Mt. Vernon.  
Linley, Thos., Cleveland.  
MacGregor, Alex., Springfield.  
Maschke, A. S., Cleveland.  
Mueller, Otto, Cleveland.  
Murray, F. M., Delaware.  
Oakes, I. N., No. Ridgeville.  
Rayl, W. L., Cleveland.  
Scheerer, Frank, Cincinnati.  
Scully, A. P., Cleveland.  
Smith, A. H., Marietta.  
Thomson, F. S., Dayton.  
Ulmer, C. A., Bucyrus.  
Walker, T. W., Steubenville.  
Weitz, G. J., Cleveland.  
Woodworth, J. B., Delaware.  
Yarian, N. C., Cleveland.

## OKLAHOMA TERRITORY.

Burnes, E. J., Harrah.  
Edens, M. H., Verden.

## PENNSYLVANIA.

Ackerman, J., Erie.  
Bacon, H. A., Philadelphia.  
Bair, G. E., Braddox.  
Doran, C. F., Phoenixville.  
Ferris, F. S., Philadelphia.  
Headland, M. E., Butler.

Hershey, J. D., Manheim.  
Hunter, Andrew, McKeesport.  
Kennedy, Jas. S., Chambersburg.  
Longnecker, J., Philadelphia.  
Miller, E. M., Beavertown.  
Schoch, L. E., Shamokin.  
Shank, O. J., Windber.  
Taylor, C. E., Irwin.  
Thompson, J. C., Franklin.  
Wolf, Jacob, Allegheny.

## PORTO RICO.

King, W. W., Aibonito.

## RHODE ISLAND.

Sullivan, M. H., Newport.

## SOUTH CAROLINA.

Dorsey, R. M., Spartanburg.  
Mauldin, W. L., Jr., Greenville.  
Steadly, B. B., Gaffney.  
Williams, C. F., Columbia.

## SOUTH DAKOTA.

Perkins, E. L., Sioux Falls.

## TENNESSEE.

Huddleston, J. J., Memphis.

Kern, A. G., Knoxville.  
MacKenzie, C. F., Nashville.

## TEXAS.

Redmond, Henry, Corpus Christi.  
Windham, William C., Shelbyville.

## UTAH.

Brownfield, R. R., Vernal.

## VIRGINIA.

Merchant, W. F., Manchester.

## WASHINGTON.

Blair, H., Elma.

## WISCONSIN.

Calvey, P. J., N. Fond du Lac.  
Campbell, A. D., Richland Center.  
Benson, Gideon, Richland Center.  
Holtz, H. M., Beaver Dam.  
McKitttrick, P., Thorp.  
Munger, S. C., Barneveld.  
Perry, Gentz, Amery.  
Voight, O. P., Gillett.  
Wells, J. H., Genoa.

*Marriages*

OTTO G. SMERSH, M.D., Dodge, Neb., to Miss Anna Longarre of Omaha, October 28.

CHARLES W. BONYNGE, M.D., to Miss Juliet Phelps, both of Los Angeles, October 24.

SAMUEL P. FREE, M.D., Perry, Iowa, to Miss Flora Allen of Earlham, Iowa, October 25.

J. B. PERSON, M.D., Selma, N. C., to Miss Hattie Moseley of Kinston, N. C., October 25.

SAMUEL R. UPHAM, M.D., to Miss Marguerite Bailey, both of Claremont, N. H., November 7.

HARRY N. ANDERSON, M.D., to Miss Margaret Holmes, both of Scranton, Iowa, October 18.

WILLIAM HARRISON BALLARD, M.D., Los Angeles, Cal., to Miss Louise Baker, October 27.

JAMES W. DALBEY, M.D., to Mrs. Fannie Sehneider, both of Cedar Rapids, Iowa, October 30.

MARVIN PENCE, M.D., to Miss Elizabeth Hoover, both of Nicholasville, Ky., November 2.

AUGUST KNOEFEL, M.D., Linton, Ind., to Miss Minnie Kierner of New Albany, Ind., October 25.

WILLIAM H. SHAVER, M.D., Madelia, Minn., to Mrs. Olive J. Reimstad, Minneapolis, October 25.

THOMAS CHARLES BUXTON, M.D., Decatur, Ill., to Miss Anna Strope of Oreana, Ill., November 4.

FRED E. CLÖW, M.D., Wolfboro, N. H., to Miss Jessie F. Beless of Waltham, Mass., October 25.

L. NAPOLEON BOSTON, M.D., Philadelphia, to Miss Caroline Crandall of Westerly, R. I., October 28.

DELMAR SMITHERS, M.D., Chesapeake City, Md., to Miss Annie Young, at Belair, Md., November 1.

E. M. HOLMES, M.D., Readyville, Tenn., to Miss Elizabeth Vaughan of Shelbyville, Tenn., October 18.

FRED B. JEWETT, M.D., Howard, R. I., to Miss Caroline Maloon of East Machias, Maine, August 22.

CARL CLIFFORD WHITE, M.D., Mathews, Va., to Miss Emma Lee Smith of Charlottesville, Va., October 26.

CHARLES E. PATTERSON, M.D., Grand Rapids, Mich., to Miss Helen G. Moore, at Denver, Colo., October 24.

LOUIS D. MEAD, M.D., Byron Hot Springs, Cal., to Miss Charlotte Lanneau of New York City, October 31.

HERBERT MCKAY COULTER, M.D., Azusa, Cal., to Miss Edith Sylburn Isham of Pasadena, Cal., October 25.

EDWARD FRANKLIN LOVEJOY, M.D., to Miss Edith Marie Fisher, both of Chattanooga, Tenn., October 25.

JOHN FRANKLIN CRAWFORD, M.D., Hampton, Ky., to Miss Annie Patton Bridges of Louisville, October 31.

FRANK H. EDWARDS, M.D., to Mrs. Clara Caton Sirrine, both of Evanston, Ill., in Waukegan, Ill., October 28.

WILLIAM FAYETTE OWSLEY, M.D., Burkesville, Ky., to Miss Anne Pearl Owings of Lexington, Ky., October 25.

LIEUTENANT GEORGE F. ADAIR, assistant surgeon, United States Army, to Miss Pearle Parke of Chicago, November 8.

J. R. SUTTON, M.D., Elk Park, N. C., to Miss Margarite Turner of Rutherford, N. C., at Elizabethton, Tenn., October 25.



**TIMOTHY G. HARRIMAN, M.D.**, Hampton, Iowa, to Miss Naney Masters of Long Beach, Cal., at Council Bluffs, Iowa, October 27.

**EUGENE H. MULLAN, M.D.**, assistant surgeon, United States Public Health and Marine-Hospital Service, to Miss Eleanor V. Gildea, at Baltimore, November 4.

## Deaths

**John R. Buist, M.D.** New York University, New York City, 1857, a member of the American Medical Association, one of the oldest and most prominent practitioners of Nashville, Tenn., and closely identified with the history of that city; for many years a member of the local and State Board of Health, regimental and brigade surgeon in the Confederate service during the Civil War, died at his home in Nashville, October 24, eight weeks after an operation performed in Rochester, Minn., aged 71. His last work was a paper on water filtration based on a study of the plant at St. Louis, which was submitted to the board of health the day before he died. In addition to his active interest in matters medical, he kept up with the times in public affairs, political, social and economic. In a special message to the city council Mayor Morris announced the death of Dr. Buist, and recommended that the council should make some recognition of his life and valuable public service.

**Everett Van Buren, M.D.** Rush Medical College, Chicago, 1869, formerly of Hooper, Dodge County, Neb., surgeon of the Eighth United States Colored Heavy Artillery, of the One Hundred and Forty-seventh Illinois Volunteer Infantry, and later in charge of the First Brigade Hospital, Second Division of the Army of the Cumberland in the Civil War; for six years a member of the Fremont (Neb.) city council; once vice-president of the Nebraska State Medical Society; twice coroner of Dodge County, Neb., and president of the city council of Hooper, died at the Soldiers' Home, Grand Island, Neb., October 26.

**James Duane Featherstonehaugh, M.D.** College of Physicians and Surgeons in the City of New York, 1870, member of the Medical Society of the State of New York, and member and once president of the Albany County Medical Society; sometime health officer and member of the board of education of Cohoes, N. Y., and surgeon to the Cohoes Hospital, died at his home in that city October 21, after an illness of a year, from malignant disease of the prostate gland, aged 60. The physicians of Cohoes, and the Albany County Medical Society, at special meetings, passed resolutions of eulogy and regard.

**Edward Shelby Rauch, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1904, one of the most promising young physicians of Vicksburg, Miss., died at his rooms in the Vicksburg Infirmary from yellow fever October 20, aged 23. When yellow fever broke out at Hamburg, Miss., Dr. Rauch, believing himself immune, as he had had the disease in 1897, volunteered to aid the stricken community. After a short time, however, he was taken down with the disease, whose ravages he was not able to withstand.

**Alfred Holmes Simpson, M.D.** Manitoba Medical College, Winnipeg, 1894, chairman of the provincial board of health of Manitoba and professor of materia medica and therapeutics in Manitoba Medical College until compelled to resign by reason of ill-health, died at his home in Salmon Arm, B. C., October 25, aged 36.

**Albert E. Warren, M.D.** University of Buffalo (N. Y.) Medical Department, 1891, of Youngstown, Ohio, while despondent and suffering from renal lithiasis, for which he had undergone two operations, shot and killed himself at his father's house in Buffalo, N. Y., October 6, aged 36.

**Samuel Y. Thompson, M.D.** Long Island College Hospital, Brooklyn, N. Y., 1866, several times Burgess of Danville, Pa., and associate judge of the Montour County Court, died suddenly at his home in Danville while writing a prescription, October 28, from heart disease, aged 62.

**William C. Arous, M.D.** Cincinnati, 1874, of Hudson, Wis., arrested at Colorado Springs, and under sentence of imprisonment for six years in the Minnesota state penitentiary, Stillwater, for bigamy and grand larceny, shot and killed himself in the jail at Aitkin, Minn., October 21.

**Charles Edward Dever, M.D.** University of Maryland School of Medicine, Baltimore, 1891, a member of the Massachusetts Medical Society and of the Lynn Medical Society, died at his home in Lynn, Mass., October 24, from cerebral hemorrhage, after an illness of thirty-six hours, aged 43.

**John A. Richardson, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1884, of Ben Franklin, Texas, was shot and instantly killed in an altercation with a restaurant keeper in Paris, Texas, October 25, aged 45.

**Orrin Witter, M.D.** College of Physicians and Surgeons in the City of New York, 1859, representative in 1875 from his town in the General Assembly, died suddenly at his home in Chaplin, Conn., from heart disease, October 13, aged 69.

**William Titus, M.D.** Jefferson Medical College, Philadelphia, sometime health officer of Newark, N. J., and local surgeon for the Lackawanna Railroad, died at his home in Newark from cerebral hemorrhage October 28, aged 60.

**Francena E. Porter, M.D.** Woman's Medical College of Pennsylvania, Philadelphia, 1864, formerly of Worcester, Mass., died at her home in Reading Center, Mass., October 22, from heart disease, after an illness of eight years.

**J. Frank Williams, M.D.** Jefferson Medical College, Philadelphia, 1888, formerly of Pittsburg and Greensburg, Pa., but for three years a resident of Detroit, was struck by a train and killed near Baden, Pa., September 30, aged 42.

**Anne Ceredwen Rees, M.D.** Woman's Medical College of the New York Infirmary, New York City, 1898, died at her home in Union Hill, Weehawken, N. J., October 24, from double lobar pneumonia, after a short illness, aged 29.

**Eleanor Chestnut, M.D.** Northwestern University Woman's Medical School, Chicago, 1893, of Chicago, a missionary of the Presbyterian board in Lienchow, China, was murdered at that place October 28 by a mob in a riot.

**Zachary T. Young, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1872, was shot and killed in a pistol duel with a son of a fellow-practitioner, at his home in Ville Platte, La., October 5, aged 56.

**Robert J. Cummer, M.D.** Cleveland Medical College Medical Department of Western Reserve University, 1880, died at his home in Cleveland October 22 from typhoid fever, after an illness of two weeks, aged 52.

**George W. Emerson, M.D.** Bellevue Hospital Medical College, New York City, 1864, died at his home in Webster, Mass., October 9, from degenerative spinal disease, after an illness of five years, aged 74.

**James E. Miller, M.D.** Bellevue Hospital Medical College, New York City, 1885, of Fort Wayne, Ind., died in St. Vincent's Hospital, Indianapolis, October 30, two days after an operation, aged 50.

**James Gates Adams, M.D.** University of Louisville (Ky.) Medical Department, 1882, died at his home in El Paso, Texas, October 22, from cerebral hemorrhage, after an illness of four days, aged 71.

**Arthur Meriden Patterson, M.D.** Ohio, 1895, of Westerville, Ohio, died at his father's home near Africa, Ohio, October 26, from laryngeal tuberculosis, after an illness of two years, aged 37.

**William A. Blakeley, M.D.** St. Louis College of Physicians and Surgeons, 1896, died at his home in Higginsville, Mo., October 18, from typhoid fever, after an illness of five weeks.

**Thomas W. Royston, M.D.** St. Louis Medical College, 1872, died at his home in Round Rock, Texas, October 25, from kidney disease, after a prolonged illness, aged 92.

**Conrad Henry Disse, M.D.** University of Berlin, Germany, 1853, died at his home in Nanvoo, Ill., October 21, from senile debility, after an illness of two weeks, aged 78.

**Noah K. Williams, M.D.** Kentucky School of Medicine, Louisville, 1889, died recently at his home in Catlettsburg, Ky., from cerebral hemorrhage and was buried October 3.

**Henry Clarke Walton, M.D.** Medical College of Georgia, Augusta, 1875, died at his home at Metasville, Ga., October 21, after a short illness, aged 52.

**James W. Chesney, M.D.** College of Physicians and Surgeons, Baltimore, 1884, died at his home in Fairmont, W. Va., October 28, from angina pectoris.

**Thomas Arthur Wright, M.D.** Cincinnati, 1867, died suddenly at his home in Americus, Ky., September 28, from cerebral hemorrhage, aged 64.

**William J. Ward, M.D.** Missouri, 1876, died at his home in Gilman, Iowa, October 4, from gastric ulcer, after an illness of six days, aged 59.

**S. Gertrude Norris, M.D.** Cincinnati, 1891, died at her home in Lansing, Mich., October 18, from nephritis, aged 53.

**John Bryan, M.D.** Ohio, 1866, died at his home in Beaver Falls, Pa., October 17, from senile debility, aged 78.



Samuel H. Wright, M.D. Geneva (N. Y.) Medical College, 1868, of Jerusalem, N. Y., died at Syracuse, N. Y., October 7, aged 80.

Franklin Shreve, M.D. Cincinnati, 1881, died at his home in Sioux Falls, S. D., October 23, after a long illness.

#### Deaths Abroad.

H. Schaper, M.D., for twelve years the medical superintendent of the great Berlin Charité Hospital, died October 1, aged 64. He was an army medical officer of high rank and won great distinction by his able administration of the hospital, and as member of the Imperial Board of Health, and chairman of the testing department of the pure food commission. His experience at the Charité rendered him an authority on hospital and sanitarium construction, so that his advice was sought in nearly every undertaking of the kind. He resigned his position last year on account of ill health.

R. Ruge, M.D., member of the German privy council, died at Berlin October 17, aged 71. He had long been a pioneer in matters affecting the organization of the profession, and for several years had served as a member of the city council.

E. Burckhardt, M.D., professor of surgery at Basle, died October 1, aged 52. He was an enthusiastic student of urology in relation to surgery, and published numerous works on this subject.

K. Grunert, M.D., professor of otology at Halle, died September 23, aged 38.

### Miscellany

**Protest Against Declaration of Diseases by Physician.**—Nigay, in a signed editorial in the *Jour. de Méd. de Paris*, reviews the statistics of the notifiable diseases in France. They show that the compulsory declaration is too often a farce. The number of known cases far exceeds the number declared to the authorities. Only 37 cases of puerperal infection and 44 cases of purulent ophthalmia were declared by physicians throughout France during 1904. He proposes a radical reform—abolishing any specific declaration by the physician, but imposing on him the responsibility for all disinfections. Professional secrecy should be respected and its scope broadened, but the disinfection service should be placed entirely in his charge, to apply or not for special cases as he saw fit, doing the disinfecting himself or having it done by subordinates. The only record that he would have to turn in to the authorities would be that of the number of disinfections done day by day.

**Cold Applications Better than Alcohol as Cardiac Stimulant.**—The cold compress applied over the cardiac area of the chest may well replace alcohol as a heart tonic. The thing necessary to encourage the heart's action is not mere relaxation of the peripheral vessels, but, as Winternitz has shown, increased activity of the peripheral circulation in the skin, muscles and elsewhere. Alcohol paralyzes the vasoconstrictors, and so dilates the small vessels and lessens the resistance to the heart action; at the same time it lessens the energy of the nerve centers which control the heart, diminishes the power of the heart muscles, and lessens that rhythmical activity of the small vessels whereby the circulation is so efficiently aided at that portion of the blood circuit most remote from the heart. A cold application to that portion of the chest overlying the heart reflexly stimulates and energizes the heart through the cardiac nerves. This reflex action is not confined to the heart muscle; the stimulation of the activity of the cardiac vessels improves the circulation through the heart structure, refreshing and energizing it in the same manner in which a voluntary muscle is energized by a cold application, as is well shown by the ergograph.—Kellogg in *Lancet-Clinic*.

**Teaching Physical Curative Measures at Medical Colleges.**—Prof. W. Winternitz of Vienna contributed an article on this subject to the Congress of Physiotherapy, held at Liège last summer. He urges that physiotherapy should be an obligatory course in medical colleges, and that it should be taught clinically, not theoretically alone nor practically alone, but at the bedside, in a well-equipped clinic. The nutritional disturbance presented by the patient should first be exactly differen-

tiated and the deviations from normal fully determined. The more exactly the nutritional disturbance is understood the clearer the indications for treatment. The test of its success will be the therapeutic experiment. The plan of treatment outlined to the students is then applied under their eyes. Successes and failures are watched, and the action of the physical measures on the innervation, circulation, blood pressure, metabolism, secretions and excretions, increase or decrease in oxidations, elimination of toxins and of morbid products, changes in the morphology and chemistry of the blood, etc., are demonstrated before the eyes of the students as the necessary consequences of the correctly dosed thermic and mechanical interventions. The young physician will then become familiar with the mode of application and of the action of these powerful curative forces, and the limitations of their field of action. The professor should be a trained clinician, convinced of the value of physiotherapy, and one semester of the obligatory internal clinic should include a course devoted to physical therapeutics.

**Massage by the Blind.**—In a paper read before the New York Academy of Medicine, Dr. M. B. Cotter said, according to the *Medical News*, that for several centuries the Japanese have employed blind persons to give massage and with great success. The result of this system is that massage is very well done at a comparatively cheap rate in Japan, and, as a consequence, even the poor have the opportunity to take advantage of its curative effects. The government protects the blind in their avocation from being imposed on, and thus a class of people that otherwise would be a charge on the community becomes a very useful and self-supporting element. It is easy to understand that a blind masseur or masseuse would be more acceptable for people of delicate sensibilities than a seeing one. As a rule, the blind themselves enjoy better health as a result of the exercise they obtain, and as a consequence of the interest in life aroused by a constant money-making occupation. The only place in Europe in which massage is extensively carried out by the blind is in St. Petersburg. The first teacher of it was a medical student, who became blind just before graduating. There the experience is that the blind learn rapidly, especially if the pupils are selected with the definite idea of taking only those who show special talent. It is considered that two years are needed for the proper study of anatomy and physiology in connection with massage. After graduation the students are able to find a reasonable amount of work and make a successful living. In Sweden, the home of massage, an attempt to teach the blind failed. The reason for this was said to be the absence of books with raised letters, out of which principles of anatomy and physiology might be learned. In France the blind have been used, not extensively, yet with some success. In Brussels there is a free school for the teaching of the practice of massage for the blind. In Denmark a ten-months' course is considered sufficient to prepare the blind for massage, and a reasonable amount of success has been met with in the teaching. At Brünn, in Austria, there is a successful school for the teaching of massage to the blind. The only place in Germany where a special effort has been made in this direction is at Leipsig, and here a certain amount of success has been obtained. In Philadelphia excellent work has been done in connection with the Pennsylvania Institution for the Blind at Overbrook. About a dozen graduates are making a good living out of the profession of masseur. In this country very few of the blind are self-supporting. A certain allowance is made to all blind persons by many of the states in certain cities. If this occupation could be opened up to them, a great benefit would be conferred on them, and, at the same time, massage would be made available for many more patients than at present. Dr. Charles H. Lewis said that it not infrequently happens that patients who need massage do not have it because of the expense attached to it. Many patients, for example, convalescent from typhoid fever, would reacquire their muscular energy much sooner if given massage. Few use it, however, because of the expense attached to it, in considering the large bill for medical attendance that is likely to accumulate. For many other conditions in which there is relaxation of muscular tissue, as after intestinal toxemias.



massage would add to the speed of recovery. In such conditions as pseudoparesis and in the various forms of hysterical paralysis massage would often be of the very greatest service. Always it is the expense attached to it that constitutes the main objection against its employment.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

### CURES AT LOURDES.

\_\_\_\_\_, Oct. 26, 1905.  
To the Editor:—Accounts of "Cures at Lourdes" are printed in Catholic papers, the *True Voice*, Omaha, *Catholic Standard and Times*, Philadelphia, and four or five times a year the same wonderful cures are printed. Is this a pious fraud or is it printed as facts, and do Catholics, as a rule, believe in such reports? Y.

ANSWER: We believe that many, if not the majority of intelligent Catholics estimate the cures of Lourdes very much as most intelligent Protestants do those of the numerous faith cures which have thrived from time to time in Protestant communities. Of course there is a certain class of people in all communions who accept them as implicitly as do the Dowietes, Eddyites, etc., the cures they report. We do not believe, however, it is an essential matter of faith, outside of these sects, to believe in modern miraculous cures of organic physical disease. The rationale of many cures in other than organic diseases is fairly well understood. The action of the Paris specialists in declining to give an opinion does not seem to us like a recognition of a supernatural fact, but rather as a declination to subject themselves to the possibility of unprofitable and annoying controversy.

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending November 4:

Chidester, Walter C., asst. surg., granted leave of absence for ten days.

Woodall, Wm. P., asst.-surgeon, granted thirty days' sick leave. Dutcher, Basil H., asst.-surg., ordered to sail for Philippine service, Jan. 5, 1906, instead of Dec. 5, 1905; granted leave of absence to include December 29.

Raymond, Thomas U., surgeon, leave of absence granted for two months.

Cowper, Harold W., asst. surg., sick leave of absence extended one month.

Robbins, Chandler P., asst.-surgeon, leave of absence granted for one month, ten days.

Williams, Allie W., asst.-surgeon, leave of absence granted for one month, ten days.

Crosby, Wm. D., surgeon, granted two months' leave of absence, to take effect on being relieved from duty in the Philippines Division, and is authorized to visit Japan.

Raymond, Thomas U., surgeon, left Fort Assiniboine, Mont., on ten days' leave.

Crampton, Louis W., deputy surgeon general, granted fifteen days' leave of absence.

Lambert, Samuel E., asst.-surgeon, granted three months' leave on being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

Morse, Chas. F., asst.-surgeon, granted three months' leave of absence on being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

White, J. Samuel, contract surgeon, left Fort Snelling, Minn., on leave of absence for two months.

Hays, Melville A., contract surgeon, left Vancouver Barracks, Wash., for temporary duty at Fort Wright, Wash.

Warwick, Clarence A., contract surgeon, arrived at Fort Mott, N. J., for duty.

Wythe, Stephen, contract surgeon, order for Philippine service revoked.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending November 4:

Huntington, E. O., surgeon, detached from the Navy Department and ordered home to wait orders.

Campbell, R. A., acting asst.-surgeon, detached from duty with Naval Recruiting Party No. 5, November 13, and ordered to the Naval Recruiting Rendezvous, Cincinnati.

Angony, G. L., surgeon, commissioned surgeon with rank of lieutenant commander from April 24, 1905.

Munson, F. M., asst.-surgeon, ordered to the *Lancaster*.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 1:

Carmichael, D. A., surgeon, granted leave of absence for seven days from November 14.

Wasdin, E., surgeon, to rejoin station at Memphis, Tenn.

Magruder, G. M., surgeon, to appear before a board for physical examination, November 11, under the provisions of Paragraph 50 of the Regulations.

Guiteras, G. M., surgeon, to rejoin station at Cairo, Ill.

Gardner, C. H., P. A. surgeon, granted leave of absence for one month from November 1.

Wickes, H. W., P. A. surgeon, granted extension of leave of absence for two days, from October 28.

Greene, J. B., P. A. surgeon, to rejoin station at Fort Stanton, N. M.

Lavinder, C. H., P. A. surgeon, to rejoin station at Stapleton, N. Y.

Lavinder, C. H., P. A. surgeon, granted leave of absence for four days en route from New Orleans to New York.

Lavinder, C. H., P. A. surgeon, to report at Bureau en route to New York.

McMullen, John, P. A. surgeon, to proceed to New Orleans, and report to Surgeon J. H. White for special temporary duty.

McMullen John, P. A. surgeon, to rejoin station at Ellis Island, N. Y.

Fricks, L. D., P. A. surgeon, relieved from duty at Castries, St. Lucia, and directed to proceed to New York, N. Y., reporting arrival by wire.

Glover, M. W., P. A. surgeon, leave of absence granted him for three days from October 15, amended to read two days only.

Ward, W. K., asst.-surgeon, relieved from duty at Bridgetown, Barbadoes, and directed to proceed to New York, reporting arrival by wire.

Collins, George L., asst.-surgeon, granted leave of absence for sixteen days from October 31.

Ebert, H. G., to rejoin station at Fort Stanton, N. M.

Smith, F. C., asst.-surgeon, to rejoin station at Detroit.

Steger, E. M., asst.-surgeon, to rejoin station at Philadelphia.

Ashford, F. A., asst.-surgeon, to rejoin station at Ellis Island, N. Y., reporting at bureau en route.

McKeon, F. H., assistant surgeon, to rejoin station in New Orleans.

Frost, W. H., asst.-surgeon, to rejoin station in Baltimore.

Mullan, E. H., asst.-surgeon, to rejoin station at Ellis Island, N. Y.

Guthrie, M. C., asst.-surgeon, to proceed to Cape Fear quarantine station, reporting to the medical officer in command for duty.

Duke, B. F., acting asst.-surgeon, granted fourteen days' leave of absence on account of sickness, from October 7.

Rice, W. E., acting asst.-surgeon, granted leave of absence for seven days.

Safford, M. V., acting asst.-surgeon, granted two days' leave of absence under paragraph 210 of the regulations.

Walker, R. T., acting asst.-surgeon, granted leave of absence for five days, from November 15.

Mason, M. R., pharmacist, granted leave of absence for seven days, from October 25.

Gibson, F. L., pharmacist, to rejoin station at San Francisco, on completion of duty at Lewis & Clark Exposition at Portland, Ore.

Morris, G. H., pharmacist, to rejoin station at St. Louis.

Sterns, C. O., pharmacist, to proceed to Boston, and report to the medical officer in command for duty and assignment to quarters.

### APPOINTMENT.

C. O. Sterns appointed pharmacist of the third class.

### BOARD CONVENED.

A board of officers is to meet at Angel Island, Cal., November 11, to determine the physical condition of Surgeon G. M. Magruder, under provisions of paragraph 50 of the regulations. P. A. Surgeon H. S. Cumming, chairman; P. A. Surgeon F. E. Trotter, recorder. October 28.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the period from October 20 to November 4:

#### SMALLPOX—UNITED STATES.

California: Los Angeles, Oct. 14-21, 2 cases; San Francisco, 3 cases.

District of Columbia: Washington, Oct. 21-28, 3 cases, 1 death. Illinois: Chicago, Oct. 21-28, 2 cases; Galesburg, Oct. 16-23, 3 cases, 2 deaths.

Michigan: Kalamazoo, Oct. 21-28, 1 case.

Ohio: Cincinnati, Oct. 13-27, 7 cases.

Washington: Seattle, Oct. 7-14, 1 case; Tacoma, Oct. 14-21, 2 cases.

Wisconsin: Milwaukee, Oct. 21-28, 1 case.

#### SMALLPOX—FOREIGN.

Azores Islands: St. Michael's, Sept. 16-Oct. 4, 7 cases.

Brazil: Bahia, Sept. 23-30, 1 case; Pernambuco, Sept. 1-15, 231 deaths.

Canada: Toronto, Sept. 23-Oct. 21, 15 cases.

China: Hongkong, Sept. 8-16, 1 case.

Ecuador: Guayaquil, Sept. 21-Oct. 3, 10 cases.

France: Paris, Sept. 23-Oct. 4, 28 cases, 5 deaths.

Great Britain: Liverpool, Oct. 7-14, 2 cases.

India: Calcutta, Oct. 8-23, 4 deaths; Madras, Sept. 16-29, 19 deaths.

Italy: General, Sept. 28-Oct. 5, 10 cases.

Russia: Odessa, Sept. 23-Oct. 7, 13 cases, 4 deaths.

Spain: Barcelona, Oct. 1-10, 1 death; Cadiz, Sept. 1-30, 3 cases.

Uruguay: Montevideo, Aug. 1-30, 8 deaths.

#### YELLOW FEVER—UNITED STATES.

Alabama: Castleberry, Oct. 15, 2 cases, 2 deaths.

Florida: Pensacola, Aug. 29-Oct. 30, 538 cases, 77 deaths.

Louisiana: Ascension Parish, to Oct. 18, 80 cases, 5 deaths;

Assumption Parish, to Oct. 16, 48 cases, 2 deaths; Avoyelles Parish,

to Oct. 28; 14 cases, 2 deaths; East Carroll Parish, to Oct. 18,

341 cases, 41 deaths; Iberia Parish, to Oct. 15, 14 cases, 1 death;

Iberville Parish, to Oct. 13, 34 cases, 8 deaths; Jefferson Parish,

to Oct. 28; 505 cases, 55 deaths; Lafourche Parish, to Oct. 19, 424

cases, 55 deaths; Madison Parish, to Oct. 28, 344 cases, 19 deaths;

Natchitoches Parish, to Oct. 28, 83 cases, 7 deaths; St. Mary



Parish, to Oct. 21, 845 cases, 36 deaths; Terrebonne Parish, to Oct. 28, 334 cases, 14 deaths.

Mississippi: Gulfport, Aug. 15-Oct. 28, 120 cases, 2 deaths; Hamburg, Sept. 15-Oct. 26, 50 cases, 8 deaths; Long Beach, Oct. 18, 1 case; Mississippi City, Aug. 22-Oct. 17, 71 cases; Natchez, to Oct. 26, 142 cases, 7 deaths; Port Gibson, Sept. 27-Oct. 24, 63 cases, 2 deaths; Rosetta, to Oct. 17, 32 cases, 7 deaths; Roxie (vicinity of), to Oct. 26, 16 cases, 1 death; Vicksburg and vicinity, Aug. 30-Oct. 30, 176 cases, 26 deaths.

Ohio: Cincinnati, Sept. 15-19, 3 cases.

#### YELLOW FEVER—FOREIGN.

Cuba: Habana, Oct. 16, 1 case, on S. S. *Vigilancia*.

Ecuador: Guayaquil, Sept. 28-Oct. 3, 1 death.

Guatemala: Livingston, Oct. 18, 1 case.

Honduras: Choloma, Oct. 3-17, 3 cases, 1 death; Puerto Cortez, Sept. 26-Oct. 3, 1 death; San Pedro, Oct. 3-17, 5 cases.

Mexico: Omealca, Oct. 8-21, 12 cases, 1 death; Soconusco, 3 cases, 2 deaths; Tuxtepec, Oct. 8-21, 19 cases, 9 deaths; Vera Cruz, 5 cases, 5 deaths.

Panama: Colon, Oct. 4, 1 case removed from Matachin; Bocas del Toro, Oct. 6, 1 case.

#### CHOLERA—INSULAR.

Philippine Islands: Laguna province, Sept. 8-16, present in two localities; Manila, Sept. 8-23, 32 cases, 31 deaths; Rizal Province, Sept. 8-16, present in 8 localities.

#### CHOLERA—FOREIGN.

India: Bombay, Sept. 19-Oct. 3, 4 deaths; Calcutta, Sept. 9-23, 75 deaths; Madras, Sept. 16-29, 349 deaths.

#### PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 23-24, 3 deaths.

Philippine Islands: Manila, Sept. 16-23, 1 case, 1 death.

#### PLAGUE—FOREIGN.

Argentina: Choya, Sept. 10, 9, recrudescence.

Australia: Townville, Sept. 3-16, 2 cases, 2 deaths.

China: Hongkong, Sept. 3-23, 1 case, 2 deaths; Manchuria, Oct. 4, present; Nuchwang, Oct. 17, 3 deaths.

India: General, Sept. 2-9, 3,439 cases, 2,482 deaths; Bombay, Sept. 9-23, 72 deaths; Karachi, Sept. 17-Oct. 1, 33 cases, 32 deaths.

Peru: Lima, Sept. 11-29, 8 cases, 1 death; Payta, 6 cases, 3 deaths; Mollendo, 1 death.

## Society Proceedings

### COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.

American Dermatological Association, New York, Dec. 28-30.

Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### MEDICAL SOCIETY OF VIRGINIA.

*Thirty-sixth Annual Session, held in Norfolk, Oct. 24-27, 1905.*

The President, DR. WM. S. CHRISTIAN, Urbanna, in the Chair.

A brief address of welcome was delivered by Judge D. Tucker Brooke, which was responded to by Dr. Lewis G. Pedigo, Leatherwood, for the society.

#### The Line of Least Resistance.

DR. PAUL B. BARRINGER, Charlottesville, chairman of the faculty of the University of Virginia, delivered an address on some of the adverse conditions which confront a medical man in the practice of his profession. He said it is well known in the profession that a physician can not do his best work when unusual influences and disturbing factors are around him, and that this was one of the reasons operating against those who, like President Garfield or President McKinley, were treated, so to speak, in the light of public gaze. Under such conditions a physician may lose his nerve under his sense of responsibility. The chances of the pauper picked up on the street and carried to the hospital for immediate operation are, therefore, better than those of the more prominent man. He suggested that it is much better for the friends of the patient to refrain from asking questions until the doctor is ready to give information. In families of physicians little medicine is usually administered and nothing is ever done until an accurate diagnosis has been made. He alluded to the imperative duty resting on the physician to report to the local board of health any cases of communicable disease and commented on the warning that may be seen in the experience in New Orleans with yellow fever. With the advanced knowledge of the present day there should never be a return of the plagues which, in past history, have devastated continents.

#### The Country Doctor.

DR. WILLIAM S. CHRISTIAN, Urbanna, the president, in his annual address, stated that he had been a country doctor for fifty-four years, that the country practitioner must be a good

all-around man, a good student of human nature and acquainted with the inner life and characteristics of his people. He treats all classes of cases and many diseases which, in cities, would be divided up among several classes of specialists. He maintained that, in ordinary diseases, the country doctor is more accurate in diagnosis than his city brother, that he has more time for this work and that, being his own apothecary, he can compound his prescriptions, administer them to the patients and observe the results. The life of the country doctor is full of hard and laborious toil, but, although he is the most poorly paid man in the world, he finds a rich reward in the love of his people.

#### Nephritis.

The medical aspect of nephritis was discussed by Dr. James S. Irwin, Danville, and the surgical aspect by Dr. Hugh M. Taylor, Richmond. The fact most clearly brought out in the papers and discussion was the curability of nephritis; that if the disease be taken in its earliest stages, the patient stands a good chance of recovery. Much progress has been made in the treatment of the disease, and individual symptoms are now receiving more attention than heretofore.

#### Bubonic Plague.

DR. THOMAS R. MARSHALL, Bedford City, late chief health inspector of the Philippine Islands, and a member of the board of health of the Philippine Islands and the city of Manila, who is now in the United States on leave, read an important paper on bubonic plague, in which he stated that the spread of the plague could be controlled by a system of inoculation. In the Philippines 30,000 persons have been immunized by the prophylactic serum manufactured in the government laboratory at Manila, and none of these persons has contracted the disease, although exposed to it after immunization.

#### Admission of Non-graduate Practitioners.

A considerable discussion arose on the question of the admission of practicing physicians of the state who did not possess diplomas from recognized medical colleges. During, and just after the Civil War, when it was extremely difficult to secure a college medical education, a number of men studied medicine under recognized practitioners and are now permitted to practice, although holding no diplomas, and are rated among the best regular and general practitioners of the state. Several of these men have applied for membership in the society, the laws of which provide, as a requisite for membership, that an applicant must be a graduate of a reputable school of medicine. The society, however, by an overwhelming majority, agreed to suspend the rules and to admit all such practitioners.

#### Asks Repeal of State Tax.

The society decided to petition the legislature to repeal the state license fee of \$10 which is now imposed on physicians.

#### Entertainment.

The social features of the convention were a banquet on the first day for the members of the society; a trip on the steamship *Pennsylvania* around the harbor on the second day; at the close of the convention a trip to Cape Henry and an oyster roast, and, in addition, a number of private entertainments and receptions by the local profession.

#### Election of Officers.

The following officers were elected: President, Dr. Lomax Gwathmey, Norfolk; vice-presidents, Drs. S. T. Anderson Kent, Ingram; Greer Baughman, Richmond, and Tunis C. Quick, Falls Church; recording secretary, Dr. Landon B. Edwards, Richmond (re-elected); corresponding secretary, Dr. John F. Winn, Richmond (re-elected); treasurer, Dr. Robert M. Slaughter, Theological Seminary; executive committee, Drs. Paulus A. Irving, Moses D. Hoge and Clifton M. Miller, Richmond; William F. Drewry, Petersburg, and Frank H. Hancock, Norfolk; state medical board—first district, Dr. Willard B. Robinson, Rappahannock; second district, Dr. Herbert M. Nash, Norfolk; third district, Dr. Junius E. Warinner, Brook Hill; fourth district, Dr. William W. Wilkinson, La Crosse; fifth district, Dr. Richard S. Martin, Stuart; sixth district, Dr. Samuel Lile, Lynchburg; seventh district, Dr. Robert C. Randolph, Boyce; eighth district, Dr. Robert M. Slaughter, Theological Seminary;



ninth district, Dr. Elliott T. Brady, Abingdon; tenth district, Dr. Charles W. Rodgers, Staunton; at large, Drs. Rawley W. Martin, Lynchburg; A. S. Priddy, Bristol, and R. Bruce James, Danville; delegate to American Medical Association, Dr. William E. Anderson, Farmville; honorary fellows, Drs. William S. Christian, Urbana, and Robert G. Halloway, Port Royal; non-resident honorary fellow, Dr. George Tully Vaughan, assistant surgeon general United States Public Health and Marine-Hospital Service, Washington, D. C.

Charlottesville was selected as the next place of meeting.

#### OBSTETRICAL SOCIETY OF PHILADELPHIA.

*Regular Meeting, held Sept. 7, 1905.*

DR. WILMER KRUSEN in the Chair.

##### Mercurialism from Bichlorid Douche.

DR. FRANK C. HAMMOND reported a number of cases, in one of which severe mercurialism occurred, due to excessive use of very strong bichlorid vaginal douches given to produce an abortion. The uterus was curetted for incomplete abortion. During the first six days, after symptoms of mercurialism appeared, only five ounces of urine were secreted, secured by catheterization.

##### DISCUSSION.

DR. J. W. WEST said that it is of the greatest importance in the treatment of obstetric cases, in which one is dependent on untrained nurses, to give careful instructions about all douches and enemata that are to be used. He recalled two experiences where untrained nurses substituted 1/1000 bichlorid solution for soap and water for rectal injections. One of the women was so desperately ill for a number of days that her life was despaired of, although there was ultimate recovery. These experiences led him to emphasize that we can not be too careful about instructions when having untrained assistants.

##### Aseptic Management of the Umbilical Cord.

DR. J. THOMPSON SCHELL advocated the method of Dr. Dickinson of Brooklyn and Dr. C. S. Bacon of Chicago, as follows: When the child is delivered a hemostat is placed on the cord three inches from the abdominal wall and a second hemostat about one inch from the first, and the cord severed between. The child is laid to one side, wrapped in its receiving blanket, while the placenta is delivered and the mother attended to. The attention is now directed to the child and the cord is amputated as follows: Grasp the hemostat forceps in one hand and with a sharp-pointed scissors the cord is severed at its skin-amniotic junction and the amniotic covering and Wharton's jelly is then separated from the vessel of the cord by stripping them back with a piece of gauze in a direction away from the abdominal wall. The vessels are now ligated with a piece of No. 0 sterile catgut and the cord is dusted with an antiseptic powder. The baby is not placed in the tub for about ten days. Dr. Schell has never had a case of umbilical hernia in babies on which the cord has been tied off in this way. The hernias he has seen have occurred in children who have been sick after delivery with marasmus, pneumonia, or some illness causing them to cry. In these cases hernia would probably have resulted without regard to the method of treating the stump. Hernias occur less often with this method than with the older ones. The ring is stronger when it is clean than when infected. He has nipped the vessels several times, but has never had any trouble. Although they would bleed for a moment the bleeding was so slight that he did not put a ligature around the vessels, except as a precautionary measure. He has never seen hemorrhage that he would call frightful. In making this incision he has cut the vessels a number of times, but has never had any trouble. He simply throws the ligature a little further back. The only bad case of hemorrhage occurred on the eighth day. There was a polypoid-like growth on the end of stump and the vessels must have bled from that and insertion of pins was necessary. Recovery finally ensued, but later symptoms of general infection set in. Many obscure illnesses in young infants probably result from an infected stump, and childbed fever in the mother may be traced to the same source.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Arteriosclerosis.

Professor Romberg, in the *Deutsche medizinische Wochenschrift*, in an article on the treatment of this disease, says that when the heart is mainly affected the coronary vessels may be the first to become sclerosed, and this may give rise to definite symptoms of cardiac insufficiency. The old remedy for this was digitalis which, of course, should not be given in cases in which there is actual or threatened hemorrhage. Sawada, however, has shown that in cases of arteriosclerosis, without involvement of the kidneys, the arterial tension is not high, and digitalis in small doses may be given with good results. Groedel's method of giving 2 grains of freshly powdered digitalis leaves once or twice a day for a prolonged period is particularly recommended. For long continued use strophanthus may also be of value. In plethoric individuals it is better to follow Huchard's advice and to enjoin strict milk diet for five days, combined with the use of digitalis. In angina pectoris digitalis is indicated only in the slight cases in which cardiac weakness is obvious between the attacks. In severe cases with normal cardiac power it is useless. In cardiac asthma, especially nocturnal, a narcotic with camphor or caffein is recommended, but morphin is contra-indicated in angina pectoris. The author has found the inhalation of amyl nitrite of little use in severe cases. When cardiac weakness from coronary sclerosis is combined with abdominal plethora the arterial pressure is often raised. In such cases purgation is valuable. When the kidneys are affected early, severe and sudden breathlessness is often a conspicuous sign; the pulse tension is increased, and if the heart is feeble the amount of urine is normal or diminished. Here also the indications are for general depletion and cardiac tonics. Digitalis must be used with the utmost caution, as in severe cases it may even reduce the arterial tension. Any heart weakening procedures, such as powerful diaphoresis or an exclusively milk diet, are to be avoided.

When the cerebrum is mainly affected there are certain functional cerebral manifestations apart from hemorrhage and from thrombosis, which betoken intracranial arteriosclerosis. These are more especially a sense of weight in the head, a feeling of precordial oppression and sleeplessness; there may also be slight vertigo, tinnitus, and gastrointestinal disturbance. The patients are often irritable and excitable, while their mental acumen and memory for recent events diminishes. The onset of these neurasthenic symptoms after the age of 40, and especially of 50, should be regarded with suspicion. Special points in the treatment are removal from customary surroundings, attention to the digestion, frequent nourishment and the consumption of a considerable quantity of water. This last remedy lessens discomfort and helps sleep. Gastrointestinal symptoms may occur in severe paroxysms, which yield best to atropin. Vascular neuroses of various types are common complications. The first indication is to reduce the vascular excitability; this is best done by the mild local baths recommended by Erb. Excitant baths are inadvisable. The best drugs are quinin, potassium bromid and valerian.

For the general treatment of arteriosclerosis Romberg states that the best remedy is potassium iodid, which he believes acts by reducing the viscosity of the blood and so lessens the work to be done by the vascular system. It is not to be given when there is edema of the lungs or when the arteriosclerosis is complicated by Graves' disease. It should be administered to the extent of not more than 15 grains a day, in five doses, and its use should extend, with intermissions, over two or three years.

In order to minimize gastric disturbance it can be given



with sodium bicarbonate, and acid foods are to be avoided. For cerebral arteriosclerosis a mixture of sodium bicarbonate, sodium nitrite and potassium nitrite is recommended. Of great importance is the regulation of the patient's habits. Arteriosclerosis is regarded as a nutritional affection of the vessel wall resulting from wear and tear; unless syphilis be present a direct remedial action of drugs on the process is not to be expected. It is essential, therefore, that any source of added strain on the vascular system be avoided. Hence, physiologic rest is indicated; obesity, for instance, should be reduced by diet and not by exercise. Sleep is also an important necessity and it may be advisable to give a hypnotic for three or four nights, after which natural repose is established. Indifferent and brine baths are useful, but must not be too hot nor too cold. The use of alcoholic liquors, tea, coffee and tobacco is to be restricted, though small quantities may be allowed as stimulants to the appetite. Abstinence from tobacco is compulsory in angina pectoris. With regard to diet, each case is treated individually, according to the state of nutrition and the condition of the alimentary canal; a mixed diet with very little condiment and not too much meat is generally advisable. Plenty of fluid should be taken, and sudden changes of diet avoided. The remedies for arteriosclerosis are essentially mild ones; the two chief lines of treatment to avoid are, on the one hand, a procrustean rule, and on the other, too frequent and fussy interference.

#### Exophthalmic Goiter.

Rudolf, in the *Dominion Medical Monthly*, discusses the medical treatment of this condition and states that the disease tends to recovery. In the absence of any specific treatment, he says, the following indications obtain and Nature is aided in her effort to overcome the disease:

1. To prevent the excessive production of thyroid secretion, or to neutralize the poisonous amount of it that is circulating in the blood.

2. To treat the symptoms as they arise.

To meet these indications the author summarizes his treatment as follows:

1. First and most important, the patient should be placed in a state of physical, mental and emotional rest. If the case be at all acute the patient would better be kept entirely recumbent, as the upright position will greatly hasten the heart's action. As a rule these patients do better away from home, either in a hospital or sanitarium. In some cases the strict régime of Weir Mitchell is advisable.

2. By careful dieting and in every way possible the general health should be raised; anemia, constipation and every other deviation from normal must be attended to. Very few patients with exophthalmic goiter die from the disease itself, death, when it occurs, being due to some intercurrent affection—hence the special need of looking after the general health. The climate at a moderate elevation seems to be specially beneficial, and such a location should be chosen whenever possible. Nothnagel considers "a sojourn in a place of moderate elevation as most important."

3. Various local applications may be employed, such as pressure to the thyroid gland, or a mild galvanic or faradic current, but probably the most valuable local treatment is application of cold to the thyroid gland or to the precordium, either in the form of an icebag or as Leiter's tubes. Such use of cold often greatly controls the rapid action of the heart.

4. Medicinal remedies will vary greatly with the physician, nearly every man has some remedy which he especially relies on; which fact proves what a secondary place all drugs take in the treatment of this condition. Rudolf gives a mixture of belladonna (from 10 to 15 minims of the tincture), thrice daily, combined with strontium bromid, and feels convinced that the patients soon feel very much more comfortable.

5. Any special symptom, such as threatened heart failure, urgent diarrhea, etc., must be met with appropriate remedies. Under such hygienic and medicinal treatment most patients will slowly improve, and some will completely recover. The majority, however, will retain some traces of the disease, such as cardiac irritability, general nervous instability and some exophthalmos. The disease is a prolonged one, and the

patient requires much patience and all the encouragement that the attendant can give. The latter should resort to mental therapeutics as much as possible.

#### Gastralgia.

Shoemaker, in the *New York Medical Journal*, relates the following cases:

The patient had a history of frequent attacks of pain in the epigastrium, agonizing in character and reflected around the lower portion of the ribs. The seizure occurred more frequently when the stomach was empty and lasted for ten or fifteen minutes. The examination of the patient was negative except that the stigmata of hysteria were present. Dr. Shoemaker suggested hyoscin hydrobromid in 1/100 grain doses during the attack, though the drug was not to be given as a routine practice. In less severe attacks the following combination was advised:

R. Spts. chloroformi .....	3iv	16
Spts. ætheris compositi.....	3vi	24
Tinct. capsici .....	3i	4
Aquæ dest., q. s. ad.....	3iii	90

M. Sig.: One teaspoonful in water every half-hour until relieved.

As the patient was anemic she was given the following for this and the general nervousness:

R. Ext. sumbul. ....	gr. xx	1	30
Zinci valerianatis.....	gr. xxx	2	
Ferri reducti.....	gr. xx	1	30
Ext. nux vom.....	gr. vii		5

M. Ft. cap. No. xx. Sig.: One capsule four times a day.

## Medicolegal

#### Prescribing When Drunk.

Section 365 of Chapter 169 of the Laws of Indiana of 1905, an act concerning public offenses, provides that whoever, while in a state of intoxication, prescribes or administers any poison, drug or medicine to another, which endangers the life of such other person, shall, on conviction, be fined not less than \$10 nor more than \$100, and be imprisoned in the county jail not less than ten days nor more than three months.

#### Prescribing Secret Medicines.

Section 366 of Chapter 169 of the Laws of Indiana of 1905 provides that whoever prescribes any drug or medicine to another, the true nature and composition of which he does not, if inquired of, truly make known, but avows the same to be a secret medicine or composition, and thereby endangers the life of such other person, shall, on conviction, be fined not less than \$30 nor more than \$100, and be imprisoned in the county jail not less than sixty days nor more than six months.

#### To Instigate Masturbation Is Sodomy.

Section 473 of Chapter 169 of the Laws of Indiana of 1905 provides that whoever commits the abominable and detestable crime against nature with mankind or beast; or whoever entices, allures, instigates or aids any person under the age of 21 years to commit masturbation or self-pollution, shall be deemed guilty of sodomy, and, on conviction, shall be fined not less than \$100 nor more than \$1,000, to which may be added imprisonment in the state prison not less than two years nor more than fourteen years.

#### Prohibits Careless Distribution of Drugs.

Chapter 33 of the General Laws of Minnesota of 1905 provides, under penalty, that no person or persons, either directly or indirectly, by agent or otherwise, shall scatter, distribute or give away any samples of any medicine, drugs or medicinal compounds, salve or liniment of any kind unless the same is delivered into the hands of an adult person, or mailed to such persons through the regular mail service.

#### Wood Alcohol to be Specially Marked.

Chapter 35 of the General Laws of Minnesota of 1905 provides, under penalty, that no person, by himself, his servant or agent, or as the servant or agent of another person or per-



sons, shall sell, exchange, deliver or have in his custody or possession with intent to sell, exchange or deliver, or expose or offer for sale, exchange or delivery, any wood alcohol, or substance commonly known as wood alcohol, unless each package, bottle, cask, can or receptacle containing the said wood alcohol shall be plainly marked, stamped, branded or labeled on the outside and face of each package, bottle, cask, can or receptacle of the capacity of less than one gallon, in legible type not smaller than large primer, and on the outside and face of each package, bottle, cask, can or receptacle of the capacity of one gallon or more, in legible letters of not less than one inch in length, the letters and words "wood naphtha," "poison."

#### Soliciting and Advertising Abortifacients.

Section 368 of Chapter 169 of the Laws of Indiana of 1905 provides that every woman who shall solicit of any person any medicine, drug or substance or thing whatever, and shall take the same, or shall submit to any operation or other means whatever, with intent thereby to procure a miscarriage, except when done by a physician for the purpose of saving the life of mother or child shall, on conviction, be fined not less than \$10 nor more than \$500, and be imprisoned in the county jail not less than thirty days nor more than one year; and any person who, in any manner whatever, unlawfully aids or assists any such woman in the violation of this section shall be liable to the same penalty.

Section 465 provides that whoever prints or publishes any advertisement of any secret drug or nostrum purporting to be for the exclusive use of females, or which cautions females against their use when in a condition of pregnancy, or in any way publishes any account or description of any drug, medicine, instrument or apparatus for preventing conception or for procuring abortion or miscarriage, or sells or gives away, or keeps for sale or gratuitous distribution any newspaper, circular, pamphlet or book containing such advertisement, account or description, or any secret drug or nostrum purporting to be exclusively for the use of females, or for preventing conception or procuring abortion or miscarriage, shall be fined not less than \$5 nor more than \$500, to which may be added imprisonment in the county jail not less than ten days nor more than six months.

#### Restrictions on Sale and Prescription of Cocain.

Chapter 42 of the General Laws of Minnesota of 1905 provides that no person shall sell or give away any cocain, hydrochlorate or any salts or compound of cocain, or preparation containing cocain, except on the written prescription of a physician or dentist licensed under the laws of the state. No prescription containing cocain shall be filled more than once and each shall have written plainly on it the name and address of the patient and be filed and preserved by the pharmacist, who shall not give a copy thereof to the patient. This section shall not be so construed as to apply to sales at wholesale, in original packages, by any manufacturer or wholesale dealer, to a retail druggist, licensed physician or dentist when such vendor shall have affixed to each receptacle containing any such drug a label in the English language specifically setting forth the proportion of cocain contained therein.

Any person who shall sell or give away any of the articles mentioned in the preceding section, in violation of this act, and any person who shall prescribe any of such articles to any one addicted to the habitual use of cocain or any preparation or compound thereof in any form, shall be punished by a fine of not less than \$50 nor more than \$100, or by imprisonment in the county jail for not less than thirty days nor more than ninety days, and if the person so offending shall be a licensed physician, dentist, pharmacist, or assistant pharmacist, in addition to the penalty above described, such offender's license shall be revoked.

On complaint being made of the violation of the provisions of this act the county attorney of the county where the offense is alleged to have been committed shall prosecute such complaint and to that end is hereby authorized to examine the books of any manufacturer or wholesale dealer within the state for the purpose of tracing the sales of any of the articles herein mentioned.

#### Physicians from Other States in Minnesota.

Chapter 236 of the General Laws of Minnesota provides that the state medical examining board, either with or without examination, may grant a license to any physician licensed to practice by a similar board of another state, and who holds a certificate of registration showing that an examination has been made by the proper board of any state in which an average grade of not less than 75 per cent. was awarded the holder thereof, the said applicant and holder of such certificate having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in this state, which said diploma may be accepted in lieu of an examination as evidence of qualification. In case the scope of said examination was less than that prescribed by this state the applicant may be required to submit to an examination in such subjects as have not been covered. The fee for such examination shall be \$50.

A certificate of registration or license issued by the proper board of any state may be accepted as evidence of qualification for registration in this state, provided the holder thereof was at the time of such registration the legal possessor of a diploma issued by a medical college in good standing in this state and that the date thereof was prior to the legal requirements of the examination test in this state.

If by the laws of any state or the rulings or decisions of the appropriate officers or boards thereof, any burden, obligation, requirement, disqualification or disability is put on physicians registered in this state or holding diplomas from medical colleges in this state which are in good standing therein, affecting the right of said physicians to be registered or admitted to practice in said state, then the same or like burdens, obligations, requirements, disqualifications or disability shall be put on the registration in this state of physicians registered in said state or holding diplomas from medical colleges situated therein.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

American Medicine, Philadelphia.  
October 28.

- 1 \*Study of Certain Complications and Sequels Met in Operative Cases of Laryngeal Diphtheria. B. F. Royer, Philadelphia.
- 2 \*Frequency and Etiology of Acute Non-Tuberculous Pneumonia in a General Hospital. W. T. Howard, Jr., Cleveland, Ohio.
- 3 \*Consideration of Hyperchlorhydria. J. A. Lichty, Pittsburg, Pa.
- 4 \*Treatment of Hyperacidity and Hypersecretion of the Stomach. A. Albu, Berlin, Germany.
- 5 Insomnia and Its Treatment. J. S. Christison, Chicago.
- 6 \*Series of Experiments to Determine the Antitoxic Depreciation of Antidiphtheric Serum. L. C. Layson, Detroit, Mich.

1. **Complications and Sequels of Laryngeal Diphtheria.**—Royer discusses the complications immediately following intubation, or attempts to intubate, when, from reflex apnea, cardiac or respiratory disturbances occur, of such gravity as to compel one to modify the procedure, or of such serious type as to cause the death of the patient. Royer states that atony of the cricoarytenoidei postici muscles may be a cause of acute stenosis after extubation. He also emphasizes the fact that reflex apnea causes dangerous disturbances. Atony of the abductors causes a tube to be returned in many instances. Pressure paralysis and exhaustion of adductors frequently cause autoextubation. Retained tubes are also caused by pathologic changes in the soft structure of the larynx and trachea. Such changes are often hypertrophic in character, following traumatism from the tube or loss of tissue from disease. There may be new cartilage formation in the perichondrium narrowing the lumen of the larynx, thus making a distinct pathologic change. For reflex apnea but little can be done. The courses of treatment open for the other conditions are: (1) Persist with intubation; (2) insert large tubes, allowing them to remain for long intervals of time; (3) when autoextubation becomes dangerous and large tubes are not retained, do tracheotomy; (4) intubate frequently while wearing the tracheotomy tube in order to prevent stricture stenosis; (5) with chronic



stenosis due to contracting scar tissue, practice wide dilation with persistent intubation; (6) consider Roentgen-ray treatment as a possible adjunct in softening scars causing chronic stenosis; and (7) avoid, if possible, tracheotomy as a means of curing a patient of a tube habit.

**2. Acute Non-tuberculous Pneumonia.**—Howard's study is based on a series of 550 consecutive autopsies. All doubtful cases and all cases of simple bronchitis are excluded. The diagnosis in every case was based on microscopic, as well as on macroscopic examination. The 550 cases furnish 195 instances of acute non-tuberculous pneumonia, an incidence of 35.45 per cent. Of this number 35 were primary pneumonias, 31 cases of acute croupous pneumonia and 4 cases of acute bronchopneumonia. One hundred and sixty cases were secondary pneumonias, 36 cases of acute croupous pneumonia and 124 cases of acute bronchopneumonia. Seventy-six, or about 61 per cent. of these cases, occurred in individuals with acute infectious processes. Of the 43 autopsies in typhoid fever cases in this series, 22 of the subjects had had bronchopneumonia and 5 croupous pneumonia. Of 81 cases of peritonitis from all causes, 36 of the subjects, or 44.4 per cent., had had pneumonia. A study of these cases does not indicate that operation in peritonitis increases the incidence of pneumonia. This point, however, needs further study. In all cases of diphtheria and pertussis coming to autopsy, there had been pneumonia. There were no autopsies in cases of scarlatina, measles or variola. Individuals with chronic nephritis and arteriosclerosis are apparently more likely to have croupous than bronchopneumonia as a terminal infection. Thus of 36 cases of secondary croupous pneumonia, arteriosclerosis was the most marked chronic lesion in 10 and chronic nephritis in 3, while of 124 cases of secondary bronchopneumonia, arteriosclerosis was the most marked lesion in 12, and chronic nephritis in 3.

**3. Hyperchlorhydria.**—According to Lichty, about one-half of the patients suffering from digestive disturbances have hyperacidity. Many cases of neurasthenia, hysteria, melancholia and hypochondriasis, and some of the organic nervous diseases, such as tabes dorsalis, are frequently associated with hyperacidity. The same thing is true of gastric ulcer and diseases of the gall bladder and bile ducts. The anatomic lesions in hyperchlorhydria are not constant. In some cases there is a proliferation of the glandular element, while in others there is no change whatever. Lichty is of the opinion that hyperchlorhydria proper is always associated with a neurotic condition, and that those cases in which there is a hyperacidity and no associated neurotic condition belong to that group of cases manifesting the earliest stage of chronic gastritis. Proper and timely treatment, says Lichty, is followed in a surprisingly short time by entire recovery. In conclusion, he emphasizes the following points: (1) Hyperacidity is a frequent condition. (2) Hyperchlorhydria is difficult to diagnose. The diagnosis can not be made without an analysis of the stomach contents, and often must be withheld until the course of the condition can be observed. (3) The treatment must be persistent. (4) The prognosis, so far as relief of symptoms is concerned, is good; so far as overcoming the acidity, it is unfavorable.

**4. Hyperacidity.**—Albu says that in hyperacidity the treatment must be chiefly dietetic, not only in the negative sense, forbidding sour foods, sauces and drinks, spices and other stimulants, alcohol, etc., but in a positive sense by prescribing a very detailed diet. The ingestion of drinks and liquid foods should be limited to a minimum. Solid foods should be taken in the form of broths, single portions of food being given in as small quantities as possible at intervals of from one to two hours.

**6. Depreciation of Antidiphtheric Serum.**—Layson bases his paper on a laboratory study of antidiphtheric serum representing the stock from which the market had been supplied, together with samples returned from the market, all kept under the varying conditions encountered by field antitoxin. He concludes that the antitoxic value of antidiphtheric serum is retained much longer than has hitherto been believed. The majority of diphtheric serums retain their antitoxic potency unimpaired or but slightly diminished for two, three, four or even five years, and that the maximum depreciation of the oc-

casional serum does not exceed 33.3 per cent., which contingency is guarded against in the practice prevalent with American mercantile antitoxin establishments of adding an excess of serum sufficient to cover the loss sustained by the occasional sample.

#### Medical Record, New York.

October 28.

- 7 \*Observations on the Cause and Treatment of Perineal Abscess and of the Periurethral Suppurations above the Triangular Ligament. S. Alexander, New York.
- 8 \*Indications for Operating in Acute Mastoiditis. P. D. Kerrison, New York.
- 9 \*Convalescents; Their Care from the Medical Standpoint. L. K. Frankel, New York.
- 10 \*Treatment of Typhoid Fever. D. E. English, Millburn, N. J.

**7. Perineal Abscess and Periurethral Suppurations Above the Triangular Ligament.**—Great stress is laid by Alexander on the origin of these two conditions in certain cases from infections extending into the glands of Littre, the glands of Cowper, the accessory glands found in the bulb of the corpus spongiosum and in the prostate gland. He says that at present the view is accepted that perineal abscess is due to a microbial invasion from the urethra, which occurs in three ways: (1) Through the glands connected with the bulbous, membranous or prostatic urethra, from which it extends into the perineal tissues; (2) it may occur through small fissures in the mucous membrane of the urethra; (3) it may be the result of a more or less extensive mechanical rupture of the urethra from external or internal violence. Infiltration of urine may occur and may play a prominent part in the infection, or it may be absent. It is not an essential causative factor in these cases. The essential cause of perineal abscess is the action of some pathogenic microbe, but contributing and exciting causes are external injuries, such as falls or blows, and especially by the unskillful or ill-advised use of urethral injections and irrigations, and rough and unnecessary instrumentations. Alexander, therefore, warns against irrigating the deep urethra, except through a catheter, or forcible injections. He considers that perineal suppurations of urethral origin can not be efficiently treated except by operation, and summarizes his plan of treatment as follows: An abscess in the perineum should be freely opened by median incision and its cavity thoroughly disinfected; the membranous urethra should also be opened, and the deep urethra should be explored by the finger, to detect any foci of suppuration which may be present either about the membranous urethra or in the prostate. When such foci are found they should be opened by the finger into the urethra, and the floor of the abscess should be made level with the floor of the urethra; the urine should be diverted from the urethra for a few days by draining the bladder through a large catheter passed into the perineal wound. The details of the operation are described at length and reports of nine cases managed in this way are given.

**8. Indications for Operating in Acute Mastoiditis.**—Kerrison summarizes the indications for operation as follows: (1) Sudden cessation of the aural discharge, other symptoms persisting, with deep-seated pain in mastoid region. Marked sensitiveness to pressure on the mastoid over an area extending well beyond the limits of the antrum. (2) In the absence of fever, the above symptoms, unless yielding promptly, i. e., in from twenty-four to forty-eight hours, to abortive measures. (3) Marked tenderness over the antrum, persisting from four to five days after free incision of Shrapnel's membrane. (4) Marked variations in the quantity of pus discharged; its maximum flow being apparently too great to be explained by the tympanic lesion; its period of diminution being coincident with the development of mastoid pain or tenderness. (5) Mastoid tenderness having been present and having disappeared, a discharge from the tympanic vault, which resists all rational non-operative measures. (6) Finally, evidences of mastoid involvement having been present, the development at any time during convalescence of symptoms of septic absorption.

**9. Care of Convalescents.**—Frankel says that notwithstanding the strides that have been made within the past two decades, in sanitary science, in the practice of medicine and surgery, in the betterment of living conditions, and in the general improvement in the physical status of all classes of the population, it is nevertheless a fact that in only a few diseases has



the death rate been lowered. A study of the census reports shows that while deaths from cholera infantum, diphtheria and consumption were less in 1900 than in 1890, the reverse was the case for nearly all other diseases. This state of affairs the author attributes largely to the fact that in hospital work and in private practice among the lower classes it is impossible for economic reasons to keep the patients under treatment until they are fully restored to health and strength, and in this way a large class of "half-cured" people is developed. These are in a condition of lowered vital resistance so that they easily fall a prey to serious illnesses. The remedy lies in the establishment of suitable convalescent homes, which shall not be like hospitals, but shall resemble as nearly as possible the normal home. For this purpose the country is most suitable, and where land is cheap such institutions should be built on the cottage plan. At the same time, the patient's family must be provided for in his absence, and in this connection the author speaks of the Winifred Masterson Burke Relief Foundation and the Loeb Memorial Home for Convalescents. He urges that the benevolent work of these private institutions be taken up by the state, and says that this would be the best prophylactic against disease of all sorts.

10. **Carbolated Camphor in Typhoid.**—English outlines his plan of treatment, in which the first step, if the patient is seen before the end of the first week, consists in the administration of from ten to twenty or even thirty grain of calomel, followed in eight hours by half an ounce of magnesium sulphate. The diet consists of Weir Mitchell's beef juice, and egg albumin water; milk and toast being avoided, as the author regards these two foods as being particularly harmful. The special medicinal treatment is by means of carbolated camphor, consisting of three parts of gum camphor to one part of crystallized carbolic acid liquified by heat. The dose is from ten to twelve drops in capsules, at first every two hours and later less often as the fever declines, the abdominal symptoms improve or cardiac depression appears. With this treatment English says that the course of the disease is shortened and the mortality lessened.

#### New York Medical Journal, New York.

October 28.

- 11 Abdominal Incision for Tuberculous Peritonitis. S. Lloyd, New York.
- 12 Uterine Myofibromata and Visceral Degeneration. H. J. Boldt, New York.
- 13 Cardiac Disease and Uterine Fibromata. C. G. Cumston, Boston.
- 14 \*Transplantation of the Round Ligaments for the Correction of Backward Displacements of the Uterus. E. W. Pinkham, New York.
- 15 Hodgkin's Disease with a Milky, Non-fatty Pleural Effusion (concluded). D. L. Edsall, Philadelphia.
- 16 Clinical and Operative Reports of Cases of Biliary and Pancreatic Calculi. E. Staehlin and W. J. Roeber, Newark, N. J.
- 17 Treatment of Hay Fever. L. W. Sterne, New York.

14. **Operative Treatment of Retrodisplaced Uterus.**—Pinkham has devised an operation which he describes as follows: A curved transverse incision is made after the method of Stimson and Hartley, passing through two points just above the external rings, and carried up on each side about one inch from these points. The skin is then dissected back from the fascia for some distance, the round ligaments are sought for as in the Alexander operation, the accompanying nerves are separated, and the enfolding peritoneum is pushed back until about four or five inches of the ligaments are exposed. The abdomen is then opened in the usual way in the median line, adhesions, if any exist, are broken up and the uterus is replaced. An incision is made in the peritoneum over the round ligaments on each side about one-half inch long and about one inch from the uterine attachments. The ligaments are found, and, as they have been separated from their peritoneal coverings, they can be pulled out through the incisions without difficulty. The peritoneal incisions are closed with Lembert sutures. At the level desired on the abdominal wall on either side of the median incision a sharp forceps is pushed through the structures obliquely, and the ligaments are grasped by the end and pulled through the wall. They are now anchored to the fascia, leaving the requisite length to hold the uterus in its normal position both as to its vertical and its horizontal planes. The abdominal incision is closed as usual. The free ends of the round ligaments are brought across and sewed to-

gether, the excess in length being cut off. The external rings are sutured and the skin is brought back and sutured with a subcutaneous stitch. The points of advantage in the operation are that it supplies a natural and sufficient support to the uterus both during quiescence and during pregnancy. During pregnancy, the ligaments will grow and lengthen out as the uterus grows, and after pregnancy will undergo involution with the uterus, so that, theoretically at least, the backward displacement will not recur. The suspension of the uterus is by the round ligaments alone with no peritoneal adhesions to hamper enlargement and involution. By transplanting the ligaments the uterus can be held in exactly the position desired. No trap is set for the intestines, and there is no pulling on the internal ring, or wedge of peritoneum in the way, to increase the tendency to hernia.

#### Medical News, New York.

October 28.

- 18 Phases in the Development of Therapy. A. Jacobi, New York.
- 19 \*The Gopher; a Possible Substitute for the Guinea-pig. S. W. Hewetson, Pincher Creek, Alberta, Canada.
- 20 \*Mammary Syphilis, with Involvement of the Axillary and Supraclavicular Glands, Simulating Cancer of the Breast. E. Beer, New York.
- 21 \*Diagnosis and Treatment of Anemia. H. Brooks, New York.
- 22 Gastric Dilatation. A. G. Hurdman, Denver, Colo.
- 23 Adenoids; the Cause of Children's Disease Most Frequently Overlooked. J. A. Donovan, Butte, Montana.

19. **The Gopher.**—Hewetson has considered the gopher as a possible substitute for the guinea-pig in laboratory experimentation. He has found that the gopher is extremely susceptible to tuberculosis, thus placing in the hands of medical men residing in the gopher belt an additional aid in the diagnosis of obscure cases.

20. **Mammary Syphilis Simulating Breast Cancer.**—Beer's patient, a woman, aged 35, noticed about four months prior to the examination a mass in her left axilla. A few weeks later she noticed a similar mass in the upper half of the left breast. These tumors caused neither inconvenience nor pain. The tumor in the upper half of the left breast measured 2 by 3 inches. It was not tender. It was freely movable on the deeper parts and non-attached to the skin. Its border was indistinct, its surface smooth, and its consistency moderately soft but not fluctuating. The nipple was normal. In the region directly below the middle of the left clavicle there was a similar mass apparently lying below the pectoralis major muscle and pushing this forward. This mass was about half the size of the tumor in the breast. Its borders were more distinct, and it felt rather spherical. In the left axilla there was another soft mass, almost the size of a hen's egg. It was freely movable and non-tender. In the same axilla there were a number of other enlarged glands. All these were of the consistency of inflamed glands. In the left supraclavicular region another similar mass fully as large as a hen's egg and several small glands of the consistency of chronically inflamed glands could be felt. The large mass in the supraclavicular region corresponded in all of its characteristics to that in the axilla. In the right axilla and right supraclavicular region there were a number of enlarged lymph nodes of normal consistency. On both sides of the neck the posterior cervical lymph-node chains were enlarged and distinctly palpable. Otherwise the patient showed nothing. The consistency of the tumor and the presence of the enlarged posterior cervical lymph nodes suggested the diagnosis of mammary syphilis. The patient was put on antisiphilitic treatment, with the result that all the tumors and enlargements disappeared.

21. **Anemia.**—Brooks emphasizes the following points: 1. The most important step in the study and treatment of resistant anemia is first a thorough and complete examination of each case in its every aspect. 2. The technical difficulties of such an examination are not great, and the results more than repay the time required. 3. Both clinical and laboratory methods must be used and the united evidence impartially considered. 4. The treatment of anemia must be based, first, on a thorough study of the particular case in hand. 5. Greater results are to be expected by the employment of carefully considered hygienic methods than from the use of drugs alone. 6. Little or nothing of value has been recently added to the purely medical treatment of the anemias.



## Boston Medical and Surgical Journal.

October 26.

- 24 \*Organization of a Department of Clinical Medicine. R. C. Cabot and E. A. Locke, Boston.  
 25 \*Review of the End Results in Cases of Exophthalmic Goiter Treated Surgically. T. W. Huntington, San Francisco.  
 26 Use of Ether in Medicine—The Treatment of Neurasthenia by Intermolecular Baths of Polarized Ether. W. Rollins, Boston.  
 27 Mercurio-Cataphoresis in Diseases of Women. F. C. Carleton, Boston.

24. Organization of a Department of Clinical Medicine.—Cabot and Locke claim that, given good teachers and abundant material for teaching, the benefits acquired by the student can be enormously increased by good methods of instruction or diminished by poor ones. During the past ten years Harvard, with essentially the same teachers and the same material, has added appreciably to the acquirement of her students by the gradual development of a better system of instruction. In their opinion, there are four chief methods of teaching medicine, and they should come in the following order: 1. Tell the student what he is to do. (Didactic or introductory lectures.) 2. Let him watch the instructor do it. (Amphitheater "clinics.") 3. Let him practice it under the teacher's direction. (Section teaching.) 4. Give him the opportunity to be of use by doing it himself under general supervision. (Ward work and out-patient work.) Each of these four processes is to be further subdivided with reference to the three main branches of every subject that is worth teaching, viz., observation, record and reasoning. 1. The student must be told how to observe, how to record his facts, how to reason with medical data. 2. He must watch his teacher in the act of studying cases, recording data and working up those data by reasoning. 3. He must himself practice examining patients, keeping records and reasoning from them under close supervision in small sections—clinics or quizzes. 4. He must be set to work quasi-independently to be of use as a physician himself, first, in the study and care of patients in the wards and dispensaries; second, in the investigation of disease by the collection of cases, reading and experimentation, the whole to be put together as a graduation thesis. Finally, the authors emphasize the need of greater diversity in the methods of teaching, of more drill in the proper keeping of records and of a broader training in the use of literature, more section work, the wider use of pictures in teaching, increase in the amount of independent work, adequate supervision, correlation and criticism of the teaching, and examinations on the ability to practice medicine rather than to write or talk it.

25. Surgery in Exophthalmic Goiter.—Huntington has treated surgically nine cases. In each instance partial ablation of one or both lobes of the thyroid was done, and one patient was subjected to three operations successfully. Seven patients were females and two were males. Their ages ranged from 28 to 56. In five patients there was pre-existing enlargement of the thyroid. In four the development of characteristic symptoms was simultaneous with glandular hypertrophy—all of these were colloid. In the five cases in which the exophthalmic condition developed secondarily, pre-existing glandular hypertrophy was noted during a period of six, ten, thirty-four, thirty-five and thirteen years, respectively. In this series, exophthalmic symptoms had been noted one, two, three, two and two years prior to operation—average one and four-fifths years. Duration of symptoms in the primary or pure Basedow cases prior to operation was two years, three months, two months and one year—average, seven and one-quarter months. Bilateral thyroid hypertrophy was noted in every case. In two it was recorded as slight. In four it was clearly noticeable, and in three the enlargement was exaggerated. The two cases of longest duration, thirty-four and thirty-five years, were of the cystic variety. Exophthalmos was manifest in eight patients. In four this symptom was recorded as slight, in two distressing, in two exaggerated, and in one absent. Tachycardia in varying degree was present in every case, and in four instances it was so manifest as to throw serious doubt on the propriety of surgical interference. Vascular disturbances, with associated symptoms, such as pulsation of cervical veins; arterial hum in the carotids and branches; interference with the sympathetic system manifest in abnormal glandular activity; in profuse perspiration; hy-

peremia, local or general; alternate dryness and excessive moisture of the palms and soles; polyuria; digestive disturbances manifest in occasional attacks of diarrhea were present in nearly every case. Psychic disturbances and neuroses of a somewhat vague character, which may be described as temperamental changes, undue excitability, intolerance of noise, weeping without adequate cause, capricious appetite, and the development of strong dislike for friends and relatives, was noted in more than half the cases. Two of the patients had experienced frequent well-defined suicidal impulses. Dyspnea of mechanical origin was uniformly present: slight in four and distressing in five cases. Deglutition was interfered with to a greater or less degree in seven cases. Muscular weakness, especially in the musculature of the thighs and back, was of frequent occurrence. In the first case, ether was employed as an anesthetic throughout the entire procedure. In the following three cases, nerve trunk cocaineization was employed satisfactorily. In the last five cases, Schleich's method was followed and found to be, on the whole, satisfactory. Eight patients survived the operation and are now living. One patient died on the twelfth day.

## Lancet-Clinic, Cincinnati.

October 28.

- 28 Etiology and Pathology of Mastoiditis. S. E. Allen, Cincinnati.  
 29 Clinical History of Mastoiditis. T. V. Fitzpatrick, Cincinnati.  
 30 Treatment of Mastoid Inflammation. J. A. Thompson, Cincinnati.

## The Laryngoscope, St. Louis, Mo.

August.

- 31 The Maxillary Sinus. R. C. Myles, New York.  
 32 Chronic Empyema of the Antrum of Highmore. G. A. Leland, Boston.  
 33 The Frontal Sinus. C. G. Coakley, New York.  
 34 \*Conservative Treatment of Chronic Suppuration of the Frontal Sinus. W. E. Casselberry, Chicago.  
 35 The Ethmoidal Sinus. J. O. Roe, Rochester, N. Y.  
 36 The Ethmoidal Sinus. J. W. Farlow, Boston.  
 37 The Sphenoidal Sinus. J. W. Gleitsmann, New York.  
 38 Comparative Results of Conservative and Radical Methods of Treatment of Disease of the Sphenoid Sinus. T. P. Berens, New York.  
 39 New Operation and Instruments for Draining the Frontal Sinus. E. F. Ingals, Chicago.  
 40 Syphilis of the Nose and Accessory Sinuses. J. E. Logan, Kansas City, Mo.  
 41 Syphilitic Manifestations in the Nasopharynx, Ear and Buccal Cavity. J. A. Stucky, Lexington, Ky.  
 42 Syphilitic Manifestations in the Larynx and Trachea. F. E. Packard, Philadelphia.

September.

- 43 \*Nose and Ear Complications in Diphtheria, Scarletina and Measles. J. H. McCollom, Boston.  
 44 Cysts in Lymphoid Tissue, an Exceptional Manifestation of Tonsillar Retrogression. J. Wright, New York.  
 45 Two Cases of Successful Obliteration of the Frontal Sinus after Repeated Operations. H. H. Curtis, New York.  
 46 \*An Unusual Case of Laryngeal Syphilis Requiring Tracheotomy. C. F. Theisen, Albany, N. Y.  
 47 Hemorrhage in Nose and Throat Operations. E. Mayer, New York.  
 48 Non-operative Treatment of Chronic Otitis Media Purulenta, with Special Reference to the Use of Pyoktanin. G. L. Richards, Fall River, Mass.  
 49 Obstruction of the Eustachian Tube a Factor in Postoperative Mastoid Fistula and in Chronic Suppuration of the Middle Ear. T. Hubbard, Toledo, Ohio.  
 50 Acute Purulent Otitis Media Complicating Typhoid Fever. E. W. Day and C. Q. Jackson, Pittsburg, Pa.  
 51 Three Cases of Trifacial Neuralgia Due to Intranasal Causes and Treated Successfully by Intranasal Methods. R. B. Canfield, Ann Arbor, Mich.  
 52 Observations on Catarrh and Predisposition, or Reflex Versus Catarrh Theory. B. M. Behrens, Minneapolis.  
 53 Garcia Jubilee Celebration Held in London, March 17, 1905. H. Smith, New York.

34. Conservative Treatment of Chronic Suppurative Frontal Sinusitis.—According to Casselberry, the demand for radical and surgical interference is imperative when there are actually present symptoms of commencing intracranial infection, such as severe persistent headache, chills, fever, central paralysis, etc., but the mere indefinite chance of complications of this kind does not warrant an external operation without additional valid reasons, inasmuch as one risk may be said to balance the other. Hence, the intranasal or conservative methods are especially suitable for latent and mildly chronic uncomplicated single sinus suppurations. Casselberry reports sixteen cases treated on the conservative plan. Six cases were of a mild type, and these patients are now well. Of the remaining ten, typically severe cases, only one patient can be called cured, two are much improved, suffering but little in-



convenience, three more are somewhat improved but are still sufferers, and the remaining four are unbenefited. In five cases there was no continuous discharge, but severe, subacute attacks were repeated every eight or nine months until the middle turbinated bodies were reduced by deep cauterization, when the attack ceased for a period of 11 years, with but one trifling recurrence. One patient had only an intermittently conspicuous discharge. Irrigation of the left frontal sinus, after middle turbinectomy, evacuated pus. The discharge gradually lessened and finally stopped. Three cases of multiple sinusitis were helped by drainage established by means of middle turbinectomies, curettage and irrigation. In three cases, the treatment was interrupted too early, and, while benefit accrued, it was far from a cure. Three patients were not benefited by intranasal treatment, but rejected the external operation. In two cases syphilis was the underlying cause, yet antisiphilitic treatments had little influence. Casselberry advises that in these cases radical treatment should not be deferred too long.

**43. Nose and Ear Complications in Diphtheria, Scarletina and Measles.**—The points emphasized by McCollom are (1) the frequency of otitis media in diphtheria, scarlet fever and measles, (2) the importance of early operation, mastoiditis occurring in these diseases, (3) the necessity of frequent examination of the ears when there are no symptoms referable to these organs, and (4) early incision of the drumhead in the acute and infectious diseases.

**46. Laryngeal Syphilis Requiring Tracheotomy.**—Theisen's patient had been inoculated with syphilis by her husband. The symptom for which she sought relief was a gradually increasing dyspnea. On examination the nose and nasal pharynx were found normal, with the exception of a slight nasopharyngeal catarrh. The entire epiglottis was infiltrated and pulled back to such an extent that the laryngeal entrance was practically closed. There were no ulcerations. The glottis, with the exception of a very small opening posteriorly, was closed by a mass of cicatricial tissue stretching from side to side just under the vocal cords. The attacks of dyspnea became so frequent that it became necessary to perform a low tracheotomy under local anesthesia. Since then the gain in the patient's general condition has been quite remarkable. She is still wearing the tracheotomy tube. Theisen favors intubation in cases in which the stenosis is not extreme and when it is caused by a thickening and infiltration of the cords and ventricular bands, thus narrowing the glottis. In some such cases intubation may be carefully used without preliminary tracheotomy. When the stenosis is extreme, however, or when membranous adhesions exist between the cords, leaving only a very small opening, a tracheotomy should precede attempts to dilate the stricture from above. In such cases a sudden edema may prove fatal before an intubation tube could be properly adjusted. Tracheotomy, followed by laryngeal fissure, offers the best chances of a permanent cure when there is much cicatricial tissue occluding the glottis by uniting the cords.

Physician and Surgeon, Detroit and Ann Arbor.  
September.

54 \*New Points of Least Resistance in the Consumption Diathesis. T. J. Mays, Philadelphia.

55 \*Skiagraphy of the Stomach and Intestines. H. Hulst, Grand Rapids, Mich.

**54. New Points in Consumption Diathesis.**—May's contribution consists of a study of the vagus reflex in 380 individuals, 138 of whom were consumptives, and in 97 per cent. of these the reflex and the pulmonary affections were found on the same side, and in 3 per cent. on opposite sides—thus being present in every case of consumption. The rest, or 242 persons, were healthy, and of these 117 showed either a vagus reflex or a family history of pulmonary consumption. In 94, or 80 per cent., of the 117 individuals, the vagus reflex and a family history of consumption coexisted in the same person; in 14, or 12.38 per cent., a family history of consumption (which was rather remote in 4) was not accompanied by a vagus reflex; and in 9 patients (three of whom had an alcoholic and 2 an insane ancestry), or 7.96 per cent., the vagus reflex was present without a family history of consumption. In the remaining 125, or about 50 per cent. of these (242) there was

complete absence of a family history of consumption and vagus reflex. From this investigation the following conclusions are drawn: 1. The vagus reflex is always present in pulmonary consumption. 2. The vagus reflex is present in about 80 per cent. of healthy people who have a family history of consumption. 3. In healthy persons without a family history of consumption the vagus reflex is universally absent, provided there is no family or personal taint of alcoholism, insanity, or other neuroses. 4. In the development of the vagus reflex dizziness, dyspnea, coughing and sweating are produced. 5. The intensity of the vagus reflex or, in other words, the number of symptoms that accompany its development other than those which manifest themselves locally in the neck, seems to be dependent on the number of consumptive deaths that have occurred in the immediate family. 6. The vagus reflex, by projecting the family history of the potential consumptive into the present, not only becomes a valuable sign in the diagnosis and prognosis of pulmonary consumption, but foreshadows that which is not otherwise evident to the senses, and thus also becomes an important factor in the prophylaxis and treatment of this disease.

**55. Skiagraphy of Stomach and Intestines.**—Hulst's experience in skiagraphy of the stomach and intestines is limited to 22 cases, but these have been amply sufficient to demonstrate to him the value of the method. One ounce of bismuth subnitrate is suspended in one quart of milk and eaten slowly with or without bread. It is important that the bismuth be free from arsenic when such large quantities are given. The first skiagraph is taken immediately or soon after the bismuth meal. In from four and one-half to six hours the normal stomach passes the bismuth on, if no food is taken meanwhile. The second skiagraph should be taken in about six hours and no food allowed between. If food is taken the remaining bismuth, getting mixed with it, is kept in the stomach that much longer. From twelve to forty-eight hours after the meal is the best time to obtain a good picture of the colon, the length of time seeming to be in direct proportion to the degree of constipation present. The anticathode should be accurately centered over the part of the spine directly opposite the umbilicus. The latter, if desired, may be indicated on the plate by sticking a penny on the navel. The distance of the anticathode from the plate should be twenty inches. By observing these two precautions the data obtained from the resulting skiagraphs can serve as a basis for comparison, although they have no orthodiagrammatic value. To get a good view of the pelvis as well, it is necessary to skiagraph the subject standing up. The patient not being exceedingly corpulent, the exposure, with a tube at twenty inches and a good diaphragm, can be made easily in ten seconds, and in even considerably less time, with from 10 to 20 milliamperes going through the tube. Other things being equal, the shorter the exposure the better, on account of peristalsis. The pictures of the normal stomach and colon obtained in this way are at variance with the illustrations and descriptions contained in text-books on anatomy. Hulst believes that this matter ought to be investigated carefully by the anatomist with a view to correcting the existing misconceptions. He concludes by saying that if it is true, as has been claimed, that it is often of more importance in cases of heart disease to examine the abdomen than to distinguish the fine point of the auscultatory symptoms, because relieving gastroptosis may mean relief of the heart, if prolapse of the abdominal organs is only half as common as our best internists now believe, and especially if the condition of ptosis and dilatation is the cause of suffering, chiefly of women, attributed to it, the skiagraphic examination of the abdomen as attempted in this article can not fail to add something of value to the other exact methods of diagnosis.

Western Medical Review, Lincoln, Neb.  
September.

56 Tubal Diseases. F. Park, Omaha, Neb.

57 Suprapubic Prostatectomy. A. I. McKinnon, Lincoln, Neb.

58 How and When to Operate for Prostatic Hypertrophy. A. C. Stokes, Omaha, Neb.

59 The Abortive Type of Typhoid Fever. W. R. Young, Ansley, Neb.

60 Review of Tubercular Peritonitis. B. H. Oberembt, Milwaukee.



Colorado Medicine, Denver.  
September.

- 61 Subnormal Temperature in Tuberculosis. M. Collins, Denver.  
62 Annual Address of the President of the Denver Academy of Medicine. H. Sewall, Denver.

Medical Sentinel, Portland, Ore.  
September.

- 63 Mental Mechanism. L. E. Holmes, Butte, Mont.  
64 Duty of the State in Preventive Medicine from a Medical Standpoint. C. J. Smith.  
65 Infantile Anemia. I. B. Bartle, Eugene, Ore.  
66 Case of Spotted Fever. J. W. Geary, Burns, Ore.

Virginia Medical Semi-monthly, Richmond.  
September 22.

- 67 Cough Due to Causes Outside the Lungs. J. J. Richardson, Washington, D. C.  
68 Therapeutic Uses of the Roentgen Rays. E. G. Williams, Richmond.  
69 Spinal Analgesia. C. E. Young, Prescott, Arizona.  
70 Principles of Surgery. S. McGuire, Richmond.

Archives of Ophthalmology, New Rochelle, N. Y.  
September.

- 71 Case of Symmetrical Congenital Absence of Choroid and Retina Except in the Macular Area. O. Landman, Toledo, Ohio.  
72 Eye Infection. Second Hundred Cases with Bacteriologic Examination. D. Smith, Bridgeport, Conn.  
73 Case of Multiple Cyst Formation of Both Lower Fornix Folds. A. Ackermann, Halle.

Woman's Medical Journal, Toledo, Ohio.  
September.

- 74 Arteriosclerosis Ending in Cardiac Insufficiency and Acute Glossolabio-laryngeal Paralysis. M. Hawes, Denver.  
75 Peripatetic Biliary Calculi. N. S. Davenport, River Forest, Ill.

Ohio State Medical Journal, Columbus.  
September.

- 76 Multiple Hemorrhagic Erosions of the Stomach. J. Eischberg, Cincinnati.  
77 Gastroenterostomy Considered as a Conservative Measure in the Treatment of Various Diseased Conditions of the Stomach and Intestines. C. A. L. Reed, Cincinnati.  
78 Features in the Diagnosis and Treatment of Associated Gastritis and Nephritis. M. J. Lichty, Cleveland.  
79 Importance of a Correct Interpretation of the Source of Pathologic Elements in the Urine. W. E. Lower, Cleveland.

Indiana Medical Journal, Indianapolis.  
October.

- 80 Clinical Studies in Europe. E. Walker, Evansville.  
81 Fractures of the Patella. J. H. Ford, Indianapolis.

New York State Journal of Medicine.  
October.

- 82 Diagnosis and Treatment of Gastric Ulcer. W. Van V. Hayes, New York.  
83 Systematic Examination of School Children's Eyes. A. C. Snell, Rochester, N. Y.  
84 Case of Multiple Neuritis and Diabetes Mellitus. W. T. Sherman, Crown Point Center, N. Y.  
85 Chronic Gastric Catarrh; Symptoms and Treatment. V. A. Marshall, Moriah, N. Y.  
86 Résumé of Recent Literature on Pneumonia. J. C. Smith, Oneonta, N. Y.  
87 Case of Myxedema, with Remarks on Thyroid Feeding. R. G. Loop, Elmira, N. Y.  
88 Bronchopneumonia. C. E. Darrow, Rochester, N. Y.  
89 Scarlatinal Nephritis. C. O. Boswell, Rochester, N. Y.  
90 Non-operative Treatment of Hemorrhoids. A. J. Westlake, Elmira, N. Y.  
91 Conservative Surgery of Extremities. G. H. Fish, Saratoga, N. Y.

Pacific Medical Journal, San Francisco.  
October.

- 92 Use of the Solar Cautey and Other Methods in the Treatment of Diseases of the Skin and Its Appendages. O. V. Thayer, San Francisco.  
93 Outline of Parental Periodic Paralysis. J. C. Booth, Lebanon, Ore.  
94 Rational Use of Wines in Health and Disease. C. A. Wetmore.  
95 One Possible Cause for Appendicitis. F. Brewer, King City, Cal.

Journal of Mississippi Medical Association, Vicksburg.  
October.

- 96 Obstetric Experience. H. A. Minor, Macon.  
97 Treatment of Lobar Pneumonia. F. C. Spalding, Gunnison.  
98 Puerperal Eclampsia. W. H. Rowan, Wiggins.  
99 Treatment of Leg Ulcer. J. M. Alford, Ellisville.

St. Louis Courier of Medicine.  
October.

- 100 Three Cases of Eclampsia; Autopsy Findings of One Case. P. H. Swahlen, St. Louis.  
101 Etiology of Eclampsia. H. Ehrenfest, St. Louis.  
102 Premature Infants. V. P. Blair, St. Louis.  
103 Baby Incubators on the Pike. J. Zahorsky, St. Louis.

Medical Standard, Chicago.  
October.

- 104 Splachnoptosis. B. Robinson, Chicago.  
105 Sanitary Supervision of Country Schools. C. W. Oleson, Lombard.

- 106 Indications for the Treatment of Cholecystitis. B. Holmes, Chicago.

- 107 Surgical Treatment of Appendicitis. A. R. Pollock, Antonio, Colo.

Buffalo Medical Journal.  
October.

- 108 Aims and Uses of a Medical Society. A. W. Hurd, Buffalo.  
109 Perineal Injuries and Methods of Repair. J. Price, Philadelphia.

FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.  
October 14.

- 1 \*Medical Education in London. T. C. Allbutt.
- 2 \*Rand Miner's Phthisis. T. Oliver.
- 3 \*Pulmonary Atelectasis in Adults. W. R. Huggard.
- 4 \*Tracheotomy Under Local Anesthesia. S. C. Thomson.
- 5 \*Traumatic Pneumonia. C. M. Beadnell.
- 6 Hysterectomy for Fibroid Disease in Three Sisters; Recovery. A. Doran.
- 7 Parovarian Cyst with Twisted Pedicle. C. Berkeley.
- 8 \*Colloid Carcinoma at Twelve Years of Age. J. A. Milne.
- 9 Case of Hematoma of the Labium Majus Formed During Labor. J. Jones.
- 10 \*Rats in Relation to Plague. B. Skinner.
- 11 \*Poisoning from Tinned Sardines; Coma; Death; Necropsy. H. Caiger.

1. Medical Education in London.—In this paper Allbutt discusses education versus instruction; preliminary education as obtained in the public schools; university instruction and its value in expanding and enlarging the mind, making it a more and more perfect instrument of knowledge and progress; the needs of medicine; the overloading of the medical curriculum, teaching many studies ill rather than a few studies well; the facilities for postgraduate study and research work, and the ethics and outlook of the medical profession.

2. Rand Miners' Phthisis.—Under this title Oliver describes a form of phthisis prevalent among the Rand gold miners. It is due to the inhalation of a fine dust that rises during the dislodgment and breaking up of stone by the use of explosives and the shoveling aside of debris of fallen stone. The essential pathologic feature of this variety of phthisis is the formation and retraction of fibrous tissue of a low type. The disease once developed, is seldom interrupted; it tends to become progressive. A peculiar bronzing of the skin and shortness of breath are the two prominent symptoms of this affection. One of the distinctions between gold miners' phthisis, or silicosis, and ordinary tuberculous phthisis is that in miners' phthisis a man does not feel that he is really ill until he is, practically speaking, past all work, whereas in the tuberculous form the patient is often ill long before there is any extensive disease in the lung, owing to the fact that toxins are secreted by the tubercle bacilli, while there is no soluble poison in miners' phthisis. There is no medicine or combination of medicines that will check the onward course of the disease once it is fully established. Cod-liver oil, nux vomica and potassium iodid, liquor strychniae, calcium glycerophosphates or the hypophosphites will help to maintain the general health, but the best treatment of all is for men not to work too long at rock drilling, to work fewer hours a day than they have been doing, and on the first indications of failing health and strength to give up the work and seek for a life in the open.

3. Pulmonary Atelectasis in Adults.—Huggard states that atelectasis, in so far as it affects a small portion of lung in adults, is an extremely common condition at the apex, but is overlooked owing to the ordinary method of examining the chest. The usual physical signs are dullness on percussion with feeble breath sounds, the dullness diminishing or passing off after a few deep breaths, the breath sounds at the same time becoming more distinct. A few sticky or viscid râles can often be heard toward the end of the first two or three deep breaths, but they get gradually fainter and then disappear. The signs of atelectasis may reappear with extraordinary rapidity. The most frequent seats of affection are, first, from the apex to the second interspace in front; next, the suprascapular, and then the interseapular region. The primary ailment must be attended to. For the condition itself, systematic deep breathing must be employed; for example, deep respira-



tions should be taken for a few minutes every hour. If there are no contraindications, exercise to develop the chest muscles is advisable. The patient must be careful to avoid anything, whether clothing or a cramped position, that might interfere with the free expansion of the chest.

**4. Tracheotomy Under Local Anesthesia.**—In 9 cases Thomson performed tracheotomy under local anesthesia. A tablet containing one-fifth grain of cocain hydrochlorid, one-fiftieth grain of morphin hydrochlorid and one-fifth grain of sodium chlorid is dissolved in 56 minims of sterilized water. To this is added a 1 to 1,000 solution of adrenalin chlorid in the proportion of one drop to every fifteen of the solution so that 4 minims of adrenalin would be contained in 60 minims of the prepared fluid. The skin over the trachea having been sterilized, a drop of pure carbolic acid is deposited on it at the two extremities of the proposed incision. The slight eschars produced are useful guides in indicating the situation and extent of the incision through the skin, and they render it so insensitive that the first prick of the needle is hardly felt. The anesthesia produced is complete and there is no danger of hemorrhage. Thomson performed these tracheotomies for cancer of the larynx, cancer of the esophagus, tuberculous laryngitis, lupus of the larynx, tertiary syphilis of the larynx, and malignant disease of the thyroid gland.

**5. Traumatic Pneumonia.**—The interest of Beadnell's case centers in the fact that a severe blow over the left lung of a robust and temperate young man was followed, some few hours later, by the onset of a definite left-sided pneumonia. There was no history of chill from exposure to wet or cold or of any previous attack of the malady. The weather had been perfect, and pneumonia was not prevalent; in a word, no predisposing influence other than traumatism was known to be present.

**8. Colloid Carcinoma.**—Milne reports a case of colloid carcinoma occurring in a boy 12 years old. The patient first complained of abdominal pain. This was followed by vomiting and diarrhea, restlessness and low delirium. About 13 hours after the appearance of the first symptom the patient was in collapse, the aspect being that of abdominal disease. Warmth, stimulants and turpentine enemata were applied and ergot and morphin were administered. The patient died that night. The autopsy disclosed a much distended large intestine, the contents consisting of gas and a dirty brown fluid. In the upper part of the rectum was a hard mass which consisted of a concentric growth in the rectal wall extending for two inches along the rectum and constricting its cavity. There were several enlarged glands behind this mass. The intestinal wall was thickened, while the mucous membrane was eroded and ecchymotic. Pathologic examination demonstrated that the growth was a colloid carcinoma of the large intestine.

10. See abstract in *THE JOURNAL*, Sept. 23, 1905, page 947.

**11. Poisoning from Sardines.**—In the case reported by Caiger vomiting and diarrhea were absent and coma was the prominent symptom, the coma appearing about 18 hours after the ingestion of the sardines. The patient died.

#### The Lancet, London.

October 14.

- 12 Medical Science Forty Years Ago; A Retrospect and a Forecast. L. Brunton.
- 13 Aneurism of the Abdominal Cavity. W. Osler.
- 14 \*Points in Connection with the Exaltation and Reduction of Blood Coagulability by Therapeutic Measures. A. E. Wright and W. E. Paramore.
- 15 \*Case of Diver's Paralysis. W. H. White and F. A. Bainbridge.
- 16 Case of Anencephalic Monster. R. H. Paramore.
- 17 Case of Toxic or Typhoid Pneumonia. A. M. Elliot.
- 18 Inflammation of the Pharyngeal Tonsil. P. McBride.
- 19 Distension of the Gall Bladder Simulating Ovarian Cyst. J. A. C. Kynoch.
- 20 \*A Method of Sterilizing Sponges. F. W. Andrewes.

**14. Exaltation and Reduction of Blood Coagulability.**—Wright and Paramore have investigated the accelerating effect produced on the blood by the ingestion of calcium chlorid, calcium lactate, magnesium carbonate, milk and other medicinal agents.

**15. Diver's Paralysis.**—White and Bainbridge report a case of diver's paralysis occurring in a man, 38 years of age, who had been a diver for fifteen years. The symptoms presented were typical of the affection. The man was under observation

for several years, and death finally ensued, with symptoms of pulmonary tuberculosis and cirrhosis of the liver predominant. The autopsy confirmed this diagnosis. The brain and spinal cord were removed from the body about 24 hours after death, and they appeared normal to the naked eye. The cord was hardened for six weeks in a mixture of 3 per cent. bichromate of potassium and 10 per cent. formalin; pieces from different levels of the cord were imbedded in paraffin. The staining methods used were those of Marchi and Weigert-Pal; anilin blue-black was also employed. The white matter showed no morbid changes either by Marchi's method or by the Weigert-Pal method. Throughout its entire length the periphery of the white matter presented a vacuolated appearance; this was due, however, to postmortem changes. A large number of sections of the grey matter from different parts of the cord were examined; many of them were cut serially. They appeared to show that the cells in the lumbar region were fewer in number than usual; the deficiency was most marked in the case of the large cells of the anterior horns. The cells which were present looked healthy, the only exception being that some who saw the sections thought one or two cells showed slight necrosis. The perivascular spaces in the lumbar region were larger than those in the thoracic or cervical regions. Since sections from all parts of the cord were treated in precisely the same way, the larger perivascular spaces in the lumbar region could not be due to shrinkage of the vessels. There was definite thickening of the small arteries in both the grey and the white matter; the patient had been a drinker. No hemorrhages were observed.

**20. Method of Sterilizing Sponges.**—Andrewes uses a solution of persulphate of ammonium for sterilizing sea sponges used in surgery. The exact mixture advocated is made up as follows: Thirty-seven grams of ammonium persulphate are dissolved in 950 c.c. of pure distilled water and 11 c.c. of strong hydrochloric acid are then added. When first made up, the mixture has no very extraordinary germicidal powers, but in the course of a few days these become very pronounced, and when six days old the mixture will kill anthrax spores in less than one minute. It retains its efficiency for many weeks. It is a perfectly clear, colorless solution, with no staining powers and no injurious action on the skin, though it may fix blood stains in the crevices of the nails. Some of the methods in common use for the preparation of sponges for surgical purposes occupy several days. By this method they can be sterilized with certainty in an hour, whereby considerable economy in the stock of sponges required can be effected. Moreover, discolored sponges can be bleached and renovated. For this latter purpose a sojourn of two or three days in the mixture is requisite. For mere sterilization, an hour is ample; the sponges should then be rinsed in sterile water and stored in carbolic solution. This is advisable because the persulphate does exercise a certain injurious effect on their texture. Andrewes found that if they are kept soaking in the mixture for three or four weeks they become softened and eventually disintegrate; hence, the shorter the sojourn at each sterilization the longer will be the life of the sponge. He emphasizes two facts in connection with this method. First, the persulphate mixture should have been made up at least four days before use, but preferably not more than a month. Second, the method does not do away with the necessity for preliminary mechanical cleansing of the most thorough kind to get rid of all fibrin and other organic matter in the interstices of the sponge. The expense of the method is slight—a gallon of the persulphate mixture costs less than 25 cents.

#### Journal of Tropical Medicine, London.

October 21.

- 21 Behavior of Certain Bodies which Closely Commingle with and Resemble Leucocytes in the Earliest Stages of Cancer Formation in the Human Body. G. H. Fink.
- 22 Importance of the Hyaloid Membrane in Mature Cataracts in India. G. H. Fink.
- 23 Etiology of Sprue. D. J. Galloway.

#### Bulletin de l'Académie de Médecine, Paris.

Last indexed page 949.

- 24 (Year LXIX, No. 31.) \*Ablation de l'estomac pour cancer de la petite courbure (gastrectomy). J. Boeckel (Strasbourg).
- 25 \*Infection et intoxication par des viandes et leur rapport avec certaines maladies infectieuses de l'homme (infection from meat). V. Babes.



- 26 2 cas de pleurésie médiastine, l'une purulente, l'autre gangréneuse, traitées et guéries par la thoracotomie. Fernet.
- 27 \*Urgence de la recherche officielle et méthodique des tuberculeux pulmonaires au point de vue de la préservation sociale (systematic search for tuberculous individuals). E. Vidal.
- 28 \*Du traitement du lupus ulcéré et de quelques autres manifestations tuberculeuses par l'héliothérapie. Vidal.

24. Removal of Stomach.—Boeckel reports a second case of almost total gastrectomy on account of cancer. His first patient lived for seven and a half months after removal of the stomach and then succumbed to the effects of intestinal occlusion. The autopsy showed that there was no trace of recurrence of the cancer nor of metastasis. The patient had been in good health during the interim, eating ordinary food and digesting better than many other persons. The possibility of good health after total removal of the stomach is further corroborated by the present case. The patient was a man of 43, and the cancer in the lesser curvature occupied almost the entire cavity of the stomach. The organ was entirely removed below the cardia and the duodenum sutured to the latter. The patient was dismissed, quite recovered in three weeks, having gained 13 pounds. Boeckel reviews 48 published cases of removal of the stomach on account of cancer or (in 3) of plastic linitis. The mortality was 39.1 per cent., but two-thirds of the deaths were due to peritonitis, and in the others to shock or to pneumonia. Out of the 28 individuals reported cured, 21 have been followed to date, and recurrence was observed in 11 (before the second year in 7, and between this and five years in the others). Two of the 22 succumbed to an intercurrent affection, and 8 are living in good health, 2 for more than a year, 5 between two and five years, and 1 for more than eleven years. In every instance the cancer was in an advanced stage.

25. Infections and Intoxication from Meat.—Babes writes from Bucharest to suggest that certain diseases observed in human beings are traceable to meat from animals affected with similar infectious diseases, due principally to microbes intermediate between Eberth's and the colon bacillus. The principal characteristics of this group are the great virulence of the germs, the production of toxins which resist high temperatures, and the ability to produce infection by way of the digestive tract. He gives a number of instances of epidemics from this source and queries whether it is not responsible for a whole series of human affections, such as paratyphoid, certain cases of typhoid, dysentery, different cases of cholera morbus, of enteritis, of septicemias, of hemorrhagic affections, and of bronchial, pulmonary, gastrointestinal and hepatic infections of obscure origin, of Weil's disease, and of infectious myelitis, in all of which he has succeeded in isolating microbes resembling in every respect the *Bacillus enteritidis* by Gaertner or the paratyphoid bacillus. Serodiagnosis should not be considered complete unless made with these bacilli as well as the typhoid bacillus.

27. Urgency for Detecting Tuberculosis Among the People.—Vidal urges that all medical certificates issued to wet nurses, school children, etc., should include a clause testifying to the condition of the individual's lungs. All government employes should be inspected by a physician at certain intervals to detect incipient tuberculosis, and every person consulting a dispensary or entering a hospital, presenting any indications of tuberculosis, should be reported to some central office where a register should be kept of all cases of tuberculosis. Measures should be taken to protect and to cure patients in the incipient stage and to prevent infection of others.

28. Cure of Surgical Tuberculosis by Exposure to Sunlight.—Vidal practices at Hyères, on the southern coast of France, and here reports 8 cases of patients with ulcerating lupus or with tuberculous ulcerations in the neck or tuberculous arthritis of the knees, all cured by systematic exposure to the direct sunlight for several hours a day. In some of the cases all previous measures had been ineffectual.

Presse Médicale, Paris.

- 29 (Nos. 79-80, October 4-6.) \*Le chien tuberculeux (dog). L. Landouzy.
- 30 \*La tuberculose des buandiers, blanchisseurs, buandières, blanchisseuses et repasseuses (of laundry employes). Id.
- 31 Histogénèse des lésions tuberculeuses du poumon humain (in human lung). M. Letulle.
- 32 \*Tuberculose rénale. J. Albarran.
- 33 L'influence de la puerpéralité sur la tuberculose. E. Bonnaire.

- 34 (No. 81, October 7.) Lumière et tuberculose (sunlight in houses). A. Rey.
- 35 (No. 82.) Le micrococcus catarrhalis. F. Bezançon and S. I. de Jong.
- 36 Resolutions Adopted by International Tuberculosis Congress. Paris, October 7.

29. Tuberculosis in Dogs.—Landouzy states that the museum annex to the Tuberculosis Congress contained an exhibit of tuberculous lesions found in dogs, with statistics showing the frequency of the disease among them. One veterinary school reported that the proportion of tuberculous dogs has increased from 4.5 to 9 per cent. during the last five years. Several of the specimens exhibited were of tuberculous ulcers on the muzzle and elsewhere. Some were from dogs that had been pets of noted persons. He adds that the dog tuberculized by man is another example of the diffusion of the tubercle bacilli by promiscuous expectoration. The tuberculous dog, playing with the children, licking their faces, licking the hands of his master, may recommence the cycle of infection. In conclusion he remarks that all danger from this source can be avoided by rigid measures to prohibit promiscuous expectoration and to destroy all virulent bacillary material in the houses and to enforce the use of closed garbage cans in which dogs are unable to forage.

30. Tuberculosis in Laundry Workers.—Landouzy has had opportunity to examine 1,590 laundry employes treated at the Laennec Hospital, this class forming fully 6 per cent. of the 23,249 inmates of the hospital between 1900 and 1904. More than a third of the 1,202 women and more than a half of the 388 men were affected with pulmonary tuberculosis, generally of the acute form. Surgical tuberculous lesions were rare among them. Laundry employes, as a rule, are young and strong, but they become infected from breathing the dried sputa from handkerchiefs, napkins and bed linen. All these articles are sorted out, pell-mell, and the employes live and breathe in an atmosphere full of bacillus dust. He pointed out long ago that attendants in hospitals have much less to fear from eruptive diseases, diphtheria or typhoid fever than from dry sweeping of the wards and halls, and that postoffice clerks employed out of doors are much less subject to tuberculosis than those employed in the postoffices where dust is being constantly brought in and stirred up by the public. Also that policemen are in much less danger from the bullets of bandits than from the promiscuous expectoration on the floors of the police stations. In the same line he now points out that laundry employes run much less risk from pneumonia, etc., than from their manipulation of dry handkerchiefs, napkins, pillow cases and sheets. He adds that this professional tuberculosis of laundry workers may entail endemic tuberculosis. Sanitary certificates should be insisted on for every house, and they should state the profession of its inmates or late residents. If they include a laundry worker, the house should be mistrusted until disinfected. Tuberculosis among laundry workers is avoidable, and education of the public will certainly reduce its proportions. Education, he adds, will foster the fear of contagion, and the spittoon will be generally adopted, just as the custom of using a handkerchief when blowing the nose was introduced into France in the days of Henry III. When the fear of contagion is once implanted, protective measures will become mere ordinary reflex actions. The task of educating the public belongs to physicians. They must make families understand that they have duties to perform, and chief among them is the obligation to render harmless the virulent expectorated matters and to take care of soiled linen differently from the present customs. Laundry workers should be protected by sanitary regulations, enforced by public authority if need be.

32. Tuberculosis of the Kidneys and "Experimental Polyuria."—Albarran lost only one patient in 64 on whom he performed nephrectomy, and regards it as scarcely a dangerous operation. Nine of his patients, operated on more than six years ago, and 2 more than ten years ago, are known to be in good health to-day. The general health improved remarkably after the nephrectomy in every instance, and the secondary cystitis was much improved or cured by the operation. The cystitis always heals when it is due to mere irritation of the bladder, but if the tuberculous lesions in the bladder are in an advanced stage cure is dubious. Without operation, tubercu-



losis of the kidney entails inevitably the destruction of the organ. Even if the process heals, stenosis or obliteration of the ureter is unavoidable. The only contraindications to nephrectomy are insufficiency of the other kidney and bad general condition. The early signs are usually merely disturbances in urination and changes in the urine, occasionally accompanied by general debility and pain in the kidney. Absence of micro-organisms in a purulent urine should suggest the possibility of renal tuberculosis. He refers to a work he has published recently on the exploration of the kidney functions, summarizing his views in the statement that intravesical segregation of the urine, cryoscopy, phloridzin glycosuria and the methylene-blue test are all more or less unreliable. He found that methylene blue can be eliminated apparently normally when both kidneys are diseased, and even when one of the kidneys is profoundly affected with tuberculosis with large cavities. Catheterization of the ureters for from fifteen to thirty minutes is also unreliable. He asserts that the only means of obtaining absolutely reliable information in regard to the functional capacity of the kidneys is by what he calls "experimental polyuria." This consists in comparing the rate of spontaneous and induced elimination of urine by the two kidneys in a series of samples successively collected by catheterization of the ureters before and after the induction of polyuria by ingestion of water. By this measure it becomes possible to study microscopically and chemically the urine from each kidney and to determine the working capacity of each organ. In possession of data thus obtained, the surgeon is able to make a diagnosis with certainty in the early stages and to establish the prognosis of surgical intervention on a solid basis, thus sparing the patient the dangers of temporization.

#### Semaine Médicale, Paris.

37 (XXV., No. 41, October 11.) Legal Fees in France for Medical Attendance of Victims of Industrial Accidents.—Le tarif officiel, etc.

38 \*Present Status of Our Knowledge in Regard to Tuberculosis.—L'état actuel de nos connaissances sur la tuberculose. L. Cheinisse.

38. Present Status of Our Knowledge in Regard to Tuberculosis.—Cheinisse has been an attentive attendant at all the European tuberculosis congresses. He summarizes the work of the International Congress, which has just closed its sessions at Paris, in the statement that it has not added to our knowledge in regard to tuberculosis, except possibly in the authoritative denial of Koch's assertions in regard to the duality of human and bovine tuberculosis. He calls particular attention to the fact that, notwithstanding the great hopes based on the newer diagnostic methods that have been evolved in the laboratory, the clinic still holds its own as pre-eminent, especially in deciding a question so delicate as the early diagnosis of tuberculosis. He remarks that the very multiplicity of "serums" and "new tuberculins" proposed for the treatment of tuberculosis is an evidence that to date none of them can be regarded as specific. The lack of corroborative reports from others besides the inventors or discoverers of these serums is testimony enough, especially when, as in the case of Marmorek's serum, his confrères have been given ample opportunity to try them. Cheinisse says in regard to Behring's announcement that the profession will have to wait until the worth of his new remedy has been tested and confirmed by other scientists, both experimentally and in the clinic. Cheinisse further discusses the collaborating of the press in disseminating scientific views. This part of his article was reviewed editorially on page 1411.

#### Berliner klinische Wochenschrift.

39 (XLII, No. 36, Sept. 4.) \*Endoskopie der Flexura sigmoidea. H. Strauss (Senator's clinic, Berlin).

40 Die Spirochæta vaccina. II. Bonhoff.

41 \*Vorkommen von Spirochæten bei syphilitischen und anderen Krankheitsprodukten. P. Mulzer.

42 \*Should a Mother with Scarlet Fever Nurse Her Child?—Kann eine an Scharlach erkrankte Mutter stillen? B. Salge.

43 \*To Outline Bodies Behind the Sternum.—Ueber den Nachweis substernaler Massen. M. Herz.

44 \*Die Behandlung der Lungen-Tuberkulose mit Bacillen-Emulsion-Koch. Pöppelmann.

45 Ueber Vererbung und Vererbbarkeit in der Pathologie (inheritance). H. Beitzke.

46 Eine Tastvorrichtung an Beckenzirkeln (improved pelvimeter). L. Sarason.

47 "Meningokokken-Septikämie." H. Salomon. Id. Martini.

48 (No. 37.) \*Ear Injuries in Accident Insurance.—Die Unfallbegutachtung in der Ohrenheilkunde. B. Naginsky.

49 \*Direct Inspection of Upper Air Passages.—Erfahrungen mit den direkten Untersuchungsmethoden der oberen Luftwege. E. Meyer.

50 \*Ueber partielle Myotonie unter dem Bilde einer Beschäftigungsneurose und Lähmung. H. Curschmann.

51 \*Die Photoaktivität des Blutes (of blood). V. Schläpfer.

52 \*Ueber physiologisches und pathologisches Wachstum (growth). R. Beneke. (Concluded.)

53 Zur Lehre von den Antikomplementen. C. Moreschi.

54 Modern Research on Albumin.—Resultate der modernen Eiweissforschung für die Physiologie und Pathologie. C. Neuberg.

39. Direct Inspection of the Sigmoid Flexure.—Strauss states that he has succeeded in endoscopy in 95 per cent. out of his last series of nearly 120 cases. The failures were in persons with such loose sphincters that retention of air was impossible. He applies the pneumatic principle and uses an endoscope of his own devising which, he thinks, is a great improvement over Kelly's. He gives illustrations of it and of the views obtained. In many pathologic processes, differentiation is possible only by this means. He relates a number of instances to show the value of the information thus derived. In one, for example, the flexure was spasmodically contracted, simulating a tumor, with evidences of gastropnoia. This spastic contraction of the flexure is not uncommon as an accompaniment to gastropnoia. The flexure was sensitive to pressure and the stools contained much mucus. Cancer had been surmised, but sigmoidoscopy revealed, as Strauss expected, absolutely normal conditions, and the patient is still in good health, several years afterward. In another case, hard, enlarged inguinal glands and tenderness of the flexure suggested cancer of the latter, but sigmoidoscopy was negative, and the cystoscope finally revealed a malignant neoplasm in the bladder. There had been no hematuria during the six months the patient had been under observation, only indications of mild cystitis. The contracting force of the constrictors of the flexure is much below that of the anal sphincters, and, as the rectum holds about a pint and the flexure about a quart, a quart and a half of fluid introduced will make its way into the flexure. In order to hold it there, in case the opening is relaxed, Strauss inserts a sound covered with a long, thin rubber bag with an enlargement about 3 mm. from the tip. This bag and bulb are inflated and serve to plug the opening into the flexure. He has very seldom found these mechanical procedures annoying to the patients, and now omits all attempts at local anesthesia except in special cases.

41. Spirochetes in Syphilis.—Mulzer reports positive findings in 55 cases of syphilis, and invariably negative findings in other affections.

42. Nursing When Mother Has Scarlet Fever.—Salge believes that an ordinary cold in the head, in the mother, is more dangerous for the nursing infant than scarlet fever. Infants under 6 months are practically immune, he thinks, to scarlet fever, and a preventive serum injection would protect them in case of diphtheria. Breast milk confers the best protection against infections, and there is no reason for taking the child away from the mother in case she exhibits an acute infection. The only disease that contraindicates nursing is tuberculosis. With this exception, the acute infections are no contraindication to breast nursing, unless the infection is of an extremely severe type, in which event the secretion of milk would probably cease. He cites a case in detail to prove the correctness of these principles. The milk secretion diminished after the onset of the scarlet fever, but it was easily supplemented by a little artificial feeding, and the amount gradually returned to normal as convalescence approached, and both mother and child were soon in fine condition. He warns expressly against the custom of wiping out the mouths of infants, as this is liable to cause erosions which invite infection.

43. Device to Improve Percussion.—Herz uses a small, round, air-tight box to set over the part to be percussed. A rod passes through the top and rests against the skin, and a tube enters the box, the ear tubes being connected with its two branches. The effect of percussion on the rod through the top of the box is transmitted to the ears with magnified intensity. He gives illustrations of the findings when this appliance is placed over the sternum. It enables the outline of the enlarged heart or of an aneurism, mediastinal tumor, infiltrated



part of the lung or other mass directly under the sternum to be determined with great precision.

44. **Treatment of Tuberculosis with Koch's Bacillus Emulsion.**—Pöppelmann has been using this treatment for five years and his experiences have been invariably favorable. He thinks that it is especially adapted for dispensary treatment of incipient cases. If applied on a large scale he is convinced that it would be a most important reform in the campaign against tuberculosis, stifling the disease everywhere at its inception and at trifling expense, without waiting for the red tape sanatorium treatment. He combines it with systematic frictions with some preparation of iodine and open-air reclining when possible.

48. **Injuries of the Ear in Accident Insurance.**—Baginsky urges that the specialist should be consulted at once after an injury affecting the ear. It has been his experience that only in the rarest cases does improvement develop later, and then only to a very moderate extent. There is no doubt that organic changes exist in the patients with a constant subjective and objective clinical picture. Merely functional disturbances are comparatively rare.

49. **Visual Inspection of Air Passages.**—Meyer has had occasion fully a hundred times to inspect the air passages for removal of foreign bodies, new growths or other affections. He uses Kirstein's autoscope for the purpose, and has found this direct inspection most important in his clinic for throat and nose affections. One girl suffered from rapidly recurring papillomata, but she is now completely cured of the tendency, and the tracheotomy wound has been sutured. Fifty-two sittings were required before a permanent cure was obtained. He describes the technique of direct and indirect inspection by autoscopy or with Killian's straight tubes for tracheoscopy and bronchoscopy, and relates a number of instances showing the value of the information to be derived from them in puzzling cases. In one case the bronchoscope aided in removing a wad of cotton in the right bronchus, and in another case bronchoscopy in a child of 3, still suffocating notwithstanding an opening into the trachea, showed fibrinous deposits in the air passages. The recurring deposits were removed through a tube again and again, with the final recovery of the child. In a third case, bronchoscopy in a patient suffering from gangrene of the lung revealed the presence of a piece of bone aspirated ten months previously. It was discovered in a small bronchus 40 cm. from the front teeth. Killian asserts that the time is approaching when a tampon can be applied directly through the air passages to the bleeding point in the lungs in case of hemoptysis. Whether this is ever attained or not, it is certain that the affections of the mucosa in the trachea and bronchi are now amenable to direct local treatment as much as the mucosa of the throat. Meyer asks why a tuberculous ulcer in the trachea can not be treated just as well as one of the larynx, now that direct inspection and local measures are possible.

50. **Partial Myotony in Occupation Paralysis.**—Cursehmann describes with minute detail a case of Thomsen's disease with atrophy of the muscles. A previously healthy young man, a brushmaker, acquired an occupation paresis in the extensors of the right hand, while the antagonist muscles atrophied. The restriction of the atrophy to these muscles alone and the circumscribed field of the myotony render the case unusual.

51. **Photoactivity of the Blood.**—Schlöpfer exposed a sensitized plate to the action of blood from rabbits after they had been long exposed to the sun. The changes in the sensitized plate convinced him that the blood possesses the property of taking in the light and giving out light energy afterward. He believes that the hemoglobin is mainly concerned in this phenomenon. He found that the blood of albino rabbits displayed this property much more than that of the colored animals. He suggests that varying photoactivity of the blood may be a factor in pathology.

52. **Physiologic and Pathologic Growth.**—Beneke remarks that this year is the semicentennial of cellular pathology, as it was in 1855 that Virchow published his famous axiom, "*Omnis cellula a cellula*." As the natural conclusion from these principles of cellular pathology, Beneke classes all growth

as physiologic and pathologic, the latter including cancers, etc., the blastomas, as he calls them. The distinguishing features of physiologic growth are nutrition, function and endurance. The physiologic balance between nutrition and function, or—to express it differently—between the energy of growth and the energy of function, regulates the life cycle of the cell. When the growth is pathologic, this balance is lacking and we behold exaggerated growth with lacking function and a lack also of durability in the individual cell. This cataplasia of the cells may be induced by irritation from without, and when the cells are once transformed under its influence the pathologic growth is liable to continue, although the casual irritation may have long since subsided.

#### Deutsche Zeitschrift f. Chirurgie, Leipsic.

*Last indexed page 1284.*

- 55 (LXXVII, Nos. 1-3.) \*Zur Operation der Carcinome in der Gegend der Tonsillen. L. Heidenhain.
- 56 Zur Lehre von der Invagination. H. Lorenz.
- 57 Spontan-Abstossung einer Darm-Invagination. Hermes.
- 58 Hemorrhage in Mucosa of Extirpated Appendix.—Wie ist d. Entstehung der Blut. in d. Schleimh. operat. entfernten Wurmfortsätze zu erklären? C. Lauenstein and H. Revenstorff.
- 59 \*Ulcers Above Intestinal Strictures.—Ueber die oberhalb von Dickdarmverengerungen auftretenden Darmgeschwüre. W. von Greyerz.
- 60 \*Results of Surgery of Cancerous Stomach.—Ueber 101 Magenresektionen wegen Carcinom. H. Matti (Kocher's clinic, Berne).
- 61 Ueber Entstehung und Wesen des arteriellen Collateral-Kreislaufs (circulation). M. Katzenstein.
- 62 Ueber Luxation im Carpometacarpal-Gelenke des Daumens und über Luxations-Fractur des Daumen-Metacarpus (Bennettsche Fractur). E. Aulhorn.
- 63 Zur Tuberkulose des Hodens und Nebenhodens (of testicle and epididymis). W. von Brunn.
- 64 Zur Kenntnis der traumatischen Luxationen des Fusses im Talocrural-Gelenke. J. Richter.
- 65 Ueber Osteoma der Orbita und des Oberkiefers (upper jaw.) A. Vischer.
- 66 Zur Lehre von der idiopathischen Osteopsathyrosis. H. Doering. One case.
- 67 Infraktionen und Frakturen des Schenkelhalses bei Jugendlichen (of neck of femur in the young). Blecher.
- 68 Negative Results of Treatment of an Angioma with Pencil-Shaped Sticks of Magnesium.—Zur Behandlung cavernöser Tumoren mit Magnesiumstiften. C. Tollens.
- 59 Woody Phlegmon of Neck.—Holzphlegmone (Reclus). P. Sick.

55. **Carcinoma in Tonsil Region.**—Heidenhain comments on the bad prognosis of cancer in the pharynx. Czerny has not had a permanent cure in 47 cases, Krönlein only in 2 in 29, one seven years and one two years since the operation, and Lindenberg's summary of the literature on the subject mentions only a few isolated cases of permanent cure. Recurrence is the rule, but the operators fail to state just where the recurrence developed. Details in regard to this point might suggest improved technique. Heidenhain believes that to guard against the possibility of recurrence the operator must decide to remove the side wall of the pharynx, the musculature of the soft palate to beyond the median line, with the uvula, both pterygoid muscles, the superior constrictor of the pharynx and the pillars of the fauces—in short, the entire third of the side of the posterior wall of the pharynx. The bones from which these muscles spring must be removed with them, that is, the maxillary and pterygoid processes and the vertical plate of the palate bone. The masseter may be considered sound if the neoplasm is not adherent to the lower jaw. If it is adherent, then the masseter should be regarded with suspicion, for the carcinoma can spread along the periosteum of the lower jaw without any clinical manifestations. The more of the lower jaw that is cut away the better the oversight of the field of operation and the better opportunity for suturing the defect in the side wall of the pharynx. He has always had good success in suturing it in two or three tiers. As the submaxillary fossa always has to be scraped out, the arc incision from the corner of the mouth to the mastoid process seems preferable in all cases. He describes one case in which he operated by this technique, with fine functional results. The patient, a man of 50, now chews on the other side of his mouth and has no trouble in opening his mouth to 4 cm., chewing and swallowing. Radical procedures along these lines will certainly bring better results than the ordinary technique if the cancers can be removed while they are still small.

59. **Ulcers Above Strictures.**—Greyerz has observed 2 cases of this kind at Chaux-de-Fonds, and has been making a study of the subject. It has shown that the distension of the walls of



the bowel above the constriction causes a pronounced tendency to ulcer-formation after a few days of stasis. Every obstruction in the intestines and every case of ileus should suggest the possibility of danger from this source. It is another argument in favor of early operative intervention to empty the intestine.

60. **Resection of Stomach in 101 Cases of Cancer.**—Matti remarks that resection of the stomach has become a comparatively harmless intervention nowadays. The experiences at Kocher's clinic have shown that cancer of the stomach can be permanently cured. The results will grow constantly better as the cancer is diagnosed earlier and an exploratory incision made on the mere suspicion of carcinoma of the stomach. He advocates the resection with gastroduodenostomy as approximating most closely the natural conditions, while the permanent results afterward are better than with other technics. The mortality from local complications was only 8 per cent. of 75 operations between 1881 and 1904, and only 4.6 per cent. out of 43 patients operated on in the last six years. About 71.8 per cent. of 71 patients traced to date died after an interval of from one month to six years, but 20 patients, a proportion of 28.2 per cent., are still living. The average survival was 18.7 months, and the family frequently state that the patient was free from all stomach disturbances to the end. In one case of supposed recurrence the stomach proved to be free from it; the constant vomiting that had been observed was explained by the finding of retroperitoneal glandular metastases. Of the 20 surviving patients, one is in good health after sixteen years and 6 others after from eleven to five years. Recurrence in the cicatrix was observed in only one instance. Many of the permanent cures were in patients who had presented a palpable tumor, generally of the configuration of the pyloric portion of the stomach. When the stomach was artificially inflated the tumor could be felt on the right, and then it sank gradually lower as the inflation progressed until finally it approached more and more to the right costal arch and generally encroached on it for an inch or more. These changes in the position of the tumor are typically characteristic of a tumor in the pyloric region. When the tumor was in the rear of the stomach it was hidden by the progressive inflation of that organ. The difficulty of palpating a small tumor justifies investigation under anesthesia. In dubious cases, the patients should be examined several times in this way after evacuation of the intestines and stomach and inflation of the latter. Even with negative findings, if the suspicion still persists, an exploratory laparotomy may reveal a cancer, as occurred in some cases in Matti's experience. Ptosis was frequent, probably due to relaxation of the abdominal walls and of the ligaments from loss of fat. In 45 cases the motor function of the stomach was considerably impaired, while in others under lavage and diet it seemed to be nearly normal. The results of chemical examination in 80 cases were that free hydrochloric acid was absent, except in the cases in which the carcinoma had developed on the basis of a simple ulcer or in which the tumor was above the pyloric region. Lactic acid was found in the cases without free hydrochloric acid or with considerable retention. Matti's extensive monograph fills nearly 100 pages.

Münchener med. Wochenschrift, Munich.

- 70 (LII, No. 37, September 12.) \*Ueber spontane Wachstumshemmung der Bakterien infolge Selbstvergiftung (inhibition of growth by self poisoning). H. Conradi and O. Kurpjuweit.
- 71 Recurrence of Scarlet Fever After Six Weeks. Post-scarlatinal Striae.—Zwei seltene Beobachtungen bei Scharlach. L. Bleibtreu.
- 72 Corynebakterium pseudodiphthericum commune als Erreger eines Hirnabszesses (agent of brain abscess). F. Steinhaus.
- 73 Internal Treatment of Appendicitis.—Ueber innere Behandlung der Blinddarmentzündung. Moosbrugger.
- 74 Zur Pathogenese der Dehnungstreifen der Haut (Striae cutis distensae). K. Zieler.
- 75 \*Zur Symptomatologie des Empyema antri Highmori. Hecht.
- 76 \*Staining Sediment of Urine and of Exudates.—Zur Färbung der Sedimente des Harns und der Exsudate. Wederhake.
- 77 Ueber Ulcus ventriculi traumaticum. Fertig.
- 78 Ueber Verwendung des Balsamum peruvianum bei Behandlung von Wunden und chronischen Unterschenkelgeschwüren (in treatment of wounds, etc.) Aronhelm.
- 79 Ein dauerhafter Nasenspüler (nose irrigator). A. Hofmann (Freiburg).
- 80 Eine einfache Vorrichtung zum Reinigen von Mischpipetten (Melangeuren) (to clean mixing pipettes). W. Presslich (Vienna).

- 81 Ueber Säuglingsfürsorge in Paris mit Vorschlägen zum Säuglingsschutz in München (public provisions for care of infants). K. Oppenheimer.

70. **Inhibition of Growth of Bacteria by Self-Poisoning.**—Conradi asserts that, as they grow, bacteria elaborate a certain substance which is destructive to themselves. This spontaneously-formed antiseptic is more strongly bactericidal than even carbolic acid. It does not dissolve in alcohol nor resist heat; it is diffusible, but does not pass through an earthenware filter, and seems to be of the nature of an enzyme. Its deleterious action is restricted exclusively to the micro-organisms, and he suggests the term "autotoxin" for it.

75. **Empyema of Maxillary Sinus.**—Hecht reports 2 unusual cases. In one a patient presented remarkable physical depression, multiple neuritis, disturbances in swallowing and darting pains in one ear, while convalescing from a febrile parametritis. The maxillary sinus was sensitive to pressure, but the patient rejected operative intervention, even removal of a carious tooth in that region. An ear specialist examined her twice, but decided that the pains in the ear were due to retraction of the tympanic membrane and that the disturbance in swallowing was merely a nervous reflex trouble. When an operation was finally allowed, all the disturbances were arrested. The second case was distinguished by its rapid course and the development of sudden blindness and of fatal meningitis a few days later.

76. **To Stain Sediment of Urine and Exudates.**—Wederhake commends neutral red as an excellent stain for the sediment of urine and exudates. For differentiation of wax tube casts he combines it with methylene violet. He uses a 1 per cent. solution of neutral red. One drop is sufficient, dropped on the sediment after centrifuging and decanting all the fluid down to about 1 cm. above the sediment. After shaking well, he fills up the tube with water and centrifuges again. He then decants the fluid and takes up the sediment with a pipette for inspection under the microscope. For the contrast stain he adds 20 c.c. of the 1 per cent. aqueous solution of neutral red to 10 drops of a concentrated alcoholic solution of methylene violet and uses two or three drops of this mixture. For a control stain he uses a concentrated solution of crocein scarlet 7, B, in 70 per cent. alcohol. He adds one drop of tincture of iodine to the sediment with its 1 cm. of fluid above and adds the scarlet solution to 2 cm., shaking well, centrifuging, decanting and spreading on a cover-glass. If the specimen is to be preserved he pipettes it into a drop of glycerin or Farant's solution.

Therapie der Gegenwart, Berlin.

Last indexed page 953.

- 82 (XLVI, No. 9.) \*Zur Beurteilung und operativen Behandlung grosser Herzbeutelergüsse (large pericardial effusions). H. Curschmann. (Concluded from No. 8.)
- 83 Conditions Influencing Acidity and Alkalinity of Urine.—Ueber die Ursache der Aciditäts-Abnahme im Harn nach Nahrungsaufnahme und die Bedingungen, welche Einfluss auf die Ausscheidung der Alkalien im Harn und auch des Kochsalzes haben. Paul Edel.
- 84 Die intravenöse Digitalis-Behandlung. Felix Mendel (Ruhr).
- 85 \*Flüssige Gelatine als Antidiarrhoicum und Stomachicum. E. Cohn.
- 86 Der Mechanismus der Eiweissverdauung (digestion of albumin). P. Bergeil.
- 87 Eine neue Tropfenbildungsmethode und ihre praktische Anwendung bei Chloroform-Tropfflaschen (drop apparatus). A. Koren (Christiania).
- 88 Erfahrungen über die Anwendung von Eisen und Arsen (administration of iron and arsenic). L. Laquer.

82. **Treatment of Large Pericarditic Effusions.**—To puncture the pericardium, Curschmann uses a flat cannula carrying a flat, lance-shaped cutting tip which makes a very narrow incision, while it allows thorough evacuation of the effusion. He discusses the best point for puncturing. At his clinic this varies with individual cases, but he aims to puncture as far from the heart muscle and its apex as possible, disregarding the pleura. He punctures, therefore, farther to the left than other surgeons; in case of moderate effusion, in the left mammary line, but in very large ones outside of this. The extreme limit of dullness to the left is the point chosen. Which interspace to select depends on the position of the diaphragm. After the incision has been made the cannula is left in the wound, the stopcock closed, and a tube filled with salt solution is attached to the outer end of the cannula. When the stopcock is opened, the effusion is siphoned out; the amount



of suction can be regulated. As a rule, the effusion should be evacuated very slowly. Dangerous heart weakness may be observed in case the fluid is removed too rapidly. He generally allows as much fluid to escape as can be done with unforced siphonage. The remnant of the effusion can be trusted to be spontaneously absorbed, especially if diuretics are given. Adhesions and displacement of the heart, etc., contraindicate this mode of treating pericarditic effusions. The effusion should then be tapped on the right side, with resection of ribs, if necessary.

85. Gelatin as a Remedy for Diarrhea and as a Stomachic.—Cohn found that diarrhea was favorably influenced when the patients took spoonfuls of a gelatin jelly systematically during the day. As his patients did not take kindly to this jelly medicine, he used gelatin that had been rendered more fluid by heating for six hours. A solution of gelatin thus prepared does not harden unless placed on ice. He doubted whether this fluid gelatin would have the same action as ordinary gelatin, but found that it surpassed the latter in its effect as an anti-diarrheic and stomachic. He summarizes the results in 20 children under 2 years, in 6 under 14 and in 32 adults, all outpatients. The results were actually brilliant in certain cases and benefit was apparent in all. He prescribes the gelatin in a 10 per cent. solution, with 1 per cent. citric acid and about 9 per cent. syrup of orange peel, ordering half a tablespoonful every two hours for an infant and one or two tablespoonfuls for an adult. The results of treatment are sometimes not apparent until after 100 or 200 gm. have been taken.

#### Riforma Medica, Naples.

Last indexed page 882.

- 89 (XXI., No. 25.) L' Ankylostomum americanum (Stiles). P. D. Siccardi.
- 90 Recherche batteriologische sul morbillo (measles). A. Borini.
- 91 \*Hydatid Cyst in Malarial Spleen.—Echinococco primitivo suppurato in milza malarica. Splenectomy. Guarigione. N. Giannettasio.
- 92 (No. 26.) \*Sulla sindrome clinica degli endoteliomi gastrici a sede pilorica. O. Cignozzi.
- 93 \*Ascending Pneumococcus Neuritis.—Nevrite ascendente da pneumococco del Fränkel. D. Pirrone. (Commenced in No. 24.)
- 94 (No. 27.) \*Sul passaggio delle agglutinine ed antitossine tubercolari nel latte e loro assorbimento per via del tubo gastro-enterico (in milk). F. Figari.
- 95 \*Contributo allo studio della istogenesi del carcinoma epatico e del valore clinico della iperleucocitosi in alcune malattie del fegato. C. Tonarelli.

91. Hydatid Cyst in Malarial Spleen.—After splenectomy the patient, a woman of 38, recovered rapidly. The tumor weighed 850 gm. and measured 24 by 14 cm. The woman had never suffered from any digestive disturbances and there had been no pains. The general health was good and the history of long residence in a district where the echinococcus prevailed aided in the differentiation. A distinct resonant zone was found interposed between the left margin of the cystic tumor and the inner margin of the enlarged spleen, but this resonance disappeared if the abdomen was manipulated.

92. Endotheliomata of the Stomach.—Cignozzi's article describes a case in detail which answers the typical description of what has been called plastic linitis, but was in reality the effects of an endothelioma in the stomach, with consecutive stenosis of the pylorus. He believes that most, if not all, of the cases of plastic linitis, in fact, belong to this category. The slow development of the trouble (6 years in Brissaud's case and 10 in Oettinger's, with 15 years in his own case), the gradual development of indications of stenosis of the pylorus, the typical picture of pyloric obstruction, vomiting of food without hematemesis and melena, the discovery of a smooth, movable tumor in the pyloric region and the absence of metastases and of cachexia, plus the anatomic findings at the operation, all are features of the so-called plastic linitis.

93. Ascending Pneumococcus Neuritis.—Pirrone has demonstrated by his experimental researches that the pneumococcus is able to produce an ascending neuritis, but that the nerves are not an easy route for the propagation of the inflammatory process toward the centers. The lesions grow less and less pronounced as they recede from the periphery. To reach the centers, the germs must be extremely virulent. Traumatism of the nerve centers did not seem to have any influence on the ascending neuritis.

94. Passage of Antitoxins into Milk and Their Absorption in the Alimentary Canal.—Figari here continues his report of experimental research in this line. He has demonstrated that not only the young, but also older and adult rabbits, when fed with milk from animals rendered immune, acquire immunity to such an extent that they prove refractory to doses of toxins fatal for the controls. This proves, he thinks, that the antitoxins in the milk must be absorbed in the stomach. These findings, superposed on those of his previous work in this line, sustain his assertions in regard to the value and the importance of milk from immunized animals in the treatment and prophylaxis of tuberculosis. His experiments are described in detail. He also gives the histories of two children presenting signs of incipient tuberculosis, who recovered complete health while taking a quart of milk from the immunized cows every day. The serum acquired pronounced agglutinating and antitoxic properties. He inoculated rabbits with 5 mg. of live, virulent cultures of tubercle bacilli to the kilogram after two months of feeding with the immunized milk. When killed later, no traces of active tuberculosis could be found in them, while the controls all showed unmistakable lesions. The animals had all gained in weight. One of the rabbits is still living, five months after the inoculation, and in good health, having increased nearly two pounds in weight.

95. Blood Count in Affections of the Liver.—Tonarelli reiterates that the blood count is a valuable adjuvant in diagnosing affections of the liver. In a case of epithelioma of the liver he noticed low hemoglobin and pronounced oligocythemia in connection with hyperleucocytosis and moderate mononucleosis.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ANATOMY, DESCRIPTIVE AND SURGICAL. By H. Gray, F.R.S. Edited by T. P. Pick, F.R.C.S., and R. Howden, M.A., M.B., C.M. New American Edition, Revised and Re-edited with Additions, by J. C. Da Costa, M.D. Illustrated with 1,132 engravings. Cloth. Pp. 1,600. Price, \$6.00 net. Philadelphia: Lea Brothers & Co., 1905.

OFFICIAL CONGRESSIONAL DIRECTORY. For the Use of the United States Congress. Compiled under the Direction of the Joint Committee on Printing by A. J. Halford. Third Edition. Corrections Made to April 1, 1904. Paper. Pp. 447. Washington: Government Printing House, 1904.

DAS WESEN DER PSYCHOSE auf Grundlage moderner naturwissenschaftlicher Anschauung. By Dr. H. Stadelmann. Heft v, Die Paranoia. Heft vi, Die Epilepsie. Paper. Pp. 277. Price, 3.50 marks. München: Verlag der "Aerztlichen Rundschau." (Otto Gmelin), 1905.

GEISTESKRANKHEIT UND NATURWISSENSCHAFT, GEISTESKRANKHEIT UND SITTE. GEISTESKRANKHEIT UND GENIALITÄT. GEISTESKRANKHEIT UND SCHICKSAL. By Dr. med. H. Stadelmann. Paper. Pp. 43. München: Verlag der "Aerztlichen Rundschau" (Otto Gmelin), 1905.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By C. von Noorden, Part vii. Translated by F. Buchanon, D.Sc., and I. W. Hall, M.D. Cloth. Pp. 211. Price, \$1.50. New York: E. B. Treat & Co., 1905.

BIOGRAPHIC CLINICS. Vol. iil. Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, on the Health of Patients. By G. M. Gould, M.D. Cloth. Pp. 516. Price, \$1.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

TECHNIK, WIRKUNGEN UND INDIKATIONEN DER HYDRO-ELEKTROTHERAPIE BEI ANOMALIEN DES KREISLAUFS. By Dr. P. C. Franze. Paper. Pp. 71. Price, 1.60 marks. München: Verlag der "Aerztlichen Rundschau" (Otto Gmelin), 1905.

NEUROTIC DISORDERS OF CHILDHOOD, Including a Study of Auto and Intestinal Intoxications, Chronic Anemia, etc. By B. K. Rachford, M.D. Cloth. Pp. 440. Price, \$2.75. New York: E. B. Treat & Co., 1905.

LA LEPRO. Etiologia, Historia y Profilaxis. Presented at the Third Scientific Latin-American Congress. By Dr. Juan de Dios Carrasquilla. Paper. Pp. 100. Bogota (Columbia): Hernando Santos, 1905.

TEXT-BOOK OF ANATOMY. By D. J. Cunningham, F.R.S. Second Revised Edition. Illustrated with 936 Engravings. Some in Colors. Cloth. Pp. 1,388. Price, \$6.00. New York: William Wood & Co.

NOVOS ESTUDOS sobre a Genese da Ictericia dos Recem-Nascidos. By Dr. O. De Oliveira. Paper. Pp. 12. Buenos Aires: Las Ciencias Libreria de Nicholas Marana, 1905.

PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M.D. Leather. Pp. 216. Price, \$1.00. Philadelphia: The Medical Council.

A DYSENTERIA AMERICA NA INFANCIA. By Dr. O. De Oliveira. Paper. Pp. 39. Rio de Janeiro: Besnard Freres, 1904.



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## Addresses

### TO-DAY'S CRUSADE AGAINST CONSUMPTION.\*

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PHILADELPHIA.

Prophylaxis in pulmonary tuberculosis, that is, its prevention, is of such general interest and of such vital importance that the presentation of this subject in a public address needs no apology. People everywhere are alive to the preventable character of this disease, and never before has the interest in this phase of the subject been more widespread.

Before taking up the subject proper of this paper, however, I wish to present some interesting figures from the United States Census Reports 11 and 12, and from certain German reports. In the year 1890, 102,199 people died of consumption in the United States; a proportion of over 12,000 per 100,000 deaths. In 1900, 111,059 people died of consumption; a proportion of over 10,000 per 100,000 deaths. It will be seen that over a hundred thousand lives are lost a year through this dread disease; or, to put it a little differently, one death out of every ten is caused by consumption. In fact, more people die of consumption than of scarlet fever, measles, typhoid fever, diphtheria, whooping cough and influenza, all together. Fully 80 per cent. of the victims of tuberculosis are in the middle period of life, between the ages of 15 and 50. Let us make a very conservative estimate, which is not as fanciful as it may seem, of the actual loss in cash of this army of sick, incapacitated from earning their daily bread. Putting the average daily wage at 75 cents a day, the loss amounts to \$67,000 a day; or reckoning the working year at 300 days, and estimating the individual incapacity as being for six months only, the loss amounts to \$10,000,000 a year. When to this one adds the expenditure necessary for physicians, nursing, medicine and burial, the figures become stupendous.

Cornet of Berlin gives some interesting figures on tuberculosis for continental Europe, which it may interest you to hear. From 1875 to 1894 the deaths from tuberculosis in Prussia alone amounted to 1,669,587 persons, which is equivalent to the entire population of Philadelphia. The average is about 80,000 a year. In Austria, from 1881 to 1892, a period of eleven years, there were 1,059,300 deaths, or about 90,000 a year. These figures represent a mortality even greater than we have in this country.

Tuberculosis is more fatal to humanity than dysentery, cholera or the plague. The ravages of war are insignificant beside it. In the great Franco-Prussian war, according to Prussian statistics, the number of men killed and dying of wounds and disease amounted to 40,951. Twice as many die each year in Prussia of tuberculosis. In our own Civil War there were 70,293 lives lost in battle. This is only a little over half the number dying each year from tuberculosis in this country.

But monstrous as is this showing of the direct ravages of tuberculosis, it is not all nor even the worst half of the picture; for you must know that tuberculosis attacks every organ and tissue of the body and accordingly travels under many other names. For instance, it is called lupus when it attacks the skin; serofula when it attacks the glands; curvature of the spine, or spinal caries, when it attacks the vertebrae; Pott's disease, when it attacks the hip; white swelling, when it attacks the joints; and so on indefinitely. Who, then, can measure the anguish, poverty, degradation and sin which it causes! Our insane hospitals and orphan asylums, our homes and hospitals for crippled children, our reformatories, prisons and penitentiaries are filled with the indirect results of tuberculosis (Flick).

With such facts and figures before us, there can be little need of discussing the advisability of employing measures to suppress this universal pest. That we should adopt all such measures as lie in our power is a self-evident fact. And when I add that we *can* safeguard against it, and that by certain simple measures we *can* cut down this awful mortality it becomes criminal negligence on our part to neglect them.

The general indications for prophylaxis or prevention in pulmonary tuberculosis may be classified as including two broad aims: first, to destroy the tubercle bacillus and prevent its spread in the dried state; and, second, when once it has gained entrance to the body, to eliminate it as quickly as possible, or inhibit its growth by means of the vital energies (Cornet).

Let us consider, first, the means at our disposal to annihilate the organism. The tubercle bacillus, which is the one and only cause of tuberculosis, is unable, except when cultivated artificially in the laboratory, to increase and multiply outside the body of either human beings or animals. This is partly because it requires high body temperatures, and partly because of its slow growth, as it is crowded out of existence by other micro-organisms which grow more rapidly and luxuriantly. Fresh air and sunlight destroy it. It, therefore, exists among us only from being present in (1) the secretions and excretions of tuberculous human beings, and (2) in the milk and meat of tuberculous animals. The breath of tuberculous patients does not contain the bacilli; it is sterile and harmless.

\* An address given under the auspices of the Henry Phipps Institute, in Carnegie Hall, Pittsburg; and to the students of the Medical Department of the University of Pennsylvania.



The bacillus gains entrance to the human system, first, and most frequently, from tuberculous matter given off by consumptives after it has become dry and pulverized, and the bacilli, diffused in the air, are then either directly inhaled or taken into the gastro-intestinal tract; and, second, from the use of infected meat or milk. Tuberculosis is very rarely transmitted by heredity.

Infection from the use of tuberculous meat or milk is not likely to occur where there is careful inspection of dairies, slaughter houses and herds. It is also guarded against by cooking the food. The great omnipresent danger lies in the inhalation of tubercle bacilli as they float in the atmosphere of contaminated places, halls and rooms of dwelling houses, factories or other poorly ventilated buildings, which have become infected by expectoration of tuberculous material. Other excreta may contain tubercle bacilli. It may be given off from the drying of feces, of pus from areas of tuberculous suppuration, from particles thrown out in the act of coughing; but these are all negligible quantities compared with the all-important source of infection in dried sputum.

Before proceeding, however, with the prophylaxis of the individual, let us for a moment consider the interest of the state in tuberculosis. We have seen from the statistics which have already been given that this matter is of such vital interest and of such widespread importance that, without aid from state and municipal authorities, the profession, even seconded by an intelligent public, is powerless to stop the spread of this scourge. We, therefore, turn, as we have every right to do, to those bodies politic which assure to each and every one of us life, liberty and the pursuit of happiness. The only question to be asked is, How can the state help in this crusade? It can help in three most important and effective ways: (1) By establishing sanatoria for the segregation, treatment and employment of those cases which are too poor or ignorant to take care of themselves and in whose carelessness, squalor and filth lies the chief source of infection. (2) By rendering effective financial assistance to free, private or corporate sanatoria already in existence. (3) By requiring the registration of every case of tuberculosis within its confines.

The state sees and performs wisely its duties in protecting us from the spread of smallpox, scarlet fever, diphtheria, typhoid fever and other contagious diseases, the yearly ravages from which are not individually one-tenth of, and in the aggregate do not equal, the mortality of tuberculosis. Why, then, should it not in certain simple, timely and reasonable ways see its way clear to these more urgent measures. There should exist in all states adequate sanatoria accommodation for the tuberculous poor of the commonwealth. Whether this can best be done by free institutions founded and maintained by the state, or by free private institutions fostered by state aid, is an open matter of dispute. These free sanatoria should be placed in suitable localities in different sections of the state, and should, of course, be under expert medical and sanitary control. There are at present in Pennsylvania, counting city institutions as well as those in the country, at the most 1,000 free beds for consumptives. The present need is for at least five times that number.

One has only to turn to the records of existing sanatoria, of which the free hospital for poor consumptives at White Haven may be taken as a model type, to see the splendid results achieved. Both private and state

aid should be freely given to such institutions; for their expenses are always very great. Their cottages and tents are always filled, and they have demonstrated that this is the best and most effective treatment we have to-day for a large class of cases.

In public or state sanatoria, did they but exist, or in free sanatoria supported by private charity, could they be enlarged and given increased means, the afflicted poor who infest our slums and die miserably by the hundreds could receive the care and treatment they require. What a gain to them! What a gain to humanity at large! It is these overcrowded lodging houses and tenements in the poorer sections of our cities, plague spots, which furnish the ever-present foci and source of the disease!

For tuberculosis is pre-eminently a house-bred disease. It is not contagious in the ordinary acceptance of that term. In the vast majority of instances it is contracted from living in a room or a house which has been previously contaminated or is being contaminated by the carelessness of a consumptive. It requires a prolonged exposure for a successful implantation or inoculation with the tubercle bacillus. There is little if any danger in transient association with consumptives, or transient exposure to contaminated places. Physicians are in little or no danger from their examination of and attendance on the tuberculous sick. You can not contract consumption from riding in a street car, nor even from sleeping a night or two in a berth on a railroad train or boat which has been previously occupied by a consumptive. All such ideas of the danger of consumption come of ignorance and exaggeration.

But it is the plague-invested areas of the slums which keep the disease continually alive; the filth and overcrowding, the squalor and starvation, which furnish the fertile soil for the disease. Many of you know, no doubt, the small tumbledown houses and the dirty tenements in which the really poor live; the cheerless, ill-ventilated rooms, the dark, narrow halls. There was a filthy, contaminated house, not unlike many others, which I happen to recall because it was so near the Phipps Institute. There were six or eight deaths a year from tuberculosis from this place alone. The average number of occupants to a room was four. I knew of two families of seven in two rooms, five of whom had consumption. How long would it take these five people, even if there were no other cases, to contaminate that whole house! The average length of residence in one place among the poor is about two or three months. How long would it take anyone coming into such quarters to contract the disease! Is it any wonder that with these ever-present foci of infection, tuberculosis numbers its victims by the tens of thousands, and that the ranks of this great army of death are always filled?

The period at which consumptives are most dangerous to their families and to the community is when they are far advanced in the disease and are very ill. Then it is that, while expectorating a great deal, they are too ill or careless to take the precaution of destroying their sputum and so guarding others from its dangers. It is especially at this time that they should be removed from their squalid surroundings and placed in city institutions. Sanatoria are necessarily limited to incipient or moderately advanced cases, which will get better in from three to six months, and they must be supplemented by city hospitals for advanced dying cases.

It is in this latter way that the wards of the Phipps Institute are doing such a great work, not only in ar-



resting the disease in apparently hopeless cases, but in taking these cases away from their filthy surroundings just at the time when they are most dangerous to others.

In this connection dispensaries for out-patients or ambulatory cases should also be mentioned. They, too, are most potent factors in the restriction of the disease, because, aside from the benefit patients receive from treatment in dispensaries (and this is very great), they are also taught how to take care of themselves and protect others from infection.

Finally, just a word about registration. It is absolutely essential for the authorities to know the location and distribution of these cases in order that they may carry out disinfectant measures where such are necessary. It is not with the idea of making outcasts of these afflicted poor, but rather with a view of preventing them from becoming such. These cases among the ignorant should be protected from the isolation and neglect to which an unreasonable fear of their condition often subjects them. Registration would not mean municipal interference with private rights or personal liberty, but would enable urgent measures to be taken to clean and disinfect the houses and localities in which the disease is thickest, and to educate the householders themselves as to the real source of the danger.

Let us now take up the question of private prophylaxis or prevention. The interest or duty of the individual in prophylaxis concerns us even more vitally than the duty of the state in this regard. It is here that each and every one of us has the opportunity, and our duty is plain, to help along this great crusade. The keynote of what I shall say in regard to individual prophylaxis lies in the fact that the tuberculous person is himself the origin and source of the danger, and that it is well within his power, by the exercise of a little care and a few simple rules of hygiene, which will in no way interfere with his comfort, to control absolutely the spread of the disease from himself (Cornet).

As I hinted above, the most important element in private prophylaxis is the absolute destruction of tuberculous sputum. It is absolutely essential that it should not become dry and pulverized, thus permitting the bacilli to be disseminated in the air. Tuberculous sputum is, as a rule, enveloped in a viscid bronchial mucus, which contains the bacilli in enormous numbers and retains them as long as it remains moist. When it dries, however, and becomes pulverized, as is apt to occur when it is expectorated on the floor or into handkerchiefs, or rags, millions and millions of bacilli, death lurking in their presence, are disseminated in the air. The danger from the drying of sputum is much more imminent in closed or poorly ventilated places. The bacilli may be directly inhaled as they float in the atmosphere of the infected room or house, or may settle in the dust to be later stirred up and inhaled or carried directly to the mouth by contaminated hands or food and so ingested into the stomach.

Is it possible to guard against this prolific source of infection? The answer is *yes*, and very simply and easily, viz., the absolute destruction of sputum. This can be accomplished just in one way, by the use of paper spitboxes and paper handkerchiefs. In this way, and only in this way, can the consumptive absolutely control the danger. When indoors, patients should without fail expectorate into these. For the street, they should carry paper handkerchiefs and a small paper bag, into which the former are placed when used, the whole being burned as soon as the house is reached. Subjects of this disease should absolutely

avoid spitting into rags or ordinary handkerchiefs, as the sputum dries quickly, and this is not only a source of infection for others, but of reinfection for the patient himself. Inasmuch, too, as during the act of coughing, particles of sputum are thrown forcibly out, a paper handkerchief should always be held over the mouth when coughing.

The use of spittoons should be avoided, because absolute control of the sputum and its sure destruction is not possible under these circumstances. Spittoons lead to carelessness and are very difficult to disinfect. Unless the greatest care is used in burning the contents and the vessel is subsequently sterilized in boiling water, the spittoon is more apt to be a source of menace than of security. Another objection lies in the difficulty of expectorating precisely into a spittoon and not on to the rim or surrounding floor or carpet. One has only to note the condition of cuspidors in public places frequented by men to appreciate the significance of my remarks. Indeed, they are worse than useless and rather predispose to infection than protect against it.

The importance of destroying the sputum can not be exaggerated. Cornet says: "According to my experience, bacilli are found in the immediate environment of consumptives, only in case they make use of handkerchiefs or spit on the floor, and never under other conditions." This is an important statement when one considers that Cornet is one of the greatest authorities in Germany on tuberculosis and was the first to demonstrate the presence of tubercle bacilli in rooms and wards occupied by tuberculous patients. It might interest you to hear how he did this. He placed plates in the places which he had reason to believe were infected, and allowed the dust of the room or factory to settle on them. He then collected this dust and inoculated guinea-pigs with it, with the invariable result that from the dust of infected places the pigs developed tuberculosis and died.

A consumptive's sputum is not only dangerous to others, but to himself. By inhaling fresh tubercle bacilli or swallowing his sputum, fresh foci of infection are set up, on the one hand in the lungs, and on the other in the intestines. He can not be too careful on his own account, and it is a good plan for him to wash his mouth and hands thoroughly before taking food, in order that no stray particle of sputum may be carried into the stomach. On this point Cornet says: "The tuberculous person lives at the center, as it were, of the infectious circle which he himself creates, and so imperils himself more than any other. He really commits a slow suicide by carelessness."

Physicians should discourage the marriage of tuberculous persons. A wife, or child occupying the same room with a tuberculous husband or father, is almost sure to contract the disease. An individual, the subject of tuberculosis, should occupy a room alone.

Physicians and others should wash their hands thoroughly after examining or being about tuberculous patients. Nurses who have to do with these sick can not be too careful not to carry their hands to their lips. It is a good plan when in an infected room or house to breathe as much as possible through the nose.

The bedding, towels and clothing of tuberculous patients should be frequently changed, and when soiled put into boiling water or disinfected by live steam. The vessels of the toilet or table articles should be thoroughly disinfected in boiling water.

The use of disinfectants other than fire, boiling water and steam is unsatisfactory and incomplete. Powdered



lye may be used to put on sputum which has been expectorated on the floor. It does not destroy the bacillus, but dissolves and disintegrates the sputum mass and enables it to be taken up with soap and water. The best disinfectant for the hands is soap and water and a stiff scrubbing brush. In a general way it may be said that solutions of carbolic acid or corrosive sublimate are useless for the hands, as they are when applied directly to the sputum. They serve only to incase the bacillus in a firm albumin coagulum from which they eventually emerge on drying as lively as ever. Chlorinated lime and the milk of lime are useful to mix with contaminated excreta, and whitewash is a good disinfectant applied to the walls of a cellar. For the purpose of disinfecting rooms, however, the best agent is, first, thorough cleansing, followed by formaldehyd gas. Formaldehyd in solution, while inferior to lime, is also useful. We are thus reduced, briefly, to the following measures or solutions:

(a) General measures—fire, boiling water, steam, formaldehyd gas; (b) local measures, absolute cleanliness, soap and water, lye, chlorid and milk of lime and formalin.

Bedrooms and sitting rooms should be frequently aired and have all the sunlight possible admitted. They should not be dusted, but the walls and furniture should be wiped down moist. They should not have curtains at the windows, nor unnecessary hangings nor drapery of any kind. The floors should be bare or only covered by rugs, and the windows, except in very cold or wet weather, should be kept open both day and night. A room or house in which a consumptive has lived and died should be disinfected with as much care, according to established methods in such cases, as if he had died of smallpox or diphtheria.

Perhaps it would interest you to hear how we practice prophylaxis at the Phipps Institute. Each patient is given a sputum cup as soon as he enters the hospital and is instructed in the importance of its use. He is also carefully instructed in other details of personal cleanliness. The hospital building itself, floors, walls and stairways from garret to cellar are wiped down every morning with moist mops and cloths. Each bit of furniture and woodwork is treated in the same way, even the doorknobs are not forgotten. All bed linen, towels, wearing apparel after being used are put immediately into large bags and immersed in boiling water.

Not the least part of the prophylaxis relates to the out-patients to the daily clinics. At the first visit of each patient he is given a sputum cup and paper handkerchief and bags for the street. In his history he replies to the following questions: How many persons in the house? How many sleeping rooms? How many beds? Do you sleep alone? Where do you expectorate when home? When in the street? etc. Then he is carefully instructed as to personal cleanliness and the right manner of living.

Subsequently the home of the patient is visited by an inspectress from the institute, who examines into the conditions as they actually exist and makes a report. She reinstructs the patient and his family and posts the rules of the institute on the wall.

In regard to the second indication in prophylaxis as indicated above, i. e., to inhibit the growth and destroy the bacillus after it has gained entrance to the body, by means of stimulating the vital energies, or the natural immunity of the individual, we must here trespass a little on the domain of the cure or treatment. You must know that all animals, including man, enjoy a certain

amount of natural immunity against tuberculosis; in other words, have a certain amount of natural resistance against its invasion. If this were not so, many more would have the disease than do, for there can be little doubt that the seed of infection is often sown when it does not thrive. This resistance to infection may be increased or diminished by the circumstances of the patient's life. For instance, confinement and overwork, mental worry or strain, loss of sleep and poor food, all contribute to reduce the natural resistance; while a healthy, out-of-door life, with plenty of fresh air and exercise, long hours of rest and good food, all tend to increase the natural resistance of the organism. It is by the application of this principle in the treatment of tuberculosis that we obtain such happy results to-day. The percentage of cures is much greater than it has ever been before.

Tuberculosis is not, as a rule, hereditary in the sense of being directly transmitted from parent to offspring. Rarely, however, it is congenital through the mother. But, on the contrary, the view held by Dr. Flick is that children of tuberculous parents when born after the parents, one or both, have had the disease, enjoy to a much higher degree this power of resisting the infection than do others. So firm a believer is Dr. Flick in this theory that he says he is always relieved to find such a family history in a patient. In other words, he thinks that you have inherited in your organism and blood a greater resistance if your father or mother or your grandfather or grandmother have had consumption before you. The reason why children of tuberculous parents so often develop the disease and die is that throughout their early childhood they are subject to such a constant source of infection in their homes.

You will reply that even when taken from home and the environment of their parents early and brought up elsewhere such children frequently die of consumption. This is true, but the answer is that they have been infected early, not with the disease itself, but with the cause of it, the tubercle bacillus; and have carried in their bodies for years, frequently in tuberculous retroperitoneal or bronchial lymph glands, the germ of the disease. This has only awaited a favorable opportunity to break forth and infect the lungs through the lymph channels or the blood. Such an opportunity is furnished by ill health, or a bad cold, an attack of the grippe or pneumonia, and eventually they perish.

#### RECAPITULATION.

Let me, then, briefly recapitulate and I am through. The most general and fatal disease of mankind is tuberculosis (consumption). One-tenth of all people fall victims to it. In America alone over 110,000 people die of it annually. The disease originates through the inspiration or ingestion of the germ of the disease, the tubercle bacillus. Infection usually occurs through the sputum, which contains millions and millions of these bacilli. It is only dangerous when it dries and becomes pulverized and the bacilli are thus disseminated in the air. This most frequently happens when it is spit on the floor or into handkerchiefs. The drying of sputum is a source of danger not only to those who come in contact with consumptives, but also to the invalids themselves, as they are apt to reinhale or reingest the bacteria which they themselves have expectorated and thus infect portions of the lungs or other tissues which were previously healthy. Public measures for the restriction and prevention of tuberculosis are:

1. The establishment of free sanatoria in the country



for the treatment of incipient and moderately advanced cases, and also farms for convalescents.

2. The establishment of city hospitals for the treatment of advanced cases in the wards, and of dispensaries for ambulatory cases.

3. Registration of all cases and thorough disinfection of all houses in which tuberculosis has occurred.

4. Government inspection of dairies, slaughter houses and herds.

5. The organization of societies for the prevention of tuberculosis.

Measures for the prophylaxis of the individual are:

1. The absolute control and destruction of the sputum. This can only be done if the patient spits into paper spitboxes or paper napkins, which are subsequently burned. Spittoons should not be used.

2. Care and cleanliness in the home, in respect of dust and dirt, and in disinfection of articles contaminated by use.

3. Tuberculous persons should sleep alone. The room should have no unnecessary drapery or furniture and the windows should be kept open both night and day.

Personal prophylaxis is inspired by the fact that the consumptive, if scrupulously clean, is not a source of danger even to his immediate environment. If the above directions in regard to sputum are strictly observed, association with consumptives and the care of them is ordinarily without danger (Cornet).

In conclusion, permit me a word of exhortation. There is nothing done without faith, and you must have faith that these things are so, and that the end for which we are striving will be brought about. Remember that it is not a lost cause or a forlorn hope I am offering you. This is a scourge which can be practically eradicated. Believe me, that time will come.

The bloody war in Manchuria is only more terrible in idea and not in fact. The tens of thousands of human beings given over to slaughter for cause which few of them understood is only more appalling in its barbarity and its futility. But here is a grand cause in which you may all fight without injury to yourselves or loss of life, where you may display a greater and a grander heroism, and where the end and reward is a priceless heritage to yourselves, your children and humanity forever. The civilized world to-day stands aghast at the welter of blood in the far east. At our very doors is a greater depth, whose victims are as a hundred to one, which decimates humanity year by year and century after century.

1404 Spruce Street.

## LED ASTRAY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON PHARMACOLOGY, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, ORE., JULY 11-14, 1905.

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NEW YORK.

A cat, who had lived for years with a family and was beloved by it, on one of his nightly strolls, met an owl. "Oh, bird of wisdom," exclaimed the cat, "how I wish that I had some of your learning! I pray you take me with you on your explorations and be my instructor." "Hoot, hoot," answered the owl; "and what will be my reward?" "I will give you all the mice that I catch," responded the cat, "and I am deemed an able hunter."

From that time on the cat accompanied the owl, sat at its feet and listened to its wise sayings. But with

the newly acquired wisdom the cat grew arrogant; his former associations, his simple life, the fireside where he had so long been welcomed, the gentle care of the housewife, were forgotten by him or disdained.

"I am no longer your pupil, owl," said the cat; "learning has made me your equal; take me into the midst of your wise consorts." "Ta, ta," sneered the owl, flapping his wings; "my consorts can fly; can you?" And away he flew.

The disconsolate cat wearily wended his way back to his old home, but the housewife did not recognize him, and at his place on the hearth another cat was warming himself. Left without a home and without companions, the old cat sighed: "Oh, what avail is my wisdom now?"

The moral of this fable in its relation to medicine of to-day is pertinent. In the cat, before he strayed, we may recognize the medical practitioner of old, beloved by his patients who admired his unflinching devotion to his vocation. The owl, the personification of learning, lures the practitioner from well-trodden paths of duty and leads him astray into unexplored regions. There the old ties which bound him so lovingly are sundered, he loses his identity and henceforth must walk apart. He occupies an isolated position now; the old associations are discarded, and when he yearns to take up his duties of yore he must see, to his chagrin, that his place at the hearth of family affection is occupied by a stranger. Thus he strays aimlessly about, disdainfully regarding humble efforts of others, blaming fate for his misfortunes and failing to see in his shortsightedness that he himself is the cause of his passing. He ascribes his political impotence to social ostracism, and his financial débacle to an overcrowded profession, to the proliferation of healing sects, to the craze of self-medication and to a score of other causes, while in reality he is the author of his own ill-fortune, because he has ceased to be a true physician.

The one who addresses you has always worked in the scientific field; he has for years maintained his own laboratories for biologic-chemical study, and he is now the head of an institute for medical research in the city of New York. With all unbiased experimenters he deeply deplores the trend of modern pathology and the meager, definite and employable data furnished to practical medicine by the laboratory. He has no delusions as to the "science of medicine;" he knows that it is still unborn. Moreover, he is aware that medicine, devoid of its religious, mystic, philosophic, sophistic and so-called scientific embellishments, resolves itself into the art of recognizing disease, predicting its course and ameliorating its various symptoms. Medicine is an art requiring no innate talent and differing from painting and sculpturing inasmuch as it demands no creative force, but may be acquired and practiced by any one possessing clear understanding and common sense. Firstly and lastly, the object of the healing art should be the alleviation of the physical and mental distress of the patient—the true physician is the comforter of the patient. The prognosis takes the second place in practical medicine—the patient and his family are anxious to learn what course the disease will run and how much hope there is for recovery. Thirdly, the diagnosis follows. The least important in practical medicine is the pathology, for which the patient evinces hardly any interest. The patient is really only concerned about the treatment and speedy recovery. How his disease is termed and of what nature the pathologic processes are that take place, these are questions which the patient.



as a rule, considers only when the treatment has proved of no avail. To make a correct diagnosis, of course, requires not a little proficiency, and to this fact, no doubt, the widespread customary expression "the science of diagnosis" may be ascribed. But in all earnestness is it not at least as much an art as a science to recognize a disease? Is it not in most instances the personal experience, bedside experience, by which we differentiate the many symptoms and recognize the disease? Take it all in all, how rarely does the general practitioner resort to test tube and microscope, and still, if he be a master in the art of observation, he will know whether he is dealing with a case of typhoid fever or gastric ulcer or pneumonia.

While diagnostics have taught us many new forms of disease and the discrimination of the various forms, it offers no enlightenment as to the causes and conditions which give rise to a symptom-complex, except perhaps those of infectious diseases.

Again, two physicians may have gone through the same course of instruction; they may have seen an equal number of patients affected with similar diseases; they may both be equally well versed in the system of recognized diagnostic principles, but one may be endowed with a finer touch, with a finer ear and a keener perception—faculties which make the artist. He thus becomes a more clever diagnostician. He is the greater artist of the two.

Even the foremost of diagnosticians would not claim that his special branch was a perfect science. He is fully aware how much depends on the personal equation. He has very little real use for one-sided laboratory diagnosis, and only in doubtful and disputed cases will he accept the verdict of the fledgling of the laboratory. He is the artist and is, therefore, impressed with his own importance. He surpasses his colleague, not on account of his greater learning, but through his greater skill, the result of his finer sensory perceptions. If diagnostics were really a complete science in itself, then all clinicians possessing the same amount of experience would be equally good diagnosticians. But we know the fallacy of this presumption.

And what obstacles do we, who strive to make diagnostics a science, encounter! What an enormous amount of clinical material we must have observed, what a mass of pathologic and chemical studies mastered ere we can boast of having attained even the minutest progress in the method of diagnosis which serves to perfect the recognition of but a single characteristic symptom! And, finally, how often, after all, can a perfectly positive diagnosis be made when an organ whose situation makes it unreachable by ear or eye is involved? If all diseased organs could bear witness—I mean not only those which have been subjected to necropsy, but also those which again have become sound—what would remain of our glorious science of diagnostics? We who work in laboratories, in clinics and at autopsy tables must concede, if we are sincere, that the greater part of the diagnostics of to-day really belongs to the sphere of art and not to science.

Let us linger for a moment in the domain of pathology and ask what service, if any, it has ever rendered to the common every-day practitioner of medicine, for it is of him and not of the different specialists I speak. If we come to the point, it is in reality nothing else than the antitoxin for diphtheria which pathology has furnished him. Everything else emanating and taking its root from the science treating of the nature of disease

for the purpose of curing the latter has proved ephemeral, in vain, illogical and unscientific.

And now to the prognosis, which, in my estimation, is next to the treatment, the alpha and omega of every patient. Of course, it should be based on the diagnosis of the disease, as has again been stated by Dr. Dock<sup>1</sup> last year in his excellent oration before the American Medical Association. It goes without saying that this would be the desideratum. The case can not always be accurately diagnosed, however, especially at the onset, and not every individual practitioner who is an optimist and a fair therapist is endowed with the proper amount of precise reasoning. In the same address, on the other hand, is advocated the principle that "in practical prognosis we must individualize, just as we have to in therapeutics, with the patient's welfare ever the object of our activity." Avowedly, prognosis thus must be looked on and fostered as an art primarily and not as a science.

And therapeutics—what has this main branch of medicine to do with *de facto* science? Very little, indeed. It is true, we presume, we know at this day why quinin acts in malaria; still the drug was prescribed with the same good results and millions were amassed in its manufacture many, many years before Lavan's discovery of the plasmodia; we also pretend to be acquainted with the specific activity of a number of other drugs, but our forefathers in medicine, not knowing their specific qualities as we suppose we do, have employed them for similar purposes as we on the threshold of the twentieth century. It is certainly most gratifying to understand the pharmacodynamics of a drug—I mean the physical and chemical alterations it elicits in the organism—to know why it exerts a beneficial influence in a specific case. The practitioner, as a class, has never evinced a special craving for this sort of knowledge. He has always been content to know that a certain remedial agent was effective in reducing a certain symptom or set of symptoms. Why this should be so was little concern of his.

All peoples at all times have endeavored to mitigate disease. The sick were nursed and treated ages before one had the slightest conception of the structure of the human organism, not to speak of the various functions. The ancient priest-physicians, though, were adepts in the art of healing, for the people confided in them and the temples of antiquity were resplendent with the gifts of the grateful patients. Systems of medicine have come and gone; one school, one sect, has superseded the other. In principle and theory they might have differed widely; in practice they might have employed discrepant means; their object, however, was always the same: to relieve the unnatural, the distressing phenomena. Internal therapeutics, at all times, in spite of occasional attempts at rational medication, has always been aimed at the symptoms and not at the underlying factors of the disease. And how could or can it be directed against the cause of the disease when this was and is not understood? In this, the bacteriologic era in medicine—an epoch solely due to the perfection of the microscope, the introduction of stains and the methods of pure culture—the subject of rational medicine is again foremost in the mind of the medical fledgling. But what about his rational treatment? Well, for that cough he prescribes codein or some expectorant, for that fever some coal-tar product, for gastric indigestion

1. The Journal A. M. A., June 11, 1904, p. 1540.



(and almost every case of gastric indigestion which I ever encountered was due to carbohydrates) pepsin, and for constipation—well, once in a while cascara sagrada, because one can not always keep the patient on cathartic pills or calomel.

We are not at all justified to speak at this day of our rationalism in the practice of the healing art, for what we are practicing is everything else but rational medicine. The treatment afforded by surgical measures may be rational in as far as it is directed against the cause of the affection. Internal medicine, on the other hand, is still helpless and has to combat the symptoms or the condition. Of course, the adherents of the modern medical fetiches, bacteriology and serumtherapy, if at all, will admit this with great reluctance only. The new graduate recognizes these facts instinctively when he wants to pose as a surgeon. I can not concur with the prevailing opinion that the young physician takes to surgery or to one of the surgical specialties merely on account of the probably greater pecuniary benefit he may derive from their practice. Besides apishness, the feeling of grandeur, the illusion of a resplendent social position and a mediocre intellect, I think it is nothing else but the therapeutic uncertainty and agnosticism fostered especially by the modern pathologic school in which he has grown up that prompts him to cast his lot with quick-results-yielding surgery.

Almost the entire science of therapeutics is nothing else but more or less refined and varnished empiricism, all protests to the contrary notwithstanding. The better a practitioner has trained himself to administer to the immediate needs of the patient the better a physician he is. Those who are adherents of the Vienna School of Medicine, the cunctators in therapy, may have a proper conception of the futility of influencing the course of disease by remedial measures. They may be close observers and shrewd diagnosticians, which by no means stamps them better practitioners, practitioners in the sense of alleviating the patient's mental and bodily discomfort. Is it not quite inhumane to follow to the letter the dictum of Skoda, who said: "We are able to diagnose, describe and understand a disease (when it runs a well-known typical course, I would add), but we must not believe that we are able to cure it by any of our remedies?" Of course, we can not materially influence disease in the great majority of instances, but we can mitigate its symptoms very frequently. The followers of Skoda wanted to be rational, and consequently did not even make an attempt to treat the patient. Was not Boerhave, with all his shortcomings, the greater physician who treated symptomatically and who, when presenting a case at his clinic, could exclaim to his audience: "Hear ye, and admire the power of the medicaments; we have conquered all the symptoms!"

Skoda, on the one, and Boerhave, on the other side, represent the extremes in school-therapeutics of all times. And yet not quite a century and a half intervened between the advent of the two. On both sides consciousness of the ignorance concerning etiologic treatment: on the one side, in consequence, therapeutic despair, lethargy and nihilism; on the other, overestimation of therapeutic influence, drug delusion and enthusiasm and polypharmacy, and on both sides a good deal of credulity, unjustified hope and mysticism.

We know now that most, if not all, the so-called infectious diseases are self-limited. The effect of remedial measures on the underlying condition is nil, or almost so, in every instance. But is this any reason

why we should leave the patient suffer? Should not we try to relieve his pain, his fear, his dyspnea, and the many other distressing phenomena? As a matter of fact almost every one of us follows the precept of symptomatic therapy; the very moment, however, we play the good samaritan we are decried by the so-called medical scientists on account of our empiricism, for we employ drugs of the ultimate action of which—in the light of our day—we know but very little.

Possibly I have painted somewhat too darkly, possibly I discriminated too sharply between science—real science—and the healing art. Yet it must be plainly evident to everybody who cares to see that the light of universal science, notwithstanding all radium fanaticism, thus far does not shine, and may never penetrate, into the depths of life and disease, and that the practice of medicine of to-day differs only in degree and not in character from that of our immediate predecessors.

The naive practitioner does neither know nor would he believe this. He imagines himself a man of science and chases after phantoms just in vogue. He weaves theories which can not be proved and swallows everything of a pseudoscientific character as long as it bears the stamp "made in Germany." If a theory, and be it ever so abstruse, absurd and incomprehensible, hails from the land of Virchow, Koch and Billroth, we on these free shores receive it with profound respect, reverence and open arms, and soon become interested in it, more converted to it than its propounders. Verily, another case of being more catholic than the pope.

In his search for that which he considers science—hypothesis and a series of mostly misinterpreted facts which are utterly useless to him in his practical work—the physician of to-day forgets that he is, above all, the confidant and the comforter of the patient and his family. He forgets that his purpose should be to help the sick and that he must be up and doing. He forgets that the sick individual cares little for the bacterium babble and his numberless theories, but that he desires to get well and to be relieved from aches and pains as speedily as possible—at once. He forgets that he is dealing with an individual and speaks of him as his case only. In his ardent quest for that putative science he has lost the most potent charm of the physician—sympathy, that eternal sympathy for the suffering which is often more effective in alleviating the patient's condition than all pain-soothing remedies. He has become coarse-grained and does not seek to hide his callousness from the patient; on the contrary, he tries to impress the patient with it, for is this not the surest way to inspire him with awe and reverential respect for himself, the master of the situation who has deeply quaffed of "science," with which he is saturated?

Can we marvel, then, that his practice dwindles from day to day? Is it thus surprising that we hear of "the passing of the family practitioner" from one end of the country to the other? Small wonder that the refined and sensitive public shuns him by degrees, delving instead into mystic lore and seeking admission into mystic sects! Need we wonder why the lower classes do not consult their physician any longer and buy their patent medicine trash wherever they can procure it cheapest? The patient probably does not doubt the physician's learning, perhaps he would have himself treated by him and pay the (alas!) too modest charge if but a little sympathy, a little mental comfort, were thrown into the bargain.

Sympathy and the skillful execution of his profession



make the successful practitioner. Where the physician who is endowed with common sense and humanitarian instincts puts up his tent—there mystic seats and their systems of healing find little following, there the manufacturer of patent medicines reaps no benefit. Such a physician still enjoys the confidence of his patients; he is the father-confessor of the entire family, he is a member of the town council, collects his bills and is a man among men. What a different picture unfolds itself where the fetish of science with its concomitant huffiness, airs and disregard for the patient's welfare has taken possession of the pupil of *Æsculapius*! There we find a few professors riding in automobiles, drinking champagne and having the pecuniary means to imbibe annually at the fountain the wisdom of Teutonic phantasts, but there we find domiciling in the unfashionable quarters lean and round-shouldered individuals with empty pockets and stomachs waiting for patients in whom they want to inject imported serum; they vegetate and become paupers, or make a dash for liberty and turn book or medicine or insurance agents, or anything else, but hardly ever become true and ideal physicians, because it is not in the nature of the beast. These are the men who in youthful idealism have embraced what they thought to be a definite science, but it proved a fetish which estranged them from their real calling and spoiled their useful career.

For the sake of argument, let us for a moment waive the question whether that which is considered scientific medicine is a real or pseudo science. Unfailingly we will come to the conclusion that too much hypothesis in medicine is averse to the calling of the physician, as it is averse to the devoted exercise of religion. A physician need not, nor should be, the possessor of much complementary or theoretical knowledge; if he has the gift of<sup>2</sup> quick and intelligent observation, together with the ability of associating ideas, if, in short, he is a man of shrewd common sense, it is by no means necessary for him to possess high erudition and scientific attainments to become an excellent practitioner of medicine. A physician of that caliber, even without marching in the limelight of scientific supremacy, may be an ornament to his profession. On the other hand, the physician as a so-called scientist may contribute the most learned (though abstruse and highly hypothetical) dissertations on the special subject of explorations which he has chosen as the task of his life; his presumed, scientific attainments may far exceed those of his humble confrère, the common-sense practitioner; and yet, for that matter, there is no conceivable reason why he should be a greater or even as great a factor in the real progress of medicine. On the contrary, it is more than likely that he so binds himself up with that comparatively narrow circle of vision that pertains to his special branch of science that he is likely to approach everything from his own narrow standpoint, look at everything through spectacles clouded by personal prejudice, try to explain matters of general import—so far as he attempts to explain them at all—from his own special point of view. He may, in fact, dote with the greatest possible application and fervor, with the zest and enthusiasm of the true scientist, on minute details, but fail in the rudimentary principles of the common-sense practitioner. He lacks the power of initiative and force of creation. If nature had ever bestowed these priceless gifts on him he is almost certain to lose them

through one-sided study, through concentration on one more or less theoretic subject.

Representatives of theoretical medicine, such as these, will but scantily contribute toward genuine progress in spite of the isolated discoveries which may, at distant intervals, light up their monotonous plodding like an unexpected shooting star in the dreary black of a dismal autumn night. When these hypothetists have once enshrouded themselves in their pet theories and notions, for the nursing of which they may have spent the best part of their lives, it is very difficult and almost impossible for them to give the same up in favor of results attained by the genius of others, faulty though their own researches have proved. In this respect they are veritable champions of retrogression; they obstinately cling to their own doctrines in which alone, they think, salvation lies enconced, and thus produce a stagnation on the very field the cultivation of which they profess to have elected as their special domain. They thereby brand themselves as representatives of a doctrinary science—a science which has ceased to live, and which in reality is no longer a science from the moment that it is recognized to be false. Essentially great questions which have a true bearing on the health of the individual, the health of the nation, the health of the human race, have never been asked by these representatives of theoretic knowledge, but rather by those practical men who have no time for specifically theoretic pursuits. From this point of view it would appear that the general practitioner who mixes with the people, who looks into the houses, into the beds, and into the stewpan, who knows the world at large, and also the particular world in which he moves, who not only observes things, but also associates them with surrounding circumstances, can contribute far more food for the solution of human problems than his brother who works with microscope and test tube. It is no cause for wonder, then, that the really great questions affecting the natural sciences have never been asked by professional scientists, nor is it cause for wonder that so many medical discoveries have been made—not by those who have devoted their lives to the confines within which the discoveries ranged, but by the unknown practical men who can not boast the highest scientific education, and whose names are not always chronicled on the scroll of fame.

And now you know whom I consider the ideal, the true physician. It matters not to me what he prescribes to accomplish his immediate end, so long as he knows what he is prescribing. I don't care whether the drug which he employs is made in Germany or whether it is compounded in this country, whether it is patented and trade-marked or whether it is simply trade-marked. In this respect, all eons look alike to me. If he finds it convenient to prescribe or dispense a combination of known composition bearing a copyrighted name, that is simply his concern and nobody's else. It is a peculiar taste, I avow, to order something which is trade-marked and which could be dispensed for a small fraction of the price the patient has to pay for the copyrighted article. However, this is the individual practitioner's concern and not mine. He may have weighty reasons for preferring the put-up preparation. Again, will the patient be the financial gainer by obtaining a combination of the doctor's specification, will the dispenser not charge about the same amount for, say, twelve powders whether they contain the copyrighted or a similar ar-

2. Part of the following has already been published elsewhere.



ticle compounded in his shop? To me, the entire question of patented and proprietary medicines of known composition is a contest between the manufacturer and the dispenser, whether the one or the other shall pocket the profits. It is a humane trend to sympathize with the under dog, and thus we offer our moral and material support to our friend, the druggist at the corner.

We physicians are mighty queer people. Up to the brim we are full of inconsistencies. We may be starting in practice and get along with two meals a day, but we fail to send our bill to the well-to-do father of a colleague, or to the political boss; we are timid and shy, but agitate with all our energy for the erection of new dispensaries and hospitals; we dismiss our colleague's diagnosis of a case with a shrug of the shoulder, and are ourselves supersensitive what others think and say about us; we tear to pieces our fellow practitioner's literary attempts, but we are staunch believers in the moloch of medical authority. We are going astray because we are inconsistent in our daily life, because we have ceased to believe in ourselves. We may live to see our débacle because we are misconceiving our calling, because we have lost our understanding for the real needs of the patient, because we leave the drying of his tears to a nurse, because we make our night calls by telephone. We have so little time for the patient, in the morning we have to make an examination in the laboratory, must be in the surgical amphitheater in the afternoon, must not fail to discuss our neighbor's paper—for he is our good friend—at the district meeting in the evening, and then we must not forget to see the boss, the senator, on account of that job with the railway company.

Orthodox medicine of to-day, with its shallow doctrines—masquerading as “science”—has estranged us from our real calling. Let us tear off that orthodox yoke! Let us preserve our individuality! Observe for yourselves, think it out for yourselves, give your sympathies to your patient and give him your help and don't wait for a specific curative serum. Drop that which medical autocrats have presented to you as “science”; it is an encumbrance on your energy as true physicians, it makes you uncertain in your therapeutic activity, it destroys your belief in the efficacy of your symptomatic procedures without bringing you nearer to the goal of rational medication.

I respect the heroes of the microscope and the biologic test; they, of course, are in deep earnest about their work; they are optimists and Don Quixotes, but their little field is narrow and entirely devoid of paramount stable facts. The meager results which they have obtained to this very hour are absolutely insufficient to build thereon the superstructure of medical treatment. Will ever their microscopic and biologic testing create for us a new paradise where disease finds its alleviation and cure? Does not the true man of science feel rather sceptical about this? Is not the true man of science a good deal less hasty in proclaiming to a credulous world a new-found fact, is he not one who refrains from enunciating vague speculations thereon?

The more hasty such professional investigators, the more insincere and unscientific they are. Those in subordinate positions, as a rule, are the more conservative ones; they work and are in earnest. It is different with a great number of inflated pygmies in the professorial chairs. Comments made by the *Electrical World and Engineer*, May 27, 1905, anent hasty scientists fit their case admirably. Says this editorial:

It is now near two and a half centuries since Isaac Newton, in one of the flashes of intuition that form man's best title to mortality, saw disclosed to him the key to the mysteries of space. It was a half lifetime later when, through years of patient study and waiting, data enough had come to his hands to clear his conscience in announcing his discovery. For very truth's sake he gave to the world no half-baked hypothesis nor ventured to exploit with specious arguments a doctrine which did not quite meet all the facts. We do things differently nowadays. How would the great discoverer have fared had he occupied the chair of physics at ——— University, where a monthly blank is forwarded to heads of departments to be filled out with reports on the “researches” they have completed and the number of lectures they have given before women's clubs? Would he have held his peace, or would he have sent for a reporter of the *Daily Saffron* and have filled him full of speculations on the bounds of space and the origin of life? Would he have cut up his great hypothesis into stove-lengths, as it were, to furnish his hustling pupils fuel for frying their theses? Would we have had Prof. I. Newton and Thomas Snoobs, B.S., on “Gravitation in Jupiter,” and Prof. I. Newton and Richard Roe, A.B., on “Gravitation and Saturnian System,” and so on *ad nauseam*? And would the president have sacked him for insinuating that something in the universe had a more consistent pull than the chief benefactor?

These remarks, called forth by a number of articles on the characteristics of radium, are continued, thus:

We are far from denying the possibilities of the working hypothesis assumed by Rutherford and his confrères, but what would Newton have done? Would he have left, before developing the results of his hypothesis, any stone unturned that might give him light on its fundamental correctness? Profoundly interesting as are theories of the genesis of the so-called elements, they furnish no adequate excuse for neglecting to examine the elements at hand. Take, for example, the substance radium itself. There is good reason to assign it a definite place among the other elements, and a rational set of chemical and physical properties quite apart from its radioactivity. *Who, of all those who have theorized about its radiations, have any knowledge of the physical properties of the metal,*<sup>3</sup> with the bromid of which they are daily working? *Is there anybody, indeed, who can affirm from actual knowledge that the metal radium is radioactive at all?*<sup>3</sup> Radium salts are, unhappily, costly, the latest newspaper quotation being \$3,000,000 per ounce, but the subject is surely of sufficient importance to justify some one in trying to produce a few milligrams of the metal. Again, it seems to be well established that radium salts give off heat spontaneously and steadily, as an accompaniment to their radioactive activity. But there has not yet been any adequate investigation of the actual cause of this thermal energy.

We have had any amount of speculation based on the assumed endothermic properties of radium, including a voluble explanation of the source of the sun's heat and the interior temperature of the earth, but there has not been yet a really serious attempt to determine whether the phenomenon itself is primary or secondary—due to disintegration or to the return of energy received from exterior sources. Everybody seems to have jumped at the former conclusion as the striking and sensational one without further discrimination. Likewise, in the case of radium emanation, we have on good authority the appearance of helium as a decomposition product. Radium has a definite spectrum and so has helium, but, although the spectroscopic study of this mysterious evolution of helium ought to show clearly and certainly the whole progress of atomic disintegration, no word has yet come to enlighten us. The true and faithful student of radioactivity seems to hold old-fashioned chemistry as anathema, and the spectroscope, that magic wand that has turned back the veil from interstellar abysses, as a deceit of the devil. Now the subject is a tremendously important one—we began this comment intentionally with a reference to gravitation—and it deserves the best efforts of the greatest investigators. The

3. Italics mine.



thing which we would impress on them, however, is that hypothesis needs to have its wings clipped a bit just now. It is well to remember Newton's immortal lesson in scientific self-restraint, and to make sure of one's foundations, before building a new heaven and a new earth from anything so elusive as radium emanation.

Yes, hypothesis needs to have its wings clipped a bit just now, especially when it springs from shallowness and is conceived in insincerity. Hypothesis, masquerading as science, is the fetich to force you in the bondage of those who like to have themselves called authorities, but who are too indolent and too sterile intellectually to do original work, to do anything for which cash is not forthcoming immediately. These are the drones in the domain of medicine who arrogate for themselves the meat and magnanimously leave for you the bones. These are the men who have invented for you the worship of the new fetich, "medical science;" these are the men who have led you astray. Like hornets disturbed in their nest, they will resent the intrusion and with the poison of their stings will seek to render futile the purpose of this address.

And once more I implore you: Away with the fetich, down with the false gods!

## Original Articles

### SINUS THROMBOSIS.

A REPORT OF TWO CASES, WITH MASKED SYMPTOMS.\*

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In presenting these two cases of sinus thrombosis, I desire to call special attention to the following points:

1. The thrombosis in each case, although of otitic origin, was masked by the symptoms of the other diseases,—in the first case by coexisting typhoid; and, in the second case, by a history of malaria.

2. The so-called classical symptoms of sinus thrombosis, namely,—chills, fever and sweats, were not present in either case.

3. The thrombosis in each case was suspected by certain irregularities in the history which led to uncovering and carefully examining the sinus, after the mastoid ablation.

4. The thrombosis was demonstrated in the first case by purposely opening an apparently normal sinus.

CASE 1.—E. H., a sailor aged 38, was admitted to the Los Angeles Infirmary Feb. 21, 1904, with a temperature of 104.2 and the general symptoms and signs of typhoid fever.

*History.*—The course of the disease after the patient's admission to the hospital was typical. He was irrational at times and gradually lost his weight and strength. On March 15 a sudden rise of temperature to 104 called for an examination of the ear, from which there had been a purulent discharge. The temperature for the preceding two weeks had been regular, from 101 to 102 in the afternoons and from 99 to 100 in the mornings. The aural suppuration dated back two and a half weeks and followed earache of a few hours' duration. There had been a little pain off and on in the affected ear. The discharge continued and the ear was being carefully syringed. The patient had complained very little of the ear, and it was considered a doubtful factor in the rise of the temperature.

The notes made at the time of my first examination, March 15, are as follows:

"Temperature, 104; pulse, 74; general condition bad; emaciated and weak; answers questions rationally when aroused,

but soon relapses into a typhoid condition. The examination of the ears shows a purulent discharge from the left ear, sagging of the posterosuperior canal wall and an inflamed bulging ear drum, with a small insufficient perforation. The mastoid shows no edema or redness. Very slight tenderness is elicited on deep pressure over the antrum and tip of the affected side. The right ear is normal. The nose and throat are in good condition. The eyes are normal. There are no motor or sensory disturbances."

The quantity of the middle ear discharge and the sagging of the posterosuperior canal wall rather indicated mastoid involvement, in spite of the lack of pain or marked tenderness. The drum membrane was freely incised on the following morning to obtain better drainage, in the hope that a mastoid operation could be deferred until there was some improvement in the typhoid condition. During the next three days the temperature fluctuated, the morning temperature being from 99 to 100 and the evening temperature as high as 105. There were no chills or sweats, no vomiting, and the rise in temperature was regular and occurred in the evening hours. The discharge from the ear was profuse. A mastoid operation was finally considered necessary.

*First Operation.*—Mastoid, March 19, four days after the first aural examination. The mastoid cortex was found hard and not perforated. The superficial cortical cells were full of granulations, but contained no pus. The deeper cells, especially those of the tip, were full of pus. When the antrum was opened several drops of pus welled up. The zygomatic cells contained pus and granulations. A complete ablation of the cellular structure of the mastoid was made down to the hard bone covering the sinus and to the inner plate of the middle cranial fossa. The cells over the sinus groove contained mucopus. The bony plate covering the sinus was found to be hard and intact from the knee downward. Behind the knee it was found somewhat softened, and at this point the sinus was purposely uncovered and examined. It was blue in color, soft, and except for a slight capillary injection of the dural coat, it was apparently normal, and, therefore, was not opened. The mastoid cavity was packed with iodoform gauze and the usual dressing applied.

*Postoperative History.*—During the next three days the temperature varied from 99 in the morning to 103 in the afternoon. The mastoid wound was dressed and found clean on the second day. On the fourth day the evening temperature again rose to 105.5 without any chill, vomiting or other disturbances, except pain in the opposite shoulder. This pain had been complained of for several days and was so intense as to require morphia. There was no pain in the head, and no pain or tenderness on either side of the neck. Careful examination excluded pulmonary, cardiac or abdominal complications as possible causes of the irregular fever. As the fever indicated septic absorption, it was determined to open the lateral sinus, which, in spite of its normal appearance, might contain a thrombus. On account of the weak condition of the patient the sinus was opened without moving him from the bed. The usual precautions were taken to prevent infection and to control the bleeding. The sinus, where previously uncovered at the knee, was opened with a knife and found thrombosed.

*Second Operation.*—Resection of the lateral sinus and internal jugular vein. March 24, under ether anesthesia. The bony plate covering the sinus was rapidly removed from the knee downward, as close as possible to the bulb, and behind the knee for about one inch. The sinus wall was thin, not inflamed, and would easily pass for normal. The wall was incised from the opening made at the knee, downward as far as possible and soft clots gently removed. The upper end of the sinus was then everted of soft clots until a fresh gush of blood occurred from the torular end. This was controlled by pressure. An attempt was then made to establish a return flow from below by gently evertting the clots from the bulb end of the sinus. Failing in this, it was imperative to ligate the internal jugular. The vein was rapidly exposed and ligated above the omohyoid muscle, and resected from this point upward and ligated about one inch above the facial branch. The part of the vein removed was not thrombosed

\* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



and no effort was made to resect the thrombosed portion at the jugular bulb. The pulse became so weak during the operation that it was necessary to give an intravenous injection of hot saline solution (130 F.) at the elbow. Hypodermic injections of adrenalin were also given. The neck incision was partly sutured, the usual dressing applied and the patient returned to bed.

*Result.*—The reaction from the operation was fairly good. The temperature, however, continued high and irregular, but without chills or sweats. Rather as an experiment, anti-streptococcal serum was used by hypodermic injections, 20 c.c. at a dose every twenty-four hours during the next four days. No benefit was observed. Low, muttering delirium was more or less constant. Death occurred on March 29, six days after resection of the thrombosed sinus and vein.

*Autopsy.*—The notes made at the autopsy are as follows:

"The body is considerably emaciated. There is a large bed sore over the sacrum. The mastoid wound is clean; the torcular end of the sinus is plugged by a small, firm clot at the cut end. From the jugular bulb a soft clot is pulled out; it does not show septic disintegration. The dura is normal except for some congestion. The cerebrum and cerebellum are normal. The neck wound is clean and free of pus. The ligated upper end of the jugular vein, near the bulb, contains a soft clot. The lower end of the jugular is securely closed by ligature and is normal. The small intestines show several typhoid ulcers, each the size of a dime, near the ileocecal valve. There is no perforation of the intestines and no evidence of hemorrhage."

Microscopic examination of the clot from the jugular vein by Dr. Stanley Black, Medical Department of the University of Southern California, was negative; the examination of the typhoid ulcers showed them to be of several weeks' duration and without any apparent tendency toward healing.

*Remarks.*—The cause of death was septicemia, resulting from the sinus complication. The septicemia probably had commenced, judging from the temperature chart, as early as March 15, when I first saw the patient. The active typhoid symptoms and the weak condition of the patient obscured the sinus symptoms. The sinus was probably thrombosed at the time of the first operation, when it was uncovered and examined, but not opened. That the sinus wall showed so little evidence of its true condition is possibly due to the fact that the thrombosis did not result from direct infection of the wall by continuity, but through some of the venous channels of the mastoid opening into the sinus.

The second case of sinus thrombosis presents a very different history in nearly every respect and the thrombosis would not have been discovered except for an exploratory mastoid operation rendered necessary by reason of a vague malarial history following an acute aural suppuration.

*CASE 2.*—A. G., a man, aged 20, was referred from the medical to the ear clinic of the Medical Department of the University of Southern California on account of aural discharge and some mastoid tenderness. He had sought and received medical treatment on account of chills and fever, the ear complication being a complication of secondary importance.

*Examination.*—At his first aural examination, March 20, 1904, Dr. W. D. Babcock, in charge of the ear department, found some tendencies on deep pressure over the mastoid and turned the case over to me, his assistant, for treatment. The patient stated that his ear trouble dated back two months and a half. It began by buzzing noise and deafness in the right ear. The discharge began six weeks later, without much pain, and still persisted, although gradually diminished in quantity. He claimed to have had a chill three or four weeks before seeking treatment and thereafter a chill every day or two. The examination notes made April 1, are as follows:

"The general condition is good except for some pallor. Temperature, 99; pulse, normal. He complains of attacks of chilly sensations and sweats, and severe pains in the mastoid during the past few days sufficient to prevent sleep. Examination of the right ear shows a scant purulent discharge; a dull red drum membrane, with an oval perforation in the

lower anterior segment, no bulging of Schrapnell's membrane; no sagging of the postero-superior canal wall; no granulations. (The appearances were those of an acute purulent otitis media that was subsiding). The hearing is considerably affected in the right ear,—watch, negative, conversation is questionably heard, stage whisper 6 inches; speech 1 inch. The mastoid shows no redness or edema; slight tenderness over the antrum and tip, but acute tenderness on pressure over the emissary vein. The left ear is normal."

The history of chills and sweats for which the patient was being treated in the medical clinic, was then looked into. He stated that the first chill occurred three or four weeks before, while in Mobile, Ala., and that chilly attacks and sweats had occurred irregularly since then. The attacks were not well marked. There were no sharp paroxysms. He had been taking quinin for several weeks. The tongue was pale and flabby; skin and conjunctiva anemic and spleen slightly but palpably enlarged.

*Blood Examination.*—Blood smears were made and sent to the laboratory for examination for malarial organisms, and the patient told to report on the next clinic day. The laboratory report stated that blood smears from this patient had been sent in from the medical clinic and malarial organisms recorded as present.

*Course of Disease.*—By April 19 there was no change in the condition. Vague pains in the mastoid and head persisted. Several examinations failed to show any fever. The aural discharge had about ceased, but the tenderness at the posterior border of the mastoid was quite acute. For this reason, a mastoid operation was advised, after consulting with Dr. Babcock. It was explained to the patient that much or little might be found; and his consent was obtained in writing.

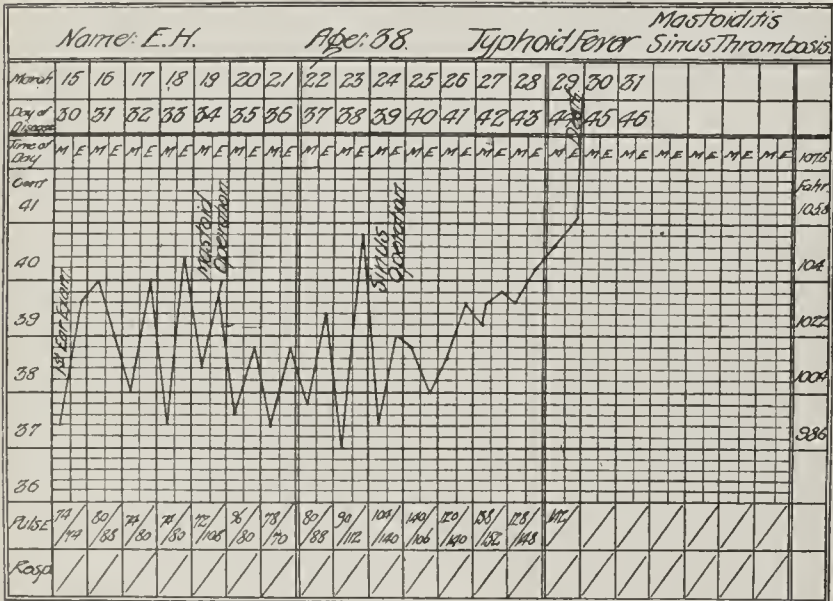
*Operation.*—April 10, mastoid ablation; resection of the sigmoid sinus. The mastoid cortex was found hard and normal. The subcortical cells were almost obliterated. Hard bone was removed with a gouge for a considerable depth before any mastoid cells were found. These were small, and full of granulations that bled freely. Deep in the tip a cell of some size was opened and contained cheesy material. The antrum was opened through partially sclerosed bone and found to be small and to contain some granulations. A posterior straight incision was made and the flaps reflected. The cortex over the sinus was hard and thick and was removed with a gouge, exposing a small cavity of cheesy material about one inch behind the bony canal. A complete ablation of the mastoid was done down to the hard bony plate covering the sinus and above to the bony plate of the middle cranial fossa. The latter was normal and the dura was not exposed. The cavity was dried and examined. Except for a dark discoloration of the bony plate covering the sinus, deep in the tip, there was no evidence of any diseased structures not already eradicated. The findings had proved to be those of resolving mastoiditis, sufficient to account for the mastoid pains and tenderness. It was remarked that the pathologic changes were those that tended to, and would likely have resulted in, sclerosis of the mastoid.

The history of chills and sweats, however, prompted us to uncover and to examine the sinus in order to be assured that it was normal. The cheesy mass that was found and cleaned out at the tip and the dark color of the bony groove behind this cavity pointed to this region of the sinus for examination. The overlying bone was carefully removed, whereupon some little pus escaped. The sinus was then uncovered from this spot upward to the knee. The wall was found to be covered with a thick, yellow exudate. Below, where the pus came from, there was a small protuberance. At this point the wall was ulcerated, and some of the pus evidently came from the lumen of the sinus. The outer table of the skull was removed along the horizontal limb of the sinus backward from the knee to the extent of 1¾ inches, before there was any appreciable decrease in the amount of fibrino-purulent exudate that covered the sinus and adjacent dura. This exudate and thickening of the dura was so great that it was difficult to make out the margins of the sinus. The sinus was collapsed, as was also the emissary vein, which could be made out. The descending limb of the sinus was incised



from the ulcerated perforation below upward to the knee, and found empty. The horizontal limb of the sinus was gradually incised on a grooved director to the extent of 1½ inches. The walls were thick, collapsed, and seemed, as it were, glued together. A grooved director, followed by a curette, was passed backward and toward the torcular to the extent of 1½ inches further, without any flow of blood resulting. It was evident that the lateral sinus was obliterated, probably, as far as the torcular; and it was considered unwarrantable to open the sinus further in this direction. As the pus was in and about the descending part of the sinus, an effort was then made to obtain a flow from below. The sinus' outer wall was cut away and opened as near the jugular bulb as possible. A small curette was gently passed into the bulb end. No clots were found, but a welling up of blood followed the removal of the curette. The curette was again inserted and a better flow of blood followed, and was controlled with a gauze plug. It was not the strong gush that usually follows a return flow from below. It was evident that the lumen at the jugular bulb had been obliterated by the same pathologic changes found above, and been partially opened with a curette. Believing that there was no thrombus in the bulb, it was not considered necessary to ligate and to excise the jugular vein. Both ends of the sinus and the mastoid were packed with iodoform gauze, the posterior straight incision sutured completely and the curved incision left open.

*Postoperative History.*—The subsequent history was uneventful. The temperature was 101 the day after the operation, 100 on the following day and normal by the third day. No quinin was given after the operation. Investigation



showed that the blood examination for malaria, heretofore recorded, was made by a student and was likely unreliable, for there was no further complaint of chilly attacks, fever or sweats. The posterior skin incision over the sinus healed by primary union. The mastoid wound filled in gradually with firm scar tissue. The patient was up and dressed on the tenth day, left the hospital on the twentieth day and went to work at the end of five weeks. There was a slight mucus discharge from the ear thereafter. The small perforation did not heal. The drum membrane became dull white in color.

While I was ill the patient left the city for his home in the East. At that time, May 31, he still had a small funnel-shaped mastoid wound at the bottom of which was the aditus, from which there was scanty discharge. It was kept open in the hope of more quickly healing the middle ear and drum membrane. There was no bare bone and a retaining patch of gauze was worn to hold the loose dressing in the wound. A report from his physician six months later stated that there was still a small, dry sinus behind the ear and a scanty ear discharge. The patient wrote that his hearing had improved rapidly. A letter eleven months after operation stated that he had remained in good health in every way, but that a small sinus and scanty aural discharge had persisted, in spite of frequent curettements, and that a radical operation had been advised in order to heal this.

REMARKS.

A case similar to the second case which I have reported was described by Dr. J. E. Sheppard, at the New York Academy of Medicine, Nov, 21, 1898. In his case, the symptoms likewise simulated malaria and the sinus was opened and found thrombosed as far back as the torcular.

In the first case here reported I regret that I did not open the sinus at the first operation, in spite of its good appearance.

The temperature chart indicates that septic material was then entering the circulation.

I have been able to follow up twelve cases of sinus thrombosis—nine while house surgeon at the New York Eye and Ear Infirmary, and three in my own practice.

It was a striking fact that the thrombosis of the sinus in five patients who recovered was not diagnosed before operation, but discovered by purposely opening the sinus wall on account of its suspicious appearance. This experience is in accord with the statement made by Whiting in 1898, that "the diagnosis of sinus thrombosis in the first stage (thrombus not having undergone disintegration) is, with rare exceptions, consequent on operation for mastoiditis."

I have seen the sinus uncovered purposely or unintentionally 115 times in 198 consecutive mastoid operations, without any bad result. In 69 cases the sinus wall was found to be normal.

I have seen the sinus opened purposely or accidentally, 24 times in this series. In 12 cases thrombosis was demonstrated. In the remaining 12 cases, no harm resulted except in one case which terminated fatally from thrombosis. It is possible that this complication would have resulted, independent of the accident, as it was a badly inflamed sinus wall. The danger from delay in opening the sinus until symptoms of chills, fever and sweats appear, was shown in this series, for all of the seven patients who presented a history of these symptoms died. Many such patients, of course, do recover, but this experience emphasized the fact that the so-called cardinal symptoms of thrombosis are symptoms of a late and dangerous stage, namely, of septic disintegration. I believe that the tendency to terminate the mastoid operation in a case of long standing, or much mastoid destruction, without uncovering the sinus sufficiently to relieve one's mind of doubt as to its condition, is not in accord with good surgical judgment.

DISCUSSION.

DR. GEORGE F. COTT, Buffalo, said that these cases occur from time to time and are often overlooked by the general practitioners. The symptoms are often masked so that it is almost impossible to determine whether or not there is sinus thrombosis. When there is a discharging ear, a phlebitis or thrombus may be suspected; when, however, it occurs in other diseases, the practitioner's attention may not be called to it, because the symptoms may be completely masked. Sometimes in typhoid fever or some other zymotic disease there may be quite typical symptoms of sinus thrombosis that will be overlooked. In case there is no history of ear trouble, it is very readily overlooked. Sinus thrombosis may be caused not necessarily or directly by ear trouble and yet be due to that indirectly. For instance, in a case of chronic ear trouble from which the patient had recovered years ago, acute infectious sore throat may set up an inflammation of the bone, not necessarily affecting the middle ear, and in that way affecting the sinus and causing a thrombus to form without the septic symptoms. The otologist may cut down and mistake the thrombus for a pus sac or something else in the brain. In such cases it pays to explore; one may find some fluid or a little pus. Such patients almost invariably die from septic trouble. When the



phlebitis first begins, it depends on the extent of the infection from its source in the ear; if the disease is not checked in some way, by Nature or otherwise, the inflammation extends along the vein and the thrombus gradually forms. That thrombus may extend from the torcula herophili down to the bulb and possibly down the jugular vein. Dr. Cott has seen one that filled the sinus entirely from the torcular to the bulb. The patient had absolutely no symptoms but those of secondary supuration of the middle ear, with some little irritating feeling and a slightly irregular temperature. Another condition of importance is that there may be phlebitis without the formation of a thrombus. It does not follow that one is justified in operating because this peculiar typical temperature is present, no matter whether there are three or four degrees difference in 24 hours or in 12 hours. Dr. Cott's experience is that it is not necessary to open the lateral sinus unless there are other symptoms present. Less than a week before going to Portland he did a radical operation on a little girl 7 years of age, and following the operation he watched the temperature, which is still quite typical of sinus thrombosis. He did not and does not intend to operate on that child. He turned the case over to another otologist with the intention of having him operate if the child showed other distinct symptoms. She sat up and ate and felt well in every way.

DR. C. F. WELTY, San Francisco, said that the picture drawn in most cases of sinus thrombosis is so characteristic that it is downright negligence not to make a diagnosis at once. Again, the diagnosis may be so complicated that one can not say with any degree of certainty what the pathologic lesions may be. By a process of elimination the physician arrives at conclusions as to probabilities, and in most instances makes a correct diagnosis. The case that was diagnosed typhoid fever, with a temperature varying from 99 to 104 and with discharge from the ear, gives almost certain evidence of sinus thrombosis, because it is very seldom that such variations come in typhoid, and they are quite characteristic of sinus thrombosis. To make the diagnosis absolutely complete, the sinus must be uncovered and it must be incised, because the thrombus may not be complete and fluid blood may be obtained by use of the puncture needle. The physician must judge from the amount of blood that flows from the incised sinus as to the presence or absence of a thrombus. Dr. Welty has seen several cases in which the thrombus was not demonstrable by the use of the needle, but by incision it became so apparent that there was no room for doubt. It must be remembered that the patients who are operated on early are those who have the best chance for recovery, and when a physician is dealing with life-saving measures he is justified in more radical procedures. In the second case of chills and fever a diagnosis was made of malaria associated with a suppurating ear. This picture is so characteristic that a specialist should not hesitate to open the sinus if malaria has been demonstrated by microscopic examination. It was found on more careful examination, however, that the microscopist had made a mistake, and necessarily a great deal of valuable time was lost. Dr. Welty has not seen bad results follow the incision of a healthy sinus, and declared that if the operative field is surgically clean no harm has been done and the physician has eliminated a possibility that might have cost the patient's life. In this connection Dr. Welty mentioned a new operation that has been perfected by Professor Grünert of Halle. He removes the whole of the venous channel from one end of the thrombus to the other. Dr. Welty saw four such operations, and the patients all recovered.

DR. W. H. ROBERTS, Pasadena, Cal., said that to those who are in the habit of waiting for the cardinal symptoms of sinus thrombosis, namely, chills, fever and sweats, before opening the sinus, the stand taken by Dr. Hastings may seem a little radical, but in cases of sinus thrombosis it is necessary to be radical. It is a mistake for physicians to wait for these cardinal symptoms, which are really symptoms of disintegration of the clot and absorption of the septic material. Operation is distinctly called for in all long-standing mastoid cases. The sinus should be thoroughly uncovered and examined carefully and, if necessary, opened, under proper precautions, to see if there is a free return of blood from both ends. By doing this physicians certainly save more cases by far than they lose.

DR. H. STILLSON, Seattle, emphasized two personal equations. The first has reference to the operator and the other has reference to the patient. It seems to him that the personal equation of the operator has not been sufficiently dwelt on. It is a very easy matter to open a mastoid, but to know what one finds is another thing. It is perhaps a comparatively easy matter to open a sinus, but to open it in a most dexterous way and recognize what one sees without undue manipulation is another question. Dr. Stillson thinks the position taken will depend largely on the skill of the operator. If he is to operate as a barber or blacksmith would, Dr. Stillson would decidedly oppose his opening the sinus. If, however, he has the skill of Dench, who may go into almost any brain with comparative safety, then let him perform the operation on these cases. The personal equation of the patient should be considered. There are patients who do not stand any operation with safety. Since this operation of opening the brain is a very important one for the patient, the surgeon should see to it that the condition of the patient is such that he will best stand the operation. There are many questions to be taken into consideration when contemplating operation in these cases.

DR. G. A. LELAND, Boston, mentioned a case which he reported in 1897 to illustrate the cause of death in these cases. It was a case of sinus thrombosis, with the classical symptoms and with a white blood count of 50,000 to the cubic millimeter. At operation the sinus was opened and the clot cleaned out as far above and below as seemed justifiable; on the eighth day the whites were found to be 10,000. A stiffness of the neck occurred on the eleventh day with very little swelling behind the sternomastoid. Suddenly a leptomeningitis developed and death occurred in two days, the fifteenth day after the operation. In this case the autopsy showed that the clot had been cleared out very well, but that there was a collection of pus below the bulb in the jugular vein. The point Dr. Leland wished to make, which may throw light on the cause of death in some of these cases, is that there was a migration of the micro-organisms with consequent infection of the sinus on the other side of the torcular herophili. The right side being the one operated on, a small antemortem adherent clot was found in the left. If this patient had not died of leptomeningitis, there might doubtless have supervened a septic phlebitis or a pyemia from disintegration of the thrombus on the other side; so that in some of these cases, unless the surgeon can cut off the head and scrape out all the sinuses, Dr. Leland does not see how he can be sure that he will not have deaths. Even though one analyzes the symptoms to the uttermost limit, he may still be unable to save some patients. Dr. Leland mentioned another hospital case in which the patient was being treated for malaria by large doses of quinin. Consultation slips were sent to the throat, the second surgical, and to the aural services because of a marked swelling on the right side of the posterior pharyngeal wall. The two former diagnosed deep cervical abscess, and transfer to the surgical side was ordered. Briefly, the findings were as follows: A boy, medium height, slim but well nourished, had suffered several years with right purulent otitis media with almost entire absence of drum-head; lately with suppression of discharge followed by severe headache, chills, pyemic temperature fluctuations; the left shoulder and the right knee were red, swollen and tender, evidently the result of metastases. The outside of the neck was slightly swelled on the right, but on the pharyngeal wall there was a circumscribed tumor, longest in vertical diameter, which did not fluctuate. The diagnosis was obviously sinus thrombosis with embolism and epidural abscess originating in chronic otitic suppuration with involvement of the deep cervical vein. On further consultation operation was decided on. Dr. J. C. Munro ligated the internal jugular near the clavicle, posterior to the sternocleidomastoid attachment. The respiratory blood movements were very marked. Dr. Leland then opened the mastoid process and found the sinus blue, soft, glistening, perfectly normal in appearance, but much distended. Doubt in the minds of the medical men associated in the case began to develop into adverse criticism, felt if not voiced. Yet a small collection of sero-pus—the epidural abscess—was found inside the sinus, inside and posterior to the bulb, at the base of the skull down toward the foramen magnum.



No thrombosis of the lateral sinus could be made out, even down to the bulb, but there was a thrombosis or a phlebitis of some of the communicating veins, and possibly of the inferior petrosal sinus; this morbid process later extended up into the cavernous sinus and caused exophthalmos of the right eye with some involvement of the ocular nerves, and still later even slightly affected the left eye. No further operation was necessary. The patient recovered. Mural thrombi certainly may cause even more grave and far-reaching trouble than those completely occluding the vein. So that there is a great deal to be gained by studying all these little points and making observations as accurate as possible. Special attention should be directed to the number of white blood corpuscles. An important point is the difference in the percentage of the polymorphonuclear leucocytes. If there is a high proportion of polymorphonuclear leucocytes, there is pus in the circulation.

DR. JOHN F. BARNHILL, Indianapolis, declared that in a discussion of this kind, where there enters so much of the experience-meeting character, there is a good chance for presenting the discouraging side of operative work, and the possibility, therefore, of hindering its legitimate progress, yet it must be remembered that otologists have appropriated to themselves a field of surgery that is most difficult. It is to be expected that many of our operative cases will result fatally because of their serious and otherwise incurable nature. There are so many brilliant cases of cure as the result of definitely applied surgical skill that otologists ought at least to take from it a good deal of encouragement. Later they will doubtless have much better reports to make. The point as to where these blood clots may form is worthy of emphasis. The petrosal veins may be thrombosed just as the larger veins. A thrombus may be found in the sinus extending as far as the knee, and yet such thrombus does not constitute the entire trouble. The surgeon is not always permitted to examine fatal cases after death, and, therefore, one does not always know whether he has gone far enough in the operative work. Results must depend on accurate diagnosis, and otologists should in no case fail to go to the limit of their skill in diagnostic efforts. Any aid in making a diagnosis will aid in giving better future statistics. In this connection it might also be stated that physicians are entirely too ready to attribute certain symptoms, or groups of symptoms, to malaria, rheumatism or la grippe. The otologist and rhinologist who thoroughly and skillfully investigate the condition of the open sinuses that lie adjacent to the ear and nose, and practically surround the base of the skull, will frequently find that the symptoms attributed to those diseases can be proved to be caused by sinus suppuration and absorption. The term la grippe has been so engrafted on the mind of the profession that any patient who has some chilly sensations, aching muscles and a tired feeling is said to have la grippe. By most careful investigation of cases, otologists may improve their diagnostic abilities, and through better diagnosis will most certainly result a more hopeful prognosis of lateral sinus and other intracranial ear complications.

DR. ROBERT C. MYLES, New York, said that here is a case that will probably puzzle the supreme court of the United States to determine, and there is no attorney for the defense. No one is interested in the prosecution, except the public, and they will not let physicians help them by making an autopsy. The insurance companies have probably twenty cases of brain abscess to-day where they had one ten years ago. The cases are more frequently recognized at the present time. Dr. Myles has had patients who have laid moribund for weeks with phlebitis, and they are well to-day; patients with obliterating conditions of the veins and sepsis frequently recover. It is rather common in the lower limbs to have a phlebitis from which the patient will recover. It is a question whether a blood clot that is not septic causes so much trouble. Dr. Myles is strongly in favor of operating when there is direct evidence calling for operation; but the brain should not be torn to pieces *ad libitum* on a mere suspicion or guess. His attention has been called to so many cases in which an exploratory incision of the brain has been followed by death that it is evident that surgeons should be more careful.

DR. HILL HASTINGS said that otologists should receive encouragement from the fact that it is only about 18 years since

Lane, of England, cured a patient with sinus thrombosis by operation. The case mentioned by Dr. Richards is extremely interesting. The fact that he could not get an autopsy makes the diagnosis uncertain. It was one of those confusing cases that some of the best men worry over. Dr. Cott's case of extensive thrombosis shows that the "cardinal symptoms" are rather unreliable. Dr. Hastings has not seen a case like Dr. Leland's; it was a striking case and teaches much. The problem that confronts otologists in these cases is much like that of appendicitis some eight or ten years ago. A large number of the patients he has seen operated on for mastoid disease should have been operated on earlier. He thinks that is due to the reluctance of the patients and the absence of the swelling and the redness that seem to be regarded as the indications for the opening of the mastoid. When an early mastoid operation comes into vogue it is probably safe to predict that there will not be so many cases of sinus thrombosis; until then there will always be cases that may puzzle physicians a great deal. There are two classes of these cases. In one class belong those cases in which one is reasonably certain, on inspecting the sinus, whether it is thrombosed or not. That class contains the larger number of cases, but there always will be the second class of cases in which the physician will be uncertain whether or not there is a thrombus in the sinus, judging from the appearances. When the physician leaves such cases without opening the suspicious sinus he is uncertain whether he has done the best for the patient. All otologists have seen many mastoids of extensive involvement operated on, but in which the condition of the sinus was not determined, and death from pyemia follows. Many more of these cases in which thrombosis undoubtedly existed at the time of operation are not reported. Dr. Hastings, therefore, is decidedly in favor of opening the sinus in such doubtful cases. The incision should be done under proper precautions. It should be opened with a clean cut with the knife instead of using a needle for the purpose of diagnosis. In some cases sepsis has terminated in recovery without operation on the sinus; but such cases are conceded to be in the minority. He has seen several patients die from thrombosis who he is certain would have had good chances to get well if the sinus had been opened a few days earlier. Whiting has aptly stated that "the time for operation is in the first stage of sinus thrombosis" before the septic disintegration of the clot occurs; and he follows that up with the rather discouraging statement that we can not tell without operation when we have to deal with the first stage of sinus thrombosis. So we must uncover the sinus in bad cases and determine whether it is thrombosed. If in doubt, Dr. Hastings believes it is wise to open it and not to trust to luck. In reply to a question, he said that one can not expect in every case to decide by looking at the sinus; although the cases are comparatively few in which the appearance of the sinus would be as misleading as in the first case mentioned. The "feel" of the sinus, the evidence from the thickness of the wall, and the presence of purulent granulations as a rule help in the diagnosis. He does not believe that any one can tell absolutely without opening the sinus.

## THE CARE OF INFANTS IN PUBLIC INSTITUTIONS.\*

H. M. McCLANAHAN, M.D.  
OMAHA.

It has long been recognized that the care of infants in public institutions presents peculiar difficulties. The mortality is greater among these, in any given disease, than in private practice. The reason why the institution infant has less resisting power is, no doubt, because of its impaired nutrition; and faulty nutrition is probably the result of poor food, bad air and lack of maternal care. It can not fail to have been noticed by all doing hospital work that all infections are more severe

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among numbers, as in a ward, than among isolated individuals.

The observations on which this paper is based were made in the Child's Saving Institution, Omaha, Neb., and covered a period of four years. This is an eleemosynary institution, supported by public-spirited citizens. It receives infants and children for care and adoption. During the years of 1902-3 the nursery was not in charge of a trained nurse. The women were kind, and did the best they could, but during the summer months of those two years the mortality was unduly large. At the close of 1903 the board of directors gave the superintendent authority to employ a trained nurse to have charge of the infants' ward. I was given absolute authority to make and enforce rules governing the care and feeding of the infants. The death rates for the years 1903-4, from preventable diseases, were very much less than for the two preceding years. This lessened death rate was due wholly, I believe, to the employment of skilled help.

My purpose in presenting this brief paper to the Section is to demonstrate the importance of prevention of disease, rather than to add anything new in the way of treatment. In this connection I wish to make a plea for greater authority for the consulting physician in the internal management of hospitals, particularly for children. He should have knowledge and control of the milk supply. He should have authority to discharge nurses when proven incompetent. The reports which follow are not nearly as complete as they should have been, or as they will be in the future.

During the year 1901, 62 infants were cared for. There were 11 deaths during the year, and of this number 10 died from diarrheal diseases during the summer months. During the year 1902 there were 106 infants cared for. There were 32 deaths in that year. Of that number 26 died during the summer months from diarrheal diseases. During the year 1903 the total number of infants cared for was 92, with 15 deaths. In this year there were no deaths in July, August or September. Almost the entire mortality was in the months of January, March, April and May. Seven deaths were due to pneumonia, four to congenital syphilis, one to purpura, one to congenital heart disease, and in the two others the cause is not given. In the year 1904, 110 babies were cared for, with 15 deaths during the year. Nine of these were due to gastrointestinal diseases, but of the nine dying from this cause eight were admitted already sick with some form of diarrhea, five of the eight dying within twenty-four hours after admission. Of the infants in the institution June 1, 1904, but one developed any intestinal trouble during the summer. I make this explanation in justice to the institution. Of the six other deaths during the year, two were due to pneumonia, two to congenital syphilis and in the other cases no cause was given. The prevention of diarrheal diseases during the past two years was due, in my opinion, to employment of skilled nurses and the rigid enforcement of certain rules which will be given later in this paper.

The infants' ward is a room 29½ feet long, 13½ feet wide, 8¾ feet high, and contains 3,482 cubic feet. As there are never less than twenty-five babies in the ward, each baby has 142 cubic feet of air space. When there are thirty babies in the ward, as is often the case, then each infant has only 110 cubic feet. As we could neither decrease the number of infants nor increase the size of the room, we have been forced to make the best of the situation, and the following expedient has been adopted: There is another ward in the building of the

same size. This is used as a sleeping room for the older children. The children are removed from this room at 7 a. m., the bedding is changed, all the windows are opened, and then about 10 o'clock the infants are taken to this room. This gives an opportunity to ventilate thoroughly the infants' ward. During the summer season we have a large tent out on the lawn, open at either end, and the infants are kept here for several hours a day. Twice a week the nursery is fumigated with formaldehyd candles. The floors are wiped daily and the walls brushed down.

Another important matter with me was the care and disposal of soiled napkins, and during the last two years the following method has been adopted. Two five-gallon galvanized iron buckets, with closely fitting lids, are provided. These contain a solution composed of four ounces of common salt and two ounces of sulphate of zinc to each gallon of water. One is used for wet napkins and the other for soiled napkins. The napkins are deposited in this solution as soon as removed, and the buckets are taken to the laundry and emptied once or twice a day. The nurse is not permitted under any circumstances to leave a soiled napkin on the floor. As soon as it is removed it is taken at once and deposited in the bucket. After changing the napkin and before handling another baby or bottle, each nurse washes and then disinfects her hands in a 1 to 3,000 solution of bichlorate of mercury. This rule is rigidly enforced. I am satisfied that in an infants' ward there is more danger from this source of gastrointestinal infections than from the bottles or the milk; that is, a napkin containing the ordinary colon bacillus from a healthy child by careless handling may be the means of infecting another infant, and thereby inducing an intestinal infection.

All our infants are fed on modified milk. During the last two years we have not had a package of infant food in the house. We procure fresh milk in glass bottles, which is kept in porcelain-lined ice chests, at a temperature of 40 degrees. We also procure 20 per cent. cream. During the summer months all the food is Pasteurized. It is a standing rule that when infants receive Pasteurized food they are to receive orange juice once a day. Another rule is that one nurse prepares all the food for a given time. If there is any error, we know where to place the blame. All feeding bottles are labeled with the name of the infant. The bottles are washed with hot soapsuds once a day and then thoroughly rinsed in an alkaline solution. The nipples are thoroughly rinsed after each feeding, and are kept in a boric-acid solution.

Another rule that I have found of great value is this: An infant as soon as it is observed to be sick, whether it be a cough, a rise in temperature or offensive bowel movements, is at once isolated. In this way during the last year we have been able to prevent the spread of any contagious disease through the nursery. During the summer the head nurse is given authority to stop the milk of any baby having an offensive movement. Such an infant is given a dose of castor oil and fed on barley water until it can be examined by the physician.

#### DISCUSSION.

DR. JOHN C. COOK, Chicago, said that the education of the nurses for the care of the children is one of the most important, and, perhaps, one of the most neglected subjects in the training schools of the United States. In an institution in which he has a service, cultures from the mouths of children were made and the colon bacillus was found in so many that they stopped the nurses who were giving medicine and food from removing napkins, and ordered that a set of nurse girls take



charge of the napkins and cleanse the babies. Unless one has done some bacteriologic work in this line he has no conception of the damage done babies by the unclean hands of nurses. There is no one thing that physicians as a class neglect so much as they do instruction of mothers and nurses. Not only would a large number of the bowel troubles of children be prevented, but many of the other diseases, if this instruction were carried out. Much good would be done to the general public and to the nursing babies.

DR. ARTHUR W. FAIRBANKS, Boston, said that in his city, in a small hospital where they have a large number of the severest form of bowel infection, and formerly a number of cases of apparent reinfection, they have studied the problem and concluded that the nurses' hands have something to do with it. They have instituted a procedure of thorough cleansing of the hands of the nurses, even in changing the napkins of different children, and they have noticed since this has been put into effect a decided diminution in the reinfections. Coincident with this cleansing of the hands they have paid attention to the exclusion of flies, and the results have been most excellent. The nurses who change the napkins do not have anything directly to do with the feeding.

DR. ALICE M. SMITH, Tacoma, Wash., finds that many mothers and nurses will put things into their own mouths and then transfer them to the mouths of the children; for instance, the nipple of the bottle is put into the mother's mouth and then into the child's—a most pernicious habit. The fumigation of the rooms and the washing of the floors where children are congregated can not be too much insisted on.

DR. KATE LINDSAY, Boulder, Colo., thinks that there is only one solution of the problem and that is in thorough education. She has found it impossible to get mothers to follow instruction, and her only hope is in educating a nurse and having her go from house to house where children are ill and educate the mother by doing the work before her. Nurses ought to be specially instructed for that purpose.

DR. C. F. WAHRER, Fort Madison, Iowa, said that physicians should be almost pedantic in teaching the rules of antisepsis and cleanliness. He was recently called to attend a case of abortion in a family whose physician had died during the attendance and he was astonished to find in that isolated farmhouse that they had prepared sterilized water protected. The physician who had preceded Dr. Wahrer had done his duty well. Dr. Wahrer said that he has no sympathy with those men who claim that antiseptic measures can only be carried out in well-appointed hospitals and are impracticable in country districts. He has spent very little time in metropolitan hospitals; he has been mostly in small towns and in country practice, and he has found antisepsis quite practical wherever soap and boiling water can be obtained.

DR. H. M. McCLANAHAN declared that the point which impressed him in taking charge of an institution was the probability of infection of children from nurses in changing napkins, and some bacteriologic work was done by a young physician there which showed that there was no question as to the source of infection. It is well to remember that there are other sources of infection than that of impure milk. The thorough ventilation of the rooms which was systematically carried out he feels was very important. They did not use any of the patent milk foods and found no necessity for them. Sometimes in children from two days to six weeks of age it was found that the simple whey mixtures, with the addition of cream, were preferable to modified milk.

English as She Is Wrote.—The liberties taken with rhetoric under the banner of science are a source of never ending amazement. This license is particularly glaring in the splitting up of sentences. It appears to be assumed that a succession of adjectives and nouns without prepositions, conjunctions or verbs, is sufficient to convey an idea, and that the precious time of physicians need not be wasted in the reading of a complete sentence. Instances of this are so numerous, especially in reports of cases, that illustrations are not needed. Punctuation is fast becoming a lost art.—*Albany Medical Annals.*

## A FOURTH DETAILED REPORT OF THE SUPERIOR AND LASTING RESULTS OF MY BI-INGUINAL OPERATION FOR SIMPLE AND COMPLICATED ASEPTIC RETROVERSION OF THE UTERUS.\*

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CHICAGO.

Since Professor Kossmann<sup>1</sup> of Berlin has designated this operation by my name in a paper before the Berlin Medical Society, I may be excused for naming it so also, although I have so far applied to it its anatomic name only, notwithstanding that the combination of an extended Alexander operation, with bi-inguinal celiotomy and the Bassini hernia technic in closing the wounds with anchorage of the round ligaments to Poupart's ligaments, was made by me completely and solely in 1893, and performed in at least 75 cases, of which 47 were published, before I learned that any one else also was doing it.

This operation owes its origin and persistent growth, in the face of much opposition, to the mandates of several stern anatomic facts: (1) The round ligaments of the uterus are the only structures connected with it that, as a part of it, are composed sufficiently of non-striated muscular fibers to undergo growth with it during gestation, and involution also after labor. Striated muscle, no matter from where it is brought, can not be expected to do that; and certainly no other soft tissues will do anything of this kind, but will stretch, at best, during gestation and frequently without this, and will remain long and useless.

(2) The round ligaments of the uterus taper from within outward, so much so that their uterine origins are at least six times as strong as they are at their extra-peritoneal, but intra-abdominal portions, which compose their most vulnerable parts.

(3) These weak parts that call for reinforcement or elimination, however, are readily accessible only via the inguinal canals from without, and not advantageously by any vaginal or ventral incision. Accordingly, the operations which shorten the ligaments by these routes, especially those of the Mann, Ries,<sup>2</sup> and Webster<sup>3</sup>-Baldy<sup>4</sup> types, are anatomically wrong, because they shorten them by doubling up their thick, accessible ends and leave the outer feeble and inaccessible portions as weak and liable to stretch as before. Far preferable to these are a numerous class of intramural transplantations of the round ligaments, most of them procedures advocated during recent years, respectively, by Ferguson,<sup>5</sup> Gilliam,<sup>6</sup> G. H. Nobel,<sup>7</sup> H. T. Byford,<sup>8</sup> F. F. Simpson,<sup>9</sup> E. E. Montgomery,<sup>10</sup> McGannon,<sup>11</sup> Sperling<sup>12</sup>

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

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7. Nobel, G. H.: Amer. Jour. Obstet., 1903, vol. xlvii, p. 174.

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9. Simpson, F. F.: Amer. Gynecol., December, 1902.

10. Montgomery, E. E.: Therapeutic Gaz., 1904, 3 s., 20, p. 371.

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and C. H. Barrett.<sup>13</sup> In these commendable operations the round ligaments are separated intra-abdominally from the broad ligaments to a sufficient extent and are then drawn into the median ventral incision or into stab wounds near it and fastened, or with a suitable curved and slender forceps they are passed subperitoneally forward and around the bladder to the internal abdominal rings and stitched fast there to the muscular part of the abdominal wall. Or they are drawn, with a similar forceps, beneath the peritoneum or between muscular layers at or near the internal rings and from there into the median ventral incision or into the ends of a transverse fascial (Pfannenstiel) incision, and fastened there. All these kindred methods of transplanting the round ligaments into the abdominal wall are anatomically consistent: (1) Because they discard the useless outer portions of the round ligaments and place their inner strong portions to do the work, either of suspending the uterus or holding it forward, or partly both, and (2) because all of them, except the Ferguson and Gilliam methods, avoid making transperitoneal bands or bridges.

During the last several years I have treated more patients by one of these methods than by my own operation, for the following reasons: (1) Simple, movable retroversions with healthy appendages are, by me, largely treated by pessaries with regular monthly or bi-monthly revision and adjustment; (2) in the complicated cases the majority of the patients either have active infectious elements, or strong suspicions of such, still remaining, so that they demand preferably a median ventral section with sight to supplement touch (which I have always chosen for this class); or they have some other disorder like a chronic appendicitis, a widened linea alba, or a ventral hernia that should be eliminated also, or an incidental palpation of a suspicious kidney, gall bladder, stomach or bile ducts, determines the choice of a ventral incision; (3) during the very systematic and searching reviews in which my surgically treated patients with retroversion together with the results of pelvic peritonitis have been afterward studied by me to find out the real merits and demerits of my bi-inguinal work, during the last ten years, I have learned incidentally that in the cases of marked general pelvic peritonitis with bilateral salpingo-oöphoritis the infectious elements will frequently die out or become innocent; but quite firm and general adhesions of the uterus and particularly of the adnexæ remain, with follicular, cystic, or sclerotic ovaries and closed and deformed tubes. By liberation of all adhesions, by removing the worst parts of the adnexæ and reconstructing the remainder, chiefly by salpingostomy and resection of ovaries and by securing for the uterus a favorable position and also a better condition by an effective curettement and amputation of a pathologic cervix, when needed, these patients, with few exceptions, can be made well, with or without a subsequent course of general medical treatment, combined sometimes with local massage and a galvanic current, as, for instance, for an old metritis—but they rarely become pregnant.

Before I knew this I treated this class of patients mostly by my own operation, in view of the supposed capacity for conception that they might retain. The Alexander operation is pre-eminently the one to be chosen for fruitful women; and the urgency of its indication is directly proportionate to the reproductive capacity of the patient. This operation stands in the

vanguard, practically without a competitor, in the vast amount of anatomic and clinical evidence which it has furnished that it not merely supplies to the uterus favorable conditions for conception and increases its productive capacity, but that it is also able to cope with its critical metamorphoses during parturition and the period of involution. But when this highest function of the uterus has been lost, some one of the above-mentioned methods of utilizing the thick ends of the round ligaments through a ventral incision is good enough to correct the displacement and better for the other indications.

It is the prevailing sterility among this class of patients who are otherwise restored to fair or perfect health by conservative surgery, that induces me not to continue to treat them via the dilated inguinal rings. The surgical indications in these cases of retrodisplacement with adhesions and deformed appendages can be very safely and successfully, although not so conveniently, carried out in that manner, provided that active infectious elements are found no longer present by repeated, careful bimanual examination with properly educated fingers. That this is true I have demonstrated on at least one hundred of such patients with adhesions and other marked complications in the adnexæ who were treated by that method with a mortality rate of 1.5 per cent., with no hernia following, with at least 99 per cent. of anatomic cures (of position of the organs) and 87 per cent. of subjective cures, aside from the predominating sterility. The objection which some men raise to the matter of separating adhesions of the uterus and adnexæ without sight is hardly valid, nor well taken, because these same adhesions in such cases they themselves would liberate usually through a ventral incision of two or three inches, which would usually preclude sight of the adhesions deep down in the small pelvis beneath and around a retroverted uterus. Only after the adhesions have been severed and the parts have been separated is sight really admitted, to assist in repairing some possible damage, it is true, but scarcely to prevent it.

While I concede that the additional care, labor and inconvenience of bi-inguinal celiotomy are misplaced when offered up in patients with displacement of the uterus who retain merely a nominal reproductive capacity, or none at all—because they will never be in a position to realize its superior benefits—I must, however, contend more earnestly than ever, that bi-inguinal celiotomy, on account of its completeness and thoroughness, should be made to supplant the old superficial, extraperitoneal Alexander operation in all cases, at least to the extent of a careful and intelligent digital exploration of the uterus and adnexæ through both inguinal rings, in order that certain peculiar conditions and otherwise undiscoverable complications like the following may be successfully dealt with, even in the seemingly simple cases:

First: Adhesions of the ovary and abdominal end of the tube are of much more frequent occurrence than of the uterus itself, because, in their vicinity, infections enter the peritoneal cavity first through its most frequent channel, the endometrium, and the tubes. Adhesions of these small structures are very difficult to discover and are often not suspected when the uterus is free and reducible. They were formed on these adnexæ in their descended position, to which they sank in consequence of the retroversion of the uterus. When the uterus is brought into anteversion these, its wings,

13. Barrett, C. W.: Proc. Chicago Med. Soc., June 21, 1905.



Patient.	Symptoms.	Anatomical Diagnosis at operation.	Additional to bi-lingual section and date.	Result and convalescence.	Postoperative condition.
1. Mrs. D. F., aged 34 years; iv-para and two abortions; housewife.	Extremely nervous and anemic; menorrhagia and dysmenorrhea; very dyspeptic; diffuse pelvic pains.	Extreme retroversion, movable, descended adherent left ovary; cervix with deep laceration and ulceration, with many Naboth follicles.	Curettement; amputation of cervix; resection of both ovaries. Jan. 11, 1902.	Patient died 27 hours after operation, of cerebral embolism.	Left round ligament was traced from the broad ligament outward. Both round ligaments very small; for twenty-six hours after operation patient's condition was very satisfactory, pulse of from 68 to 100, and temperature from 99.2 to 101.2 by rectum; general condition very good, aside from nervousness. Patient suddenly became cyanosed; failure of respiration and death followed within twenty minutes.
2. Mrs. A. R. C., aged 34; multi-para; conductor's wife.	Constant pain in left ovary, backache; much headache; almost unable to walk.	Movable retroversion, metritis, endometritis; pathologic cervix; lacerated perineum, prolapse of left ovary and of vaginal walls.	Curettement; amputated cervix; perineorrhaphy; resection of both ovaries. Feb. 1, 1902.	Almost afebrile course. Primary union of inguinal wounds.	Examination June 5, 1905. (Dr. R. L. James). Uterus was anteverted, but sacrouterine ligaments elongated, permitting cervix to slide down, thus taxing round ligaments above. Patient is very corpulent, and has slight descensus of vaginal wall, but is quite well.
3. Mrs. W. B. B., aged 21; 0 para; mechanic's wife.	Anemic; very nervous and hysterical; much heart palpitation, and dyspnea, dysmenorrhea and neurasthenia; marked languor and backache.	Mobile, extremely retroverted uterus; catarrhal cervix; descended left ovary with numerous large follicle cysts.	Curettement, resection left ovary, exploratory incision and suture of right ovary. Feb. 3, 1902.	Afebrile, very comfortable course; complete primary union.	Examination, May 12, 1905. Patient was feeble and nervous for a year after operation, then she became pregnant; normal birth of large child a year ago, with puerperal fever five weeks. Position and condition of organs are now ideal, aside from a little cervical catarrh and occasional backache; nurses big baby and does housework.
4. Mrs. C. S., aged 31, iv-para; laborer's wife.	Fairly nourished but anemic; severe general pains and backache; headache; dyspnea and precordial distress.	Severely pathologic cervix, with adenoma of anterior lip; very large metritic uterus, in extreme but mobile retroversion; descended cystic very tender left ovary; lacerated perineum.	Curettement; high amputation of cervix; intrapelvic, infra vaginal perineorrhaphy; resection of one ovary. Feb. 10, 1902.	Twelve hours after operation patient very restless, almost maniacal, with pulse 106, temp. 103; afterward normal; primary union.	Examination, June 9, 1905. Position of appendages and uterine perfectly normal. Former disabilities all gone, works regularly as scrubwoman, says "I am real well."
5. Mrs. H. B., aged 32; seamstress; widow.	Back and side aches and severe dysmenorrhea.	Extreme, retroverted uterus, fixed by cohesion; endometritis, and descended cystic left ovary.	Curettement, resection of left ovary. Feb. 4, 1902.	Smooth convalescence. Primary union.	Report by intimate friend that patient moved away six months ago, was then, and is now, in very good health.
6. Mrs. E. M. W., aged 43, multi-para; saloon-keeper's wife.	Constant pains in side and back, headaches; palpitation; intercostal neuralgia; excessive and painful menses.	Metritic, retroverted mobile uterus, severely pathologic cervix lacerated and relaxed pelvic floor and perineum; double femoral hernia; right floating kidney; hemorrhoids.	Curettement, amputation of cervix; perineorrhaphy; hemorrhoids removed; cauterized; radical operation for bilateral femoral (omental) hernia, in conjunction with the bi-lingual operation. March 1, 1902.	Complete primary union; very prompt recovery.	Examination, June 7, 1905. Perfect position and condition of all organs, normal and painless menses; good, robust health, and thinks examination hardly needed.
7. Miss M. W., aged 21; virgin; farmer's daughter.	Disabling severe dysmenorrhea; constant backache; leucorrhoea; dyspepsia.	Mobile retroversion and endometritis; close cervical canal; cystic right ovary; very slender right ligaments.	Curettement, resection of right ovary; left round ligament traced from broad ligament outward. March 1, 1902.	Complete primary union; nearly afebrile course.	Examination, June 3, 1905. Married, normal gestation ended six months ago; uterus now in ideal anteversion, and good involution. She has no pelvic or other symptoms aside from profuse menses without pain. She is in good vigorous health and nurses baby.
8. Miss A. P., aged 26, domestic, single, 1-para.	Disabling pain in right side of pelvis and groin; right intercostal neuralgia, backache, leucorrhoea, dyspepsia, constipation.	Anteflexed but retroverted and retracted mobile uterus; endometritis, erosion of os; right tube much enlarged, and occluded by ovary, with follicle cysts, both markedly adherent.	Curettement, resection of left ovary, removal of right adherent tubo-ovarian conglomerate. March 25, 1902.	Primary union; normal convalescence aside from temperature 102, for a few days.	Examination, May 11, 1905. Anatomic and functional status is normal; no complaint, aside from sterility so far; has been married two years.
9. Miss M. W., aged 16½, domestic; virgin; very large girl; menses at 12 years.	Constant disabling left-sided pain and backache; leucorrhoea, menorrhagia and metrorrhagia.	Anteflexed but retroverted and retroponated uterus; catarrhal cervix; left ovary large with follicle cysts.	Curettement, resection of both ovaries; late superficial suppuration of one wound; severe ether (inhalation) bronchitis, with pulse 130, temperature 102.5, respiration 30, as maximum for three days' pain in chest.	Convalescence prolonged by burns of legs from hot water bags.	Examination, May 23, 1905. Normal position of all organs. Was well until a year ago; catarrhal endometritis evidently since then, with excessive and painful menses. She is working regularly as domestic, has severe nasopharyngeal catarrh.
10. Mrs. C. W., 1-para; laborer's wife.	Anemic, poorly nourished woman; constant pain right side and back; dyspeptic, very nervous, dysmenorrhea.	Metritic retroverted uterus; mobile pathologic cervix; both ovaries adherent; right one cystic; right kidney descended.	Curettement, amputation of cervix; removal of right ovary and tube; resection of left ovary. April 14, 1902.	Comfortable convalescence; complete primary union.	Examination, June 15, 1905. Uterus and ovary in excellent position. She is in normal condition also until recent gonorrheal (?) infection. She now has endometritis, and pain in ovary, but does washing and housework.
11. Mrs. N. O. H., aged 39; iv-para and 6 abortions; tailor's wife.	Large, flabby, anemic woman, poorly nourished; intense backache, dysmenorrhea, dyspepsia, nervousness and headaches.	Metritic, retroverted, adherent uterus; ovaries both cystic and adherent; lacerated perineum.	Curettement, perineorrhaphy; removal of right ovary, resection of left ovary. May 1, 1902.	Very smooth convalescence and primary union complete.	Examination, Sept. 10, 1904. Position and condition of uterus good; now in good health. During the first eight months tincture of iodine was applied to endometrium several times, and galvanic current to ovary more frequently; medical treatment, for renal insufficiency and rheumatism.



12. Mrs. T. S. M., aged 32; i-para; housewife.	Intense pain in back and left side; dysmenorrhea, dyspepsia, constipation.	Uterus broadly adherent; severe endometritis; firm adhesions of both tubes and ovaries, the former closed. Anteflexed retroverted and descended metritic uterus, mobile; patulous cervical canal; cirrhotic right and cystic left ovary prolapsed.	Curettement; freeing adhesions throughout; resection of both ovaries; right salpingostomy. May 20, 1902.	Primary union; normal convalescence.	Examination, June 13, 1905. Position and condition of all organs normal, aside from some tenderness of fundus. She has backache sometimes; menses normal; she does housework. Sterile so far.
13. Miss M. B., aged 25; virgin; seamstress.	Right-sided pain constantly; severe disabling dysmenorrhea, during entire period; leucorrhoea since puberty.	Anteflexed retroverted and descended metritic uterus, mobile; patulous cervical canal; cirrhotic right and cystic left ovary prolapsed.	Curettement; little resection of left ovary; extensive resection of right ovary. May 24, 1902.	Primary union; normal convalescence.	Examination, May 15, 1905. Anatomic condition and position of organs good, but has tenderness of right ovary; former disabling backache, etc., all gone. She has worked almost constantly as seamstress during the last two years.
14. Mrs. R. D. L., aged 21; 0-para; one abortion; of- fice attendant.	Large robust woman, constant disabling pain in left hip and side; dysmenorrhea and menorrhagia; dyspepsia and extreme nervousness.	Large retroverted mobile uterus; endometritis; left large cystic ovary badly descended.	Curettement, resection and suspension of left ovary. June 4, 1902.	Primary union; nearly afebrile and comfortable convalescence.	Examination, Dec. 15, 1904. Uterus and appendages in good position and fair condition. She has required medical treatment for rheumatism, and at times local galvanism to left ovary for a year, otherwise she is robust and an efficient office manager.
15. Mrs. W. T., aged 30; 0-para, one abortion; tailor's wife.	Strong plethoric woman; constant back and left-side ache, dysmenorrhea; sterility chief complaint.	Metritic uterus, in adherent retroversion; large left cystic ovary; descended and adherent, relaxed perineum.	Curettement; perineorrhaphy; resection of left ovary; July 26, 1902.	Smooth convalescence; primary union through out.	Examination, May 12, 1905. Had good health directly after operation; became pregnant in nine months; normal gestation and labor, normal condition and position of organs two months later; she is now pregnant again six months and in "too good health."
16. Miss A. C. W., aged 30; virgin; bookkeeper.	Constant right-sided pain; backache, dyspepsia, severe dysmenorrhea.	Large uterus, in marked retroversion, flexion, mobile; endometritis; descended left ovary; floating right kidney.	Right nephrorrhaphy; curette ment; resection of both ovaries; Aug. 4, 1902.	Nearly afebrile, quite comfortable course; complete primary union of wounds.	Examination, June 18, 1904. Uterus anteverted, but also anteponated, from relaxation of sacrouterine ligaments in normal condition. Right ovary now quite painless, after six months' treatment by galvanism; she has some dysmenorrhea, otherwise is well and holds important office position.
17. Mrs. W. H. B., aged 25; i-para; housewife.	Flabby adipose woman, marked dysmenorrhea; constant backache, right-sided pain; dyspepsia and palpitation.	Extreme retroversion; uterus mobile, endometritis; ovaries descended; right one large with follicle cysts; relaxed pelvic floor.	Curettement; perineorrhaphy; resection of right ovary. Aug. 15, 1902.	Complete primary union; normal course.	Examination (Dr. Barnard), May 22, 1905. Normal position and condition of all organs; painless menses; perfectly well, and does full domestic duty.
18. Miss R. G., aged 21; virgin; nurse.	Persistent left ovary pain; backache; dyspepsia, dysmenorrhea, menorrhagia, constipation.	Mobile retroversion; fungoid endometritis; cystic left ovary.	Curettement; resection of left ovary. Aug. 15, 1902.	Complete primary union; afebrile, comfortable convalescence.	Examination, June 26, 1905. Position and condition of organs ideally good; menses painless; no pelvic symptoms; robust health, great gain in weight; married two and a half years.
19. Miss M. N., aged 28; virgin; farmer's daughter.	Constant left-sided pain; extremely severe dysmenorrhea, with hysterical paroxysms.	Extreme retroflexion; uterus mobile; large descended tender left ovary; right ovary less so; long, hard catarrhal cervix; endometritis.	Curettement; internal os constricted, wide dilatation of same; resection of ovaries. Sept. 25, 1902.	Almost afebrile, comfortable course; primary union.	Examination, Sept. 19, 1903. Fundus uteri well to front, but cervix too far anteriorly, owing to too much elongation of sacro-uterine ligaments; she also has marked bearing down discomfort still; right ovary cystic; now ventral section, and removal of right ovary and tube, and appendix, round ligaments, suspension of uterus.
20. Mrs. F. M., aged 37; ii-para, one abortion; musician's wife.	Anemic, poorly nourished, woman; constant left-sided pain; marked dysmenorrhea; backache, leucorrhoea, dyspepsia.	Retroverted, adherent uterus. Endometritis, indurated surface after former trachelorrhaphy; cystic and cirrhotic ovaries; buried in adhesions; lacerated perineum. (Dr. Zinke thought he would have removed left ovary.) Sept. 25, 1902.	Curettement; perineorrhaphy; liberating of all parts; suspension of right ovary and tube; resection of left ovary.	Nearly afebrile course; primary union.	Examination, June 15, 1905. Normal position and condition of uterus, tenderness and occasional pain from ovaries; she does all her housework.
21. Mrs. F. K., aged 36; ii-para, one abortion; housewife.	Nervous, emaciated woman; constant left-sided pain, general pelvic aches; menorrhagia and gastric pain.	Large metritic uterus, retroverted, mobile; pathologic cervix; endometritis; adherent right ovary and tube.	Curettement, amputation of cervix, liberation and resection of right ovary; removal of left tube and ovary by electric thermocautery. Sept. 29, 1902.	Some temperature; much nervous disturbance; primary union.	Examination, Nov. 1, 1903. Normal position of uterus and ovary; has required several strong intrauterine iodine cauterizations for recurring hemorrhagic endometritis; good position of organs, but complains still of backache, dysmenorrhea, and thoracic neuralgia; she is a pronounced neurasthenic.
22. Mrs. H. W. H., aged 30; multi-para; working housewife.	Well-nourished, strong woman, severe and constant leucorrhoea; constant left-sided pain.	Mobile retroversion, with endometritis; pathologic cervix; painful left ovary; lacerated perineum.	Curettement, amputation of cervix; perineorrhaphy; resection of left ovary. Oct. 2, 1902.	Complete primary union; catheter required for ten days and bladder irrigation afterward.	Examination, June 12, 1905. Perfect position and condition of uterus and adnexa; menses normal, painless; has no pelvic nor other symptoms; gained 20 pounds. Robust health.
23. Miss C. S., aged 36; virgin; dressmaker.	Anemic, very nervous woman; intense backache, constant left-sided pain, dysmenorrhea, dyspepsia.	Extreme retroversion; uterus mobile, with severe catarrhal endometritis; descended, very tender ovaries; cystic and cirrhotic; catarrhal left tube.	Curettement; resection of right ovary; removal of left tube and ovary. Oct. 25, 1902. Bad ether narcosis.	Moderate temperature for several days; primary union but induration of wound.	Examination, June 20, 1904. Position of uterus and ovary very good, but chronic metritis continues; has bearing-down sensations; has digestive disorder, headaches, dysmenorrhea and marked neurasthenia; half capacity as dressmaker.
24. Mrs. A. K., aged 28; widow.	Fairly nourished woman, vigorous frame, backache, dysmenorrhea, menorrhagia.	Mobile retroversion, with endometritis; lacerated perineum; adnexa descended but normal.	Curettement; perineorrhaphy; intra-peritoneal palpation of adnexa. Oct. 31, 1902.	Comfortable convalescence; primary union complete.	Examination, October, 1904. Dr. Barnard. Uterus in good position, but patient is pregnant and bleeding from an induced abortion. In good health until now.
25. Mrs. M. M., aged 31; iv-para; working housewife.	Anemic, poorly nourished woman; somewhat neurasthenic; constant right-sided pain and backache; leucorrhoea, dyspepsia and melancholia.	Extreme retroversion, of subinvolved uterus; free, endometritis; right ovary very large and partly cirrhotic.	Curettement; resection of right ovary. Nov. 10, 1902.	Little temperature for two days; patient comfortable and cheerful; primary union.	Examination, May 30, 1905. Normal position and condition of all organs, aside from endometritis, since an induced abortion; is in greatly improved spirits since operation; feels well; has full working capacity.



Patient.	Symptoms.	Anatomical Diagnosis at operation.	Additional to bi-lingual section and date.	Result and convalescence.	Postoperative condition.
26. Mrs. B. W., aged 25; multipara; working housewife.	Slender frame, anemic, very nervous; constant back and side aches, with bearing down feeling; left intercostal neuralgia, dyspepsia, diarrhea, palpitation.	Extreme retroflexion; uterus movable; endometritis, sub involution; lacerated perineum; ovaries partly cystic and cirrhotic.	Curettement; perineorrhaphy; resection of both ovaries. Nov. 12, 1902.	Almost afebrile course anxious for solid food primary union.	Examination, December, 1903. In good health during last half year; was nervous and feeble for six months; had one application tincture iodine to endometrium for excessive menses; also general medical treatment; organs now in good position and condition.
27. Miss A. Z., aged 22; virgin; schoolgirl.	Slender build, anemic, nervous; constant backache and right-sided pain; dyspepsia, severe disabling dysmenorrhea.	Extreme retroversion-flexion. Uterus mobile; large corpus luteum; cyst in adherent right ovary; sclerosed left ovary; two small parovarian cysts in tubal left mesentery.	Curettement; liberating and resection of right ovary; removal of left parovarian cysts. Nov. 20, 1902.	Afebrile, comfortable convalescence; primary union.	Examination, May 8, 1905. Anatomic status and function of all organs fully normal; former irregular menses now regular every 26 days; formerly dysmenorrhea (cramps), now no pains with menses; formerly constipation, now regular bowels, appetite good, no dyspepsia; occasional rheumatism; works regularly.
28. Mrs. C. H., aged 26; i-para; working housewife.	Slender, fairly nourished woman; constant side and back ache; dysmenorrhea, menorrhagia.	Moderate retroversion of sub involuted uterus; endometritis; ovaries partly cirrhotic, partly cystic.	Curettement; resection of both ovaries. Dec. 15, 1902.	Afebrile, comfortable convalescence; complete primary union.	Examination, May 10, 1905. Normal position of all parts; entirely well until a few months ago; now uterus and left ovary a little tender; slight dysmenorrhea and leucorrhea; does full housework.
29. Miss D. B., aged 22; virgin; domestic.	Slender, anemic, poorly nourished woman; constant left-sided pain and backache; leucorrhea; dysmenorrhea; dyspepsia, suspicions of stones in bile passages.	Extreme retroversion; movable uterus; large right femoral ring; endometritis; descensus of left cystic ovary.	Curettement, resection and suspension of left ovary; ligaments slender and fixed in broad ligaments, requiring careful dissection to develop them. Nov. 25, 1902.	Normal recovery; late suppuration on one side.	Examination, Aug. 19, 1904. Position of uterus and ovaries normal, the latter are tender, some dysmenorrhea and diffuse pelvic pains. The patient is anemic, poorly nourished, hysterical and has dyspepsia and more marked disorder of bile passages; only half working capacity.
30. Mrs. J. W., aged 29; 0-para; sterile; housewife.	Vigorous frame, well nourished; severe dysmenorrhea, constant pain in back and left side.	Retroverted, mobile uterus; left ovary and tube extremely adherent; right tube and ovary less so, and cystic; fistula in ano.	Curettement; operation for fistula in ano; difficult but complete liberation of left tube and ovary, also of right adnexa; resection of both ovaries; suspension of left tube and ovary; right salpingostomy. Jan. 8, 1903.	Little temperature; very comfortable convalescence and primary union.	Examination, May 18, 1905. Perfectly normal position and condition of all organs in pelvis; menses normal and painless; no symptoms but sterility; robust health.
31. Mrs. H. Y., aged 24; iii-para, two abortions; housewife.	Anemic, fairly nourished woman; constant backache and left-sided pain; dyspepsia, constipation.	Metritic retroverted mobile uterus; both ovaries enlarged; right ovary adherent; endometritis.	Curettement; removal of left tube and ovary; liberating and resection of right ovary.	Comfortable primary union.	Examination. Patient became pregnant after nine months; gestation normal and comfortable, aside from little pain in left scar; labor fourteen hours; normal; child 11½ pounds. Examined March 22, 1905. Position and condition of all pelvic organs normal; robust general health (Dr. Bernard).
32. Miss L. S., aged 39; virgin, nurse.	Fairly nourished; constant left-sided pain and backache; severe dyspepsia; dysmenorrhea and menorrhagia.	Mobile retroversion and endometritis; very large cystic left ovary, extremely descended; right ovary less so.	Curettement; removal of left tube and ovary and resection of right ovary, appendectomy with electrothermic forceps through small separate wound, made bluntly, appendix buried behind cecum April 2, 1903.	Primary union and normal course aside from intestinal obstruction for which appendiceal wound was opened and small intestine liberated 30 hours after operation.	Examination, May 22, 1905. Position and condition of uterus and ovary normal; little backache and headache at menstrual time; flow two days; good general health.
33. Mrs. J. A. W., aged 27; 0-para; housewife.	Fairly nourished, severe left-sided pain and backache; dyspepsia and headache; dysmenorrhea; very nervous.	Mobile retroversion and metritis; globular extremely descended left ovary; both ovaries contained follicle cysts.	Curettement; resection of both ovaries; reinforcement of round ligaments with peritoneal envelope. April 9, 1903.	Primary union; very comfortable convalescence.	Examination, June 1, 1905. Position and condition of uterus and appendages ideal; no symptoms anywhere except sterility; marked gain in flesh.
34. Mrs. B. K., aged 24; 0-para; working housewife.	Well-nourished woman; severe pain in back and right side; dysmenorrhea; gastralgia and headaches.	Uterus retroverted and firmly adherent; ovaries likewise marked endometritis; cystic ovaries.	Curettement; liberation of uterus and adnexa; resection of both ovaries; extensive dissection of round ligaments out of broad ligaments. May 25, 1903.	Temperature 102.5 on second day, quickly subsided; fairly comfortable convalescence; ligature abscess on right side after second week.	Examination, May 10, 1905. Condition and position of pelvic organs normal; some backache at menses; sterility only complained of; does full housework.
35. Mrs. T. A. L., aged 21; 0-para; housewife.	Strong, well-nourished woman; constant right-sided pain and backache; painful and irregular menses; headaches.	Retroverted uterus; left tube and ovary firmly adherent; severe endometritis; left hydrosalpinx size of finger; both ovaries cystic.	Curettement; resection of right ovary; removal of left ovary and hydrosalpinx. July 17, 1903.	Afebrile, primary union; sat up in one week.	Examination, Jan. 30, 1904 (Dr. James). Position and condition of pelvic organs very good.
36. Miss I. F., aged 23; virgin; clerk.	Somewhat anemic woman; constant left-sided pain; backache, dyspepsia, constipation, headache, irregular painful menses.	Uterus retroverted and ante flexed, movable; stenosis of cervical canal and internal os; left ovary corpus luteum cyst.	Difficult dilatation and curettage; slight incisions without internal os, cauterized. Resection of left ovary; difficult dissection of distal portion of right ligaments. July 20, 1903.	Afebrile, primary union.	Examination, June 4, 1905. Perfectly normal position and condition of pelvic organs; no symptoms; menses now regular, three days and painless; no leucorrhea.
37. Mrs. H. B., aged 22; 0-para; manicurist.	Slender, fairly nourished woman; constant left-sided pain from ovary; severe dysmenorrhea.	Mobile retroversion; descensus of cystic left ovary; left inguinal hernia.	Curettement; resection of left ovary; radical cure of left inguinal hernia. Sept. 21, 1903.	Very smooth and afebrile; complete primary union.	Examination, June 12, 1905. Perfectly normal position and condition of uterus and adnexa; menses painless; no pelvic or other symptoms; is in good health and works regularly.



38. Mrs. D. W., 0-para; working housewife.	Poorly nourished, anemic woman; constant pelvic pains; dyspepsia, gastralgia, extreme nervousness.	Mobile retroversion and endometritis; firmly adherent adnexa; cystic and cirrhotic ovaries; closure of both tubes, left one a hydrosalpinx.	Curettement; freeing of adnexa; resection of right ovary; opening right tube; suspension of both; removal of left hydrosalpinx and left ovary. Sept. 25, 1903.	Temperature 101 for three days; complete primary union; very nervous.	Examination, May 21, 1905. Patient was nervous; had various pains during first six months; received general medical treatment; uterus and ovary in good position and fair condition; great gain in weight; normal working capacity, but bemoans sterility.
39. Miss A. K., aged 30; virgin; cashier.	Stout, well-nourished woman; constant side and back aches; dyspepsia.	Mobile retroversion; catarrhal uterus; cystic left ovary.	Curettement; formalin cauterization; stitching wound of corpus luteum cyst. Sept. 28, 1903.	Afebrile, comfortable; primary union; unusual amount of uterine discharge from cauterization.	Examination, Dec. 24, 1904. Position and condition of uterus normal; right ovary tender and often source of pain; she had amenorrhea five months after operation, with discomfort; in very good health otherwise since marriage six months ago.
40. Miss A. C. V., aged 20; virgin; stenographer.	Fairly nourished woman; constant left-sided pain; severe dysmenorrhea; dyspepsia.	Movable retroversion; cystic descended left ovary; catarrhal uterus.	Curettement; resection of left ovary; removal of hydatid cyst from right tube. Nov. 9, 1903.	Very comfortable, afebrile course; primary union.	Examination, May 13, 1905. Position and condition of pelvic organs normal; menses regular and painless; little leucorrhea; good health; works regularly.
41. Mrs. O. B., aged 22; 11-para; working housewife.	Anemic, poorly nourished woman; diffuse pelvic pains, worse on right side; dyspepsia, headaches, nervousness.	Mobile retroversion and endometritis; large and follicular ovaries; lacerated perineum.	Curettement; resection of both ovaries; perineorrhaphy. Jan. 4, 1904.	Smooth afebrile; primary union.	Examination, Oct. 10, 1904. Position of uterus and ovaries normal; excessive menstrual flow; leucorrhea; otherwise well; intrauterine iodine application with syringe applicator.
42. Mrs. S. H., aged 35; 11-para; working housewife.	Fairly nourished woman; little anemic; constant backache and dyspepsia; dysmenorrhea.	Uterus extremely retroverted. Metritic, movable; lacerated perineum.	Curettement; perineorrhaphy. Jan. 7, 1904.	Afebrile; primary union; catheter required one week.	Examination, March 15, 1905. Normal position and condition of adnexa; after four months' medical treatment for rheumatic conditions and local treatment of metritic uterus by massage and galvanism, she has quite good health and strength.
43. Mrs. W. P., aged 23; 0-para; married five years; housewife.	Well-built and nourished woman; constant right-sided pain and backache; dysmenorrhea and menorrhagia.	Retroverted, metritic movable uterus; adnexa both sides adherent; left ovary cystic; right hydrosalpinx.	Curettement; liberation of adnexa; removal of right tube and ovary. Jan. 30, 1904.	Normal; primary union.	Examination, May 23, 1905 (Dr. White). Condition and position of pelvic organs normal; menses normal, painless; normal general health.
44. Mrs. J. L., aged 32; 11-para; working housewife.	Patient with rugged muscular frame, constant backache; dyspepsia and great nervousness; obstinate neuralgias in chest and head; menorrhagia.	Metritic movable uterus in marked retroversion; severely pathologic cervix; lacerated perineum. Right ovary cystic (corp. luteum).	Curettement, amputation of cervix; perineorrhaphy; resection of right ovary; removal of three hemorrhoids by ligatures. Feb. 4, 1904.	Smooth; primary union.	Examination, Sept. 3, 1904. Position of uterus and adnexa very good and in fair condition, but has required massage and galvanism of uterus for continued metritis for about four months. Patient has renal insufficiency, with some dysmenorrhea and rheumatism.
45. Mrs. W. A. L., aged 31; 0-para; housewife.	Fairly built and nourished woman; melancholic disposition, extreme nervousness, disturbed sleep; pelvic pains not prominent; dysmenorrhea.	Extreme retroversion; uterus mobile, large; ovaries descended and cystic.	Curettement; resection of both ovaries (at patient's house). Feb. 18, 1904.	Some febrile movement stitchhole abscess on one side; almost total intestinal obstruction for two days resolved spontaneously.	Examination, Feb. 7, 1905. Uterus rather large in fair not marked anteversion; menses normal; local massage and galvanism of metritic uterus for several months after operation and tonics for a longer time; has gloomy moods still at times, but no pelvic symptoms.
46. Mrs. F. S., aged 37; 14-para and 2 abortions; minister's wife.	Anemic woman; melancholia with maniacal paroxysms; dysmenorrhea; constant backache; intercostal neuralgias; dyspepsia.	Mobile retroversion; marked metritis; lacerated perineum; cystic right ovary.	Curettement; perineorrhaphy; resection of ovary; right ligaments thin and soft; left ligament tore off but stump was caught and anchored in the wound against Poupard's ligament. March 10, 1904.	Comfortable; no nervousness, but late suppuration on one side.	Examination, May 17, 1905. Position and condition of uterus and adnexa very good; no pelvic or other symptoms; former marked melancholia, neuralgia and dyspepsia gone; has quite robust health; took tonics about a year.
47. Mrs. T. C., aged 33; multipara; housewife.	Well-built woman; constant left-sided ovarian pain and neuralgias of leg, loin, chest and arm of same side; backache; dyspepsia; constipation and dysmenorrhea.	Large, metritic, retroverted mobile uterus; left tube and cystic ovary prolapsed and adherent; lacerated perineum.	Curettement; perineorrhaphy; liberation of left adnexa; electric cauterization of follicles in left ovary. July 14, 1904.	Smooth, afebrile; primary union.	Examination, May 20, 1905. Normal position and condition of all pelvic organs; several applications tincture iodine required to endometrium; massage and galvanism of uterus to overcome chronic metritis; robust health; former persistent ovarian referred neuralgias gone.
48. Miss M. R., aged 23; virgin; dressmaker.	Poorly nourished, anemic woman; diffuse constant pelvic pains in sides and back, aggravated during menses; no colicky pains; marked dyspepsia; general feebleness and nervousness.	Movable retroversion, with apparent retroflexion; catarrhal endometritis; left ovary cystic.	Curettement; electrothermic cauterization of left ovary; special dissection of right ligaments from broad ligaments. July 23, 1904.	Comfortable; primary union.	Examination, June 12, 1905. Position and condition of uterus and adnexa ideal; menses normal and painless; no pelvic or other symptoms; little leucorrhea; good general health.
49. Miss T. D., aged 25; virgin; domestic.	Feeble build; somewhat anemic; constant left-side and backache; dysmenorrhea; dyspepsia; headaches; unable to work.	Small, extremely retroverted mobile uterus; catarrhal endometritis; cystic left ovary; imperfect development of organs.	Curettement; resection of left ovary; very feeble right ligaments, strengthened by adjacent peritoneum. Oct. 15, 1904.	Afebrile; comfortable; primary union.	Examination, May 10, 1905. Position and condition of uterus and appendages normal, but patient was too feeble to work for about six months, and required one application tincture iodine to endometrium; galvanism to left ovary several times; tonic remedies all the time; she is now in fair health.
50. Mrs. M. I., aged 25; 1-para; working housewife.	Fairly nourished, very nervous woman; neurasthenic since railroad injury six months ago; back and side aches constantly; dysmenorrhea; leucorrhea.	Extreme retroversion. movable; adnexa adherent; endometritis; lacerated cervix; cystic left ovary.	Curettement; Emmett cervix operation; resection of left ovary. Oct. 18, 1904.	Normal; primary union.	Examination, April 1905 (Dr. Bernard). Normal position and condition of uterus and adnexa; normal pelvic functions; patient has ophthalmic goiter.



can not ascend with it, as they should, being fixed at a lower plane. The enforced tension on these sensitive structures entails discomfort on the patient; and the direction of this traction is opposed to that of the extraperitoneal (often imperfectly) shortened round ligaments, which endangers their integrity and tends to induce return of displacement of the uterus. Such adhesions of an ovary and tube are severed with the greatest ease by a finger within the internal inguinal rings, because their natural position, fortunately, is just in front of them.

Second: The round ligament does not always slide extensively enough within the broad ligaments without some special intraperitoneal dissection, to impart forward traction to the uterus directly enough; but by the exclusively extraperitoneal technic it is left to pull from the point of its entanglement in the broad ligament, several inches away from the uterus, which manifestly predisposes to a recurrence of retroversion. This condition will be found once in every four or five individual ligaments dealt with, even in simple cases, according to my observations in at least 130 cases, if the effect on the uterus of traction on the shortened ligament be noted each time by a finger introduced alongside of it. This condition is readily corrected by a little dissection around the ligament when this is drawn into the slightly dilated inguinal ring.

Third: In the rather frequent cases of retroversion-flexion with a heavy fundus the center of gravity of the body of the uterus is often posterior to a line joining the points of origin of the round ligaments, while the posterior cervical attachments are relaxed and allow it to rise forward. In this condition traction on the round ligament will raise the cervix still more forward quite as often as it will raise the fundus, unless it is quite completely dissected out from the broad ligament on each side and is given a new course almost directly forward. Koenig and Feuchtwanger<sup>14</sup> have also observed this. This dissection and development of the round ligaments in such cases is readily done through the merely dilated rings.

That such intraperitoneal exploration and manipulation needs to be added to the simple Alexander operation, even in the simple cases, is indicated by results of that operation as reported, for instance, by Longyear,<sup>15</sup> who in 58 cases had five recurrences of displacement, even without any test of pregnancy affecting them at all. In consequence of his working outside of the inguinal canals likewise, he did not find either round ligament in one case, and only one in another case. Such inability to find the ligaments is a worse failure of such superficial technic than is a recurrence of displacement after the operation. It is certainly not unfair, therefore, to count such failures with the recurrences of retroversion. These two added to the five recurrences in the Longyear report makes 12.5 per cent. failures in all. This is about equal to the results of the simple Alexander operations as reported by a number of German operators, particularly those who aim not to open the inguinal canals according to Alexander.

Such results are not satisfactory when it is considered that the operation is never a life-saving one, never done for grave indications, and that non-surgical means could largely have been substituted; and, in view of the fact that I have now 155 examined cases, the majority of

which were complicated, so much so that pessaries, etc., were out of the question and surgery was positively the only resource. The patients were all carefully examined, on an average nearly two years after operation and only one case of return of displacement was found among them; no hernias, while some fifteen hernias, at least, were incidentally cured; and twenty-one patients who bore one or more children, all passed the double test of pregnancy successfully. Among those gynecologists who, on account of such considerations, have been induced, like myself, to extend the bounds of the Alexander operation, and to give the larger class of complicated cases of this kind the superior benefits of a more thorough bi-inguinal shortening of the round ligaments, are the following: Professor Fritsch of Bonn removed a tubercular tubal tumor through the inguinal ring, and canal incidentally. Barth<sup>16</sup> of Danzig says that an adequate technic for the Alexander operation was only secured when Kocher opened the inguinal canals in doing it. Barth does this and also opens the peritoneum to sever adhesions and to prove the position of the uterus. Rosinski<sup>17</sup> of Koenigsberg opens the peritoneum to get the ligaments dissected out sufficiently. Heinrich<sup>18</sup> of Bremerhafen advocates opening the peritoneum for similar reasons and says that Professor Zweifel of Leipzig does so also. Professor Kossmann<sup>1</sup> of Berlin, last year reported about twenty cases in which he had performed what at that time he baptized as "the Goldspohn operation." Sigmar Stark<sup>19</sup> says that he has been doing this bi-inguinal celiotomy by a little different technic and claims not to have known until two years ago of any of my seven articles on this subject that were out then. McKay<sup>20</sup> of Sydney, Australia, does by this bi-inguinal celiotomy substantially what I do and says, "I found out later that Goldspohn anticipated me; but I can from my experience in the procedure fully endorse his remarks on this innovation, and I have no doubt that it will be only a matter of time when this addition to the Alexander operation will be adopted on all sides . . . Such an easy matter is it to explore the ovaries and tubes through the internal ring, that I am now adopting this method in preference to the median incision when I wish to remove a small ovarian cyst or hydrosalpinx" (in connection with a retroversion, of course).

During the years 1902, 1903 and 1904 I performed this operation on 55 patients. One patient died after 36 hours of very satisfactory condition, from all the signs of cerebral embolism, which suddenly developed, and ended inside of 20 minutes. Of this number five were not accessible for examination, but 49 were examined by me or one of five other physicians after an average interval of twenty-two and one-half months after operation, and are reported in the detailed table. In five of these the uterus was adherent. In nine cases the adnexæ of both sides were adherent and in five of those on one side only. Three hernias were cured incidentally. The tube (five times a hydrosalpinx) and ovary were removed through the dilated rings on the right side four times and on the left side six times. Cystic follicles and corpora lutea or hard cirrhotic portions of ovaries were excised from the right ovary 26 times and from the left ovary 31 times. In a few, this was done by thermocautery. Lateral suspension of tube and ovary

16. Barth. *Deutsch. med. Wochft.*, 1904, p. 262.

17. Rosinski: *Deutsch. med. Wochft.*, 1904, p. 262.

18. Heinrich: *Muench. med. Wochft.*, 1901, xlii, p. 1676.

19. Sigmar Stark: *Cincinnati Lancet, Clinic*, June 3, 1905.

20. McKay; *Australasian med. Gazette*, 1904, vol. xxiii, p. 327.

14. Koenig and Feuchtwanger: *Monats. f. Geb. u. Gyn.*, vol. vi, p. 344.

15. Longyear: *Amer. Jour. Obstet.*, November, 1903, p. 668.



was made twice on the right and four times on the left side. Salpingostomy was done twice. Small parovarian cysts were removed twice. Primary union of the inguinal wounds occurred in all but five cases in which a stitch hole abscess or late catgut suppuration ensued on one side. As collateral operations at the same sitting the following were performed: Curettements 49, amputation of cervix 7, Emmett operation 1, my intrapelvic infravaginal perineorrhaphy 15, hemorrhoids by cautery 6, appendectomy by separate small wound made bluntly 1, right nephrorrhaphy 1. Among this group of cases three confessedly induced abortions were reported, and four cases of normal labor at term. In addition to the latter, six cases of normal gestation and labor were also found among the group of cases previously reported—making ten new such "double test" cases to be added to the eleven that I had before, or twenty-one in all; each patient was carefully examined afterward and the uterus found in rather more pronounced anteversion and usually in good involution. The same may be true of two others of whom examinations could not be had as yet. Since my last report I have noted the following similar cases reported by other operators in which the patients were examined after a subsequent labor and found to have no recurrence of displacement, thus having passed what I termed the double test of pregnancy successfully: J. R. King,<sup>21</sup> 3 cases; Professor Fuchs, Werth-Kiel, 6 cases and 1 temporary recurrence; Reiferscheid,<sup>22</sup> Bonn, 9 cases; Steidl,<sup>23</sup> Strassburg, 4 cases; Haid,<sup>24</sup> Buffalo, 12 cases; R. H. Car, Chicago, 5 cases; Heinrich,<sup>25</sup> Bremerhafen, 5 cases; Morlaender,<sup>26</sup> 1 case; John G. Blake,<sup>27</sup> Boston, 3 cases; W. M. Conant,<sup>28</sup> Boston, 6 cases; F. W. Johnson,<sup>29</sup> Boston, 12 cases; L. H. Boldt,<sup>30</sup> New York, 4 cases; P. F. Munde,<sup>31</sup> New York, 4 cases, and W. M. Polk,<sup>32</sup> New York, 4 cases. These, with 10 cases of mine, make 88, of which one only was a temporary recurrence. These are separate from a collection of 80 such cases that I reported three years ago,<sup>33</sup> among which there were two recurrences of displacement (in patients operated on for prolapse). Thus we have 168 cases in all, with only three failures and those for special reasons mostly. Furthermore, Dr. F. W. Johnson says "Dr. Cleveland, New York, with a large experience with the Alexander operation, and Dr. Edward Reynolds, Boston, who has confined many such cases, have never seen a return of displacement in cases after labor following the Alexander operation."

519 Cleveland Avenue.

21 King, J. E.: Buffalo Med. Jour., 1904-5, vol. xlv, p. 374.

22 Reiferscheid: Arch. f. Gyn., 1904, vol. lxxiii, p. 159.

23 Steidl: Monats. f. Geb. u. Gyn., 1904, p. 234.

24 Haid: Amer. Jour. Obstet., November 1904, p. 706.

25 Heinrich: Naturforscherversamml., Hamburg, Sept. 27, 1901.

26 Morlaender: Zeits. f. Geb. u. Gyn., vol. xlv, p. 100.

27 John G. Blake: Amer. Jour. Gyn. and Obstet., April, 1896, p. 460.

28 W. M. Conant, Amer. Jour. Gyn. and Obstet., April 1896, p. 460.

29 F. W. Johnson: Amer. Gyn. and Obstet. Jour., April, 1896, p. 460.

30 L. H. Boldt: Amer. Jour. Gyn. and Obstet., April 1896, p. 460.

31 P. F. Munde: Amer. Jour. Gyn. and Obstet., April, 1896, p. 460.

32 W. M. Polk: Amer. Jour. Gyn. and Obstet., April, 1896, p. 460.

33 The Journal A. M. A., June 5, 1902.

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## THE CONSERVATION OR RESTORATION OF NORMAL ANATOMY IN GYNECOLOGIC SURGERY.\*

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During the past few years a great wave of conservatism has agitated the entire gynecologic fraternity, not only throughout this country, but also Europe, although it must be admitted that conservatism has not yet achieved the following it deserves even here. The French and to a less degree the English and German gynecologist still vastly prefers to do a high amputation of the cervix or even a vaginal hysterectomy in cases in which better symptomatic, functional and anatomic cures, together with a more complete conservation of the child-bearing function, may be obtained by a tracheloplasty. In France it is true that ovarian conservation has received great stimulation by the well-known work of Jayle and his confrères in regard to the internal secretion of the ovary. In our own country I feel certain that I am not overstating the fact when I say emphatically that it is now a very rare occurrence for a competent gynecologist so far to forget or to neglect the principles designated in the title of this paper as to remove or to sacrifice a healthy, or even a healthy portion of an ovary. This subject, however, has been too frequently and too well exploited by others to demand especial consideration here.

My desire in bringing to your consideration this paper is to extend this tendency to conservatism to include two more large classes of cases which have been often and hotly debated, namely, uterine displacements and plastic gynecologic surgery. If this paper differs from my former papers in showing little, if any, evidence of original research work, its justification must be sought in the extemporaneous remarks of Dr. Seth C. Gordon, of Portland, Me., on the occasion of the complimentary dinner tendered him in honor of his fiftieth year of medical practice on the 6th of June last, in which he said that the highest attainment of any medical man was the ability to think for himself and to form independent, if not original, opinions on each subject, and I ask you to accept what follows as the result of such independent and, perhaps, original thought.

That the paper and its discussion may not be too broad for careful consideration, I have omitted any discussion of the merits of the treatment of uterine displacements by pessary, and shall assume in the following that we are dealing only with cases in which operative treatment has been deemed advisable.

One of the most thoughtless and unscientific assumptions ever made in this connection not only by the medical profession as a whole, but even by many able gynecologists, is that the multiplicity of operative procedures advocated by various operators bears evidence to the fact that no one satisfactory operation has as yet been devised. This, as I shall attempt to prove, is utterly fallacious. It is not only true that one satisfactory operation has been described, but that many such absolutely rational and scientifically, anatomically and symptomatically satisfactory operations have been advocated and are in daily use.

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



If any error can be greater than the one just outlined, it is that of assuming that, since some one favorite operation appeals to the appreciation of the rational in gynecology, it is right and wise to adopt that operation and to employ it in the treatment of all cases of the particular form of displacement for which it is considered a remedy. Empiricism is hotly condemned and denied throughout the whole realm of medicine, and yet such an adoption of one operation for all cases of any given uterine displacement constitutes nothing short of extreme empiricism.

To me it seems that the multiplicity, all too limited, testifies to the infinite variety anatomically manifested by such cases and also to the originator's rebellion against the former empirical employment of methods unsatisfactory in certain respects in certain cases. Moreover, being convinced that the originator of each of the better known operations does not in his own practice consider his operation by any means an universal panacea, nor use it exclusively in all his operative cases, I addressed the following letter to each of twelve American originators of such operations:

I am preparing a paper for the coming session of the American Medical Association entitled "The Conservation or Restoration of Normal Anatomy in Gynecologic Surgery." In treating of this subject I wish particularly to commend such operations as restore uterine displacements through the employment of the uterine ligaments, and as you have originated and publicly advocated such an operation, I shall greatly appreciate answers to the following questions:

1. Do you find your operation applicable to all, and do you employ it in all cases of uterine retrodisplacement in which you operate?

2. If not, in what percentage, approximately, do you employ it?

3. Am I at liberty to quote your reply in connection with my paper?

Nine of the twelve gynecologists thus addressed replied at much length, and each and all granted leave to quote their replies, for which I sincerely thank them, and from which I will quote.

DR. BALDY finds his operation applicable to most cases except those in which, through concomitant or previous operation the round ligament on one or both sides is absent.

DR. BOVÉE says: "I do not find my operation applicable to all cases nor do I employ it in all cases of uterine retrodisplacement in which I operate. There are various conditions, such as deep laceration of the cervix, the presence of tumors in the posterior wall of the uterus, habitual constipation with straining at stool, habitual retention of urine, mal-attachment of the uterovesical and uterosacral ligaments to the uterus which may cause retrodisplacements of the uterus, and especially is this so of appendage disease. In such cases, operation on the uterosacral and round ligaments would be manifestly inadvisable."

He uses his method in about one-third of his cases.

DR. A. PALMER DUDLEY, New York, finds his operation applicable to about one-fourth of his cases.

DR. GILLIAM says: "I find my operation applicable in all cases, except such as those in which the ligaments are preternaturally short and the uterus is held rigidly in retroposition by conditions that can not be overcome. The percentage is exceedingly small."

DR. GOFFE says: "I wish to say unhesitatingly that I find my operation for the cure of retrodisplacements of the uterus applicable to all cases in which I operate primarily for the displacement. Sometimes, in cases in which I have submitted a patient to laparotomy, for the relief of conditions other than displacement or complicating it, I shorten the uterosacral ligaments and fortify this procedure by shortening the round ligaments also. In patients at or near the menopause requiring multiple repairs, such as trachelorrhaphy or amputation of the cervix, perineorrhaphy, etc., for brevity I frequently

do a vaginal fixation. My operation, however, is the standard procedure."

DR. KELLOGG, finding his original operation inadequate, has devised a second operation, and now rarely needs any other.

DR. MANN says: "I do not employ it in all cases, but only in those in which for some other purpose I am obliged to open the abdomen, or when the Alexander operation has failed. I do four operations for displacement: the Alexander, my operation for internal shortening, Kellogg's operation and ventral fixation, not suspension."

DR. NEWMAN says: "In all cases, when it is not necessary to open the abdomen for other work, I employ my 'high or direct' operation for shortening the round ligaments and with uniform good results. When celiotomy is necessary (for intra-abdominal complications) I shorten the ligaments by the intra-abdominal methods."

DR. WYLIE disapproves of ventral suspension and fixation, and reserves his own operation for those cases in which opening the abdomen is necessary for complications, doing the Alexander operation when celiotomy is not necessary.

My reason for making these excerpts at such length is that they seem more potent than any other argument I could offer. When a man has patiently evolved an operation, it becomes to him almost as a part of himself, and any overenthusiasm manifested by him in its behalf is as easily excused as is the more exalted idea of a child excused in its parent. Moreover, we might reasonably expect its originator to be more expert than others in its application and to expect and actually to achieve a greater percentage of successes by its employment than any one else. It seems to me, therefore, that when the foregoing nine gynecologists, each and every one, find from a few to many cases requiring some other operation than their own, it is a strong argument in favor of a great familiarity with the greatest possible number of rational operations for the same condition. In other words, these replies to my letters confirm absolutely my contention, namely, that no one operation will fulfill all indications and that, therefore, a multiplicity of operations is an essential to a broad success. Just here permit me to insist that there is one attainment the possession of which by any operator transcends all other abilities; I allude to mechanical ingenuity.

It is well nigh impossible for the present generation of gynecologists to attain a degree in medicine without a good fundamental education in the anatomy, physiology and pathology of the pelvic organs of women, and we can, therefore, assume that such knowledge is theirs. Assuming that due consideration is given to the functions which the pelvic organs must perform, it is my contention that the operator, having thoroughly familiarized himself with the greatest number of operative procedures for any given condition, and possessed of sufficient mechanical ingenuity to vary any given operation to meet the requirements of his individual cases instead of following absolutely the originator's description, or, if need be, of combining the indicated portions of two or more such operations so as to restore the closest possible approximation of the original normal anatomy, will give the greatest measure of relief to his patients.

No discussion of the merits of any method of operative treatment of retrodeviations of the uterus is complete without comparing the merits of the utilization of the normal anatomic structures with the demerits of the introduction of adventitious, artificial and unnatural uterine supports. In the latter class I, of course, allude to ventral fixation and suspension and vaginal fixation.



I am not prepared to say that ventral fixation or suspension or vaginal fixation are absolutely unjustifiable operations, but I am prepared to say that they are performed far more often than indicated or even justified. This is true for several reasons. The ventral suspension and fixation are by far the easiest operations performed within the abdomen and can be done by any tyro, their safety merely depending on his appreciation and practice of asepsis. No minute knowledge of pelvic anatomy is required, because the operation itself is a violation of every unit of such anatomy.

The only cases in which I have ever considered myself justified in doing a ventral suspension or fixation have been cases in which through concomitant or previous operations, developmental arrest, atrophy due to long persistence of untreated disease, or senile degeneration, the normal supporting structures of the uterus were absolutely unavailable to secure it in its restored normal position. Believe me, if I could only happily convince all physicians that the foregoing constitute the only rational indications for these two operations, and that their performance under any other circumstances constituted an acknowledgement either of inability on the operator's part to do good work with the sufficiently abundant material which Nature has provided and with which the work was originally done, or an inexcusable indifference to the best interests of the patient, these operations would be very rarely performed. Furthermore, should the time ever come, as I hope it will, when these views are widely held, our successors will look back on the era of the undue prevalence of these two operations much as we now look back on venesection.

It is not to the performance of ventral suspension and ventral fixation in properly selected cases by expert operators of wide experience and established ability, possessed of expert selective judgment, that I object. These operations have been advocated and performed by the best gynecologists of the world, and in proper cases—which each year are being more carefully selected, and hence are fewer in proportion to the total number of operations for such conditions—with generally satisfactory results, and this fact alone gives them a valid standing, always, be it understood, in proper cases only.

My objection to the performance of ventral suspension is because of its ease, simplicity and safety by incompetent and inexperienced operators who would not be competent properly to adjust the uterosacral, round and broad ligaments, and who, if ventral suspension had never been devised for them, would still be using the comparatively harmless pessary or referring their patients to competent operators.

It is the too frequent performance of these operations by these occasional or inexperienced operators in cases in which none of the above-named indications for ventral suspension exist, that furnishes the abundant material for dystocias, intestinal obstructions, painful abdominal wounds and other undesirable sequelæ not infrequently observed.

The degree of surgical skill and address necessary for the performance of the operations involving the shortening of the round ligaments, the shortening or transplanting of the uterosacral ligaments and the transplanting of the uterovesical attachment to the cervix with the very vague structures known as the uterovesical ligaments should not be exaggerated. They are all comparatively simple operations, provided only that the operator knows thoroughly his normal anatomy, has the proper instruments and is well based in the

technic of the operation which he has elected to form the foundation of the individual operation. For example, so much has been said and written relative to the difficulty of isolating the round ligaments according to the technic of Alexander that in ten consecutive, unselected cases since having this paper in mind I have had my anesthetist accurately note the physical condition of the patient and the time consumed between the making of the initial skin incision to the complete isolation of the round ligament

The findings I have tabulated as follows:

CASE 1.—Patient slight.....	Right ligament	3 min. 10 sec.
	Left ligament	2 min. 35 sec.
CASE 2.—Patient slight.....	Right ligament	2 min. 45 sec.
	Left ligament	3 min. 25 sec.
CASE 3.—Patient moderately stout.	Right ligament	3 min. 20 sec.
	Left ligament	3 min. 15 sec.
CASE 4.—Patient stout.....	Right ligament	11 min. 40 sec.
	Left ligament	3 min. 20 sec.
CASE 5.—Patient slight.....	Right ligament	4 min. 15 sec.
	Left ligament	1 min. 55 sec.
CASE 6.—Patient moderately stout.	Right ligament	3 min. 30 sec.
	Left ligament	3 min. 10 sec.
CASE 7.—Patient slight.....	Right ligament	4 min. 50 sec.
	Left ligament	3 min.
CASE 8.—Patient moderately stout.	Right ligament	7 min. 20 sec.
	Left ligament	4 min. 50 sec.
CASE 9.—Patient stout.....	Right ligament	6 min. 20 sec.
	Left ligament	5 min. 35 sec.
CASE 10.—Patient slight.....	Right ligament	2 min. 40 sec.
	Left ligament	2 min. 15 sec.

This table shows that in these ten cases which were ordinary and unselected, being consecutive, the longest time consumed in isolating the round ligament was in Case 4, in which, through much oozing of blood from a thick, fat layer, the structures becoming obscured by blood staining, 11 minutes and 40 seconds, practically 12 minutes, were consumed in isolating the first ligament, only 3 minutes and 20 seconds being required on the left ligament because information acquired in isolating the first ligament always makes the isolation of the second quicker. The average time per ligament was 4 minutes and 27½ seconds, which I feel certain can not be considered excessive, and I feel no hesitation in saying emphatically that any material lengthening of the operation is invariably due to the lack of knowledge of the regional anatomy, a fault easily overcome, or to a careless disregard of proper technic as it was in the isolation of the right ligament of Case 4.

The uterosacral ligaments are not well understood or are misunderstood by many, but when their anatomy is once mastered, which is not in the least difficult, I feel certain that every surgeon who has had experience with them will sustain me in the statement that their isolation and manipulation are relatively easy.

Being, then, possessed of such good means of restoring and conserving normal pelvic anatomy by the employment of only its natural ligaments, except as previously indicated, why should we, through indolence or indifference, fasten the uterus either mediately or immediately to the anterior abdominal wall in a way never accomplished by Nature, in a position as far removed from normal as its retrodeviation for which the operation was undertaken, and with new relations which may interfere to a greater or less extent with the performance of some one or more of its functions unless for very special indications? Last and most important of all, why, when avoidable even at a far greater expenditure of time, energy and skill than is ever demanded by the other operations, put a false band with all its baneful possibilities across from one to several centimeters of the abdominal cavity, when every surgeon in the land would consider himself highly culpable if on accidentally discovering such a band under any other circumstances, he closed the abdomen without first



safely removing that band? It is useless to say that such bands do no harm because they may do just as much harm as any other similar false band. It seems little less than a miracle that it has been reported so seldom, but I have personal knowledge of two cases, one terminating fatally, in which subsequent operations were demanded for intestinal obstruction due to such suspensory ligaments, and Dr. J. M. Baldy long ago reported nine such cases. Such risks are, or at least may be, legitimate when urgent symptoms demand relief and no other means offer an equal chance for successful relief, but not otherwise.

All that has been said of the benefits of the multiplicity of methods for the operative treatment of retro-displacements applies equally well to the plastic operations for the repair of injuries of the birth canal.

How often we read or hear an article warmly advocating some particular method of tracheloplasty or some particular manner of amputating the cervix. This seems to me unwise and unsound if the method is offered as a substitute for others. As a supplement it should be welcomed. Learn thoroughly the basic, fundamental principles of all such operations. Accept what is sound and be prepared to use such principles of any one or several operations as the personal equation of the individual patient may require. It necessitates much work, but the end justifies the means, and those of us who have foresworn all other practices owe it to our patients and to our consultants to know the whole field as thoroughly as work can enable us to learn it. It was to gain time for such work that the other practice was relinquished.

I was greatly pleased at the last session of the American Gynecological Society to hear, as a guest, Dr. E. C. Dudley, in his presidential address, invite the greater attention of the members, and hence, of course, of gynecologists in general, to the performance of plastic, so-called minor, gynecologic operations and to deplore their too frequent relegation to assistants. I consider the restoration to its original normal relations of an old lacerated perineum as the most difficult of gynecologic operations, and I should consider the characterization of a man as a good plastic operator as the highest possible commendation. It is minor gynecology only in the sense of danger to the patient's life. It is probable that no operation is more frequently unsuccessfully performed, especially when the original laceration has led to a complicating cystocele and rectocele.

Here, again, no one operation will mend all cases. It is futile to exploit the advantages of the Hegar, the Tait or the Emmet operation as possessing ability to cure more than a certain percentage of cases. Only two considerations can determine the operation to be performed, namely, the location, extent and direction of the original laceration and the absolute necessity of removing all cicatricial tissue in order that the torn or separated muscles may be so placed as once more to perform their lost functions. Since it is rare to find two tears exactly alike, it is obvious that each of all the operations thus far described have their indications, and it is equally obvious that now and then a laceration will be found which no known operation will exactly repair. Regardless, then, of the size or shape of the adventitious tissue to be removed, the operation must completely remove all tissue abnormally present as the result of the laceration, completely exposing the separated muscles. A mere epithelial denudation is entirely inadequate, as it does not eradicate, but merely lessens the amount of such tissue.

I have no operation to prescribe definitely, but the principles above indicated are applied, with variations to suit each case, as follows: The size and direction of the tear is determined by palpation and inspection of the vaginal mucous membrane, and the outline of all tissue included within the cicatrized area is lightly marked with a sharp scalpel, irrespective of its size or shape. Parenthetically, I may say that an irregular approximation of the denudation suggested by Emmet obtains in about 65 per cent. of the cases. It will be found that this outline invariably terminates at the lowest remnant of the hymen on one or both sides and at some point high or low in the median line.

Having completed this outlining process, which requires but two or three minutes, the entire thickness of the mucous membrane is picked up on a tenaculum or with tooth forceps near and just internally to the lowest point of the hymenial remains and is cut entirely through into the loose areolar tissue. The opening is then carefully enlarged inward until it will admit the tip of the index finger. The entire outlined area is then freed from the underlying muscles and rectum by blunt dissection with the finger only in this loose areolar layer, and as soon as the outline has been slightly passed the entire mass is excised.

The remaining portions are now sutured in whatever way will best serve in the individual case to restore the parts to their original relations. Bleeding is free, but never serious and can always be controlled by the sutures without the necessity of tying any vessels, however the sutures are placed. The only necessity is that care be taken to place them well into the muscles and to avoid either perforating the rectum or allowing dead spaces to remain.

#### CONCLUSIONS.

The conclusions to be drawn from the work which has inspired this paper are:

1. The greater the number of ways devised for utilizing the normal uterine ligaments for its restoration and retention in its normal position the better, so long as they are rational and safe and considered as supplements to instead of substitutes for each other.

2. Every surgeon, whether specialist or general practitioner, intending to operate in such cases owes it to his profession and to his clientele to familiarize himself with all known methods and to be prepared to use any or all or to modify any or all of them to meet the demands of each individual case.

3. The skill and time required to utilize the natural ligaments are not excessive.

4. The formation and utilization of adventitious ligaments within the abdomen should be reserved for cases manifesting special indications.

5. The operations of ventral suspension and fixation should not be performed because of their ease by pseudo-surgeons who could not competently operate by using the natural ligaments.

6. The individual case should determine the method for each tracheloplasty or cervical amputation for the relief of laceration.

7. Only principles, not details, can be definitely described for the plastic repair of the lacerated perineum.

8. Plastic surgery is minor only in its danger to the patient's life.

9. The conservation or restoration of normal pelvic anatomy is the highest function of the gynecologist.



## DISCUSSION

ON PAPERS OF DRS. GOLDSPOHN AND CRAIG.

DR. C. O. THIENHAUS, Milwaukee, agreed with Dr. Craig that for retroflexion of the uterus there are many methods of operation which give satisfactory results, and that the surgeon who has perfected himself in one method and knows not only how to do it, but the indications for it as well, will have excellent results, while others will fail. In the majority of failures it is not the method which is at fault, but the inexperienced operator. Five years ago Dr. Thienhaus advocated the vaginal route and the vaginal fixation either after Mackenrodt's or Dührssen's method for retroflexion of the uterus, and he has had no reason to change his views. Women will consent more readily to operation by the vaginal route, and if this can be performed with the same success and the same immediate and future safety for the patient as by the abdominal route there is no reason why it should not be chosen. By doing a vaginal fixation it is possible to avoid all the objections which are raised to abdominal fixation and suspension, namely, abnormal position of the uterus and the formation of bands, which may cause ileus. Experience, he said, has also shown that when Mackenrodt's or Dührssen's method is used there is absolutely no danger of disturbance during future pregnancies. Dr. Thienhaus has seen eight pregnancies following vaginal fixations which he had performed after Mackenrodt's method (in one case two pregnancies), and in not one of them was there any disturbance attributable to the fixation, during pregnancy or confinement. He does not use the vaginal route for every case of retroflexion. When the retroflexed uterus is imbedded in dense adhesions or when there is sufficient reason to believe that together with a retroflexion of the uterus a disease of the appendix is present he always uses the abdominal route. In 1902 Dr. Goldspohn challenged Dr. Thienhaus to show him literature that would state that Dührssen had so few recurrences. Dr. Thienhaus showed that literature.

DR. W. O. HENRY, Omaha, said that he extends the vesicouterine ligaments upward on the anterior surface of the uterus without dissecting the bladder free from the uterus. The abdomen is opened, all adhesions are broken up, and whatever plastic work is required is done on the appendages, then the peritoneum is carefully scarified in the cul-de-sac between the uterus and the bladder, and the scarification is extended up on the uterine wall in line with the vesicouterine ligaments as far as may be necessary, depending on the size of the body of the uterus, then the bladder is sewed to the uterus for the distance of about one-quarter of an inch with a simple catgut ligature, the vesicouterine ligaments are picked up and sewed to the scarified surface with a like catgut ligature. This simply makes use of Nature's method to hold the uterus forward. Dr. Henry related the case of a young woman who, from pelvic inflammation, had a retroflexed uterus with adhesions. He advised an operation, but it was refused, until five years afterward the patient returned for operation. The abdomen was opened, the adhesions broken up, tubes and ovaries released, and the cysts in the ovaries punctured; the uterus was then brought forward according to the above plan. The woman made a good recovery. Five weeks later a careful examination showed the uterus to be in excellent position and freely movable. Dr. Henry believes that the Alexander and Goldspohn operations are all right in certain cases, but that his method of operation is rational, practicable and applicable in a large majority of cases. He thinks it well after this operation to have the patient lie on the side and face as much as possible until the parts gain their normal tone.

DR. A. ERNEST GALLANT, New York, agreed with Dr. Craig that one operation will not suit every case. Experience teaches that any disease or operation which induces adhesions of pelvic organs produces a painful point. Normally the uterus should be capable of elevation of from four to five inches, and the lateral mobility is from two to three inches. The moment adhesions form, either from inflammation or other cause, the least dragging on that point will cause pain; hence Dr. Gallant avoids any operation which will cause restrictive artificial adhesions. For this reason he has avoided shortening the uterosacral ligaments. In his experience as high as 50 per

cent. of patients suffer from this cause. In a study of 2,000 gynecologic cases trying to lift the uterus caused pain in 50 per cent. In some cases, of course, this was associated with pus tubes and other inflammations. If the uterus is placed in such a position that it can freely move up and down with every breath, then pain is avoided. In the Alexander operation the uterus is thrown forward and the ligaments shortened to such a point that the uterus by dragging thereon will produce pain. Dr. Gallant has made use of the Alexander operation but once. The number of patients he has seen with inguinal pain after that operation has led him to avoid it. The suspension operations of Ferguson and others are more favorable because while they fix the round ligaments at their middle the elasticity of those overstretched ligaments is such that it will not interfere with the rise and fall of the uterus. Dr. Gallant has seen several cases associated with the Alexander or with a ventral suspension in which there has been painful dragging on the scars. The operation he has used for the past five years is one which he first saw performed by Dr. Jarman. It consists of putting a needle threaded with catgut through the broad ligament, around the middle of the round ligament and stitching it to the peritoneal surface on either side of the median incision. There is no scarification, simply the sutures, two on each side, about half an inch apart. It is a very simple operation and it has been a successful one. In Dr. Gallant's cases the trouble has not recurred so far; one woman has been pregnant twice, and the uterus is still in good position. In thus suturing all that is done is to tip the uterus forward just far enough that intra-abdominal pressure will be exerted on the upper posterior portion of the fundus; and the force will be maintained in the right direction, driving the fundus toward the symphysis.

DR. E. G. FRISBEE, San Francisco, performs an operation which consists of detaching the round ligament at its junction with the uterus. He passes a pair of forceps through the broad ligament beneath the ovarian ligament and tube, seizes the detached round ligament, brings it around back of the uterus, and stitches the end of the one round ligament to the other, first making a slight furrow in the posterior wall of the uterus. He covers all the raw surfaces with peritoneum so that adhesions can not form. This tilts the uterus forward. He has used this method with success for four or five years. Only one patient has been pregnant so far as he knows. The operation can be performed easily.

DR. E. F. TUCKER, Portland, said that many drugs are recommended in vomiting of pregnancy because many of them are useless, and that in retroversion of the uterus many operations are recommended by different operators, but none of them is perfect. If physicians could make use of Nature's own method to restore the uterus to its position it would be a good thing. There are no ligaments to pull the uterus forward; the forward position of the uterus depends on the erect position of the woman. Animals walking on all fours do not have retroverted uteri. In the child the uterus normally is much higher in the pelvis and has a backward position, which remains, to a large extent, throughout infancy. It does not begin to antevert until the infant begins to walk. The backs of infants are flat, but when they begin to walk the pelvis is tilted forward, the lumbar curve is produced, and the intra-abdominal pressure tilts the uterus forward. Dr. Emmett used to say that the uterus was swung from above, and so it is. There may be a shortening of the broad ligaments so that the uterus will not come down completely. There are congenital cases of retroversion of the uterus. There are hundreds of women with retroverted uteri who do not suffer from this condition. It is not really a disease in itself, but it is the result often of widely divergent causes, and the condition can not be cured unless the cause is removed. By looking into the pelvis when the uterus lies forward it will be seen that the round ligaments run backward, outward and then forward through the inguinal canal. If the round ligaments of a normally located uterus are pulled on the organ will be drawn backward and upward. Dr. Tucker does not think that any of these operations are very good. He does the suspension operation, although it is only substituting one pathologic condition for another.



DR. H. O. MARCY, Boston, agreed with Dr. Tucker that physicians should study pelvic conditions more carefully. Dr. Marcy gave up the Alexander operation long ago, because he was having failures and not successes. He never operates for the replacing of a retroverted uterus without opening the abdomen. The intrafolding of the round ligament may be all one requires, and if they are folded forward the broad ligaments are shortened, thus aiding materially in holding the uterus forward. In quite a number of cases Dr. Marcy has done anterior ventrosuspension, but there is no one method that accomplishes all that is desired.

DR. A. GOLDSPOHN said that it is self-evident that any one of these operations can not suit all cases. He agreed with Dr. Craig that the procedures which he and some of the other speakers have mentioned are supplemental to each other. Vaginal fixation and ventral suspension are so far removed from normal anatomy and physiology, and so far behind other operations in their clinical results, that they stand no comparison at all. The men who have done ventral suspension have been challenged to go honestly after their patients who have borne children, to examine them and to see whether or not the majority of them have not a return of the retroversion. Recently one man did attempt to do this and reported on 445 cases out of about 900 in the Johns Hopkins Hospital, and the results are exceedingly poor. In women who can conceive, not those who can not, the bulk of operators in this country and abroad have practically discarded vaginal fixation and ventrofixation. Dührssen, Mackenrodt and their students, however, still plead desperately for these operations, but that their clinical results are not satisfactory to themselves is evident from their frequent changes in technic. That any man can show ten consecutive cases of vaginal fixation without trouble in confinement and without a recurrence of a retroversion afterward Dr. Goldspohn doubts very much. In a court of law it would not do to say that the uterus in any given case remains in good position, because the patient says that she feels well, and that, therefore, it is not necessary to examine her. Such evidence without an examination is equally inadmissible before the tribunal of science. Dr. Goldspohn said that out of 200 cases, most of them complicated, in which his bi-inguinal operation had been performed, he has now a collection of 155 patients who have been carefully examined after an average interval of twenty months after operation. In all this number there is a return of retroversion in only one case. There is not one hernia, while at least fifteen concomitant herniæ were incidentally cured. Twenty-one patients had given birth to one or more children each, and the only abnormal labor reported was a breech presentation in one case. In none of them was there a return of displacement. On the contrary, the anteversion in these cases after childbirth was generally more pronounced than in the others. This feature has been mentioned by several German operators. In the total of over 288 patients, no case of marked peritonitis, etc., occurred to impeach the intraperitoneal manipulations without sight and without drainage. One death occurred from cerebral embolism. This rare occurrence could take place after the same intrapelvic work performed by any other form of ventral section. One other death occurred from hemorrhage due to slipping of a ligature from the stump of a tube and ovary that were removed on one side. In this case the smallness of the wound may have had something to do with the accident. The resulting mortality of a little less than 1 per cent. is less than would probably have been the case if a regular median section with its consequent greater exposure of viscera had been made. Dr. Goldspohn thinks that the fact that he has only one case of recurrence of displacement in 155 cases, and results otherwise also never before equaled by any one in a similar grade of cases is because he has carefully discriminated and selected the cases suitable for bi-inguinal shortening of the round ligaments, and has performed other operations as well. He always excluded the cases of prolapsed uterus from the bi-inguinal domain, which can not cope with the excessive elongation of the sacro-uterine ligaments in those cases. In women who can no longer conceive, the retroversion, if present, should also be corrected, but it is usually more of an auxiliary surgical act, associated

with some other more pronounced indication, and for this purpose any one of the otherwise rational and effective fixation operations may be eligible.

DR. D. H. CRAIG said that the silence of the ardent advocates of ventral suspension and fixation gratified him, while at the same time mortifying him, because either his exposition of their side of the question is not worthy of consideration, or his opinion has been held universally, and shows that his paper was superfluous. He believes that in a few decades ventral suspension and fixation will be considered, except in such cases as he outlined in which they are specially indicated, as we now look on venesection, except in specially indicated cases. The question of the consent of the patient ought not to enter into any consideration of the choice of operation. Getting the consent of the patient depends more on the man trying to get it than on the merits of the operation proposed, and gynecologists ought not to allow themselves to be induced to select a secondary operation unless it is indicated. The question as to the rationality of an operation is not an entity. There are good and bad operations. A bad operation can be so well used as to make it a good operation, and a good operation can be performed so badly as to make it absolutely useless. The personal equation of the operator and selection of cases comes in everywhere. If the operation is not a good one, the gynecologist should study the anatomy and mechanics of the pelvis until he can make a good one. In regard to the question of the holding up of the uterus by a ligament from above, Dr. Craig said that he does not remember when camping out of ever having seen any ropes that held his tent in the air, and the ligaments of the uterus perform the same functions as do the guy ropes for a tent. When normal ligaments can be used to restore a normal condition, the surgeon should not try to improve on Nature, but should follow her as closely as he can. One can improve on perverted Nature, but not on a normal condition. Any operation for retroversion does not produce an immunity in that woman to a recurrence of the retroversion, even if the proper operation has been done. There is as much to be done in teaching the woman how to avoid subsequent retroversion as in correcting it operatively. Dr. Craig does not want to go on record as having the opinion that anything will do for a woman who can not have children. That woman is entitled to as much consideration as the woman who can bear children, and she must be relieved of her pain and discomfort and made as happy and comfortable as any other woman.

## CULTURES FROM THE BLOOD IN TYPHOID.

### REPORT ON EXAMINATION OF EIGHTY-EIGHT CASES.\*

RALPH DUFFY, M.D.

PITTSBURG.

While scattered reports of the occurrence of typhoid bacilli in the blood of typhoid patients extend over a period of twenty years, it is only within the last five or six years that published accounts of larger series of cases occur, and it remains for the present workers to demonstrate to the practitioner what I believe to be the case, that blood cultures in typhoid fever afford a surer and earlier means of diagnosis than the Widal reaction and are perfectly feasible in family practice.

The earliest publication on blood cultures in typhoid I have been able to find is that of Fraenkel<sup>1</sup> in 1885. This observer in seven cases demonstrated the bacilli in the blood in one case. Twelve years later Künau<sup>2</sup> reported that he had demonstrated the bacilli in eleven out of forty-one cases. In this country Cole,<sup>3</sup> of Johns Hopkins, in 1901, in fifteen cases isolated the bacilli in eleven cases. His earliest case was on the sixth day.

\* Read before the Allegheny County Medical Society, 1905.

1. Fraenkel: *Centralblatt f. klin. Medicin*, 1885.

2. Kuenau: *Zeits. f. Hygiene*, 1897.

3. Cole: *Johns Hopkins Hosp. Bull.*, July, 1901.



In the same year Auerbach,<sup>4</sup> in Germany, in ten cases, reported positive results in seven cases. His results are remarkable in that he withdrew only from ten to thirty drops of blood for the test, whereas most observers withdraw at least 5 c.c. Hewlett,<sup>5</sup> also writing in 1901, examined twenty-four cases. He does not give the proportions, but thinks that the bacilli are present in the blood in the majority of cases.

Kerr and Harris,<sup>6</sup> in 1902, reported fifty-six cases in which cultures were made. Thirty-one cases were positive and twenty-five negative. They found that in the first week of the disease 87.5 per cent. of the cases were positive; in the second, 70 per cent.; in the third, 50 per cent. They give the general average as 70 per cent.

Courmont,<sup>7</sup> of Lyons, in 1903, in thirty-seven cases, found the bacilli constantly from the first day to the third week. He used fluid cultures and from 2 to 4 c.c. of blood. He found staphylococci in five cases and the colon bacillus in one case. Courmont's belief is that the bacilli are constantly in the blood from the fifth to the twenty-seventh day, but not after the fourth week. Rosenberger,<sup>8</sup> in 1903, in his excellent article on blood cultures, states that in 535 cases collected by him from the literature results were positive in 80 per cent.

The earliest observers used solid media for their cultures. They soon found, however, that it was much better to use fluid media and in such quantity (from ten to fifty times the amount of the blood withdrawn) as to counteract the antitoxic powers of the blood serum.

My own cases in which the blood cultures were taken number eighty-eight. The material was obtained from the medical wards of the Western Pennsylvania Hospital. The patients in these wards are, in the great majority of cases, Italian and Slavish laborers, not speaking English. The fact, together with the ignorance of this class of patients as a whole, makes history-taking extremely unreliable. For this reason I have divided the cases according to temperature at time of test. The rule is for patients to be brought in with a temperature of 103 F. or over and a history of about a week's sickness. My Class A, at 103 F., represents approximately the second week of the disease. I think in no case was a culture made while the temperature was rising before the end of the first week.

The Classes B and C, at 102 and 101 F., correspond to the third week, Class D, 100 F., being somewhere in the fourth week.

The Widal test was positive in all cases but two. In eighteen cases of the series the blood cultures showed bacilli in the blood before the Widal test was positive. In the cases in which the typhoid bacillus was isolated no control cultures were made to exclude the possibility of air contamination.

The eighty-eight cases in which observations were made were routine cases and were not especially typical or severe cases selected for experiment. The mortality was not especially high. Eleven cases were fatal.

The technic I have adopted is to obtain blood from the arm veins in a sterile glass pipette of 10 c.c. capacity by suction with a rubber bulb. A tourniquet is used and the spot to be punctured is touched with pure carbolic acid for a few seconds and then rubbed off with alcohol. The needle I use is a large-sized hypodermic needle, which is thrust through the carbolized area of the skin

into the vein; 10 c.c. were withdrawn in almost all cases. In one or two cases lesser amounts were withdrawn; 4 c.c. is the smallest amount in the series. The slight operation takes only about three or four minutes, and the pain experienced is not greater than in the use of the hypodermic needle.

The blood is put into bouillon flasks of 500 c.c. capacity which are kept in the incubator for forty-eight hours before being opened. The bacillus at this dilution (1:50) generally grows in thirty-six hours. In a few cases, however, positive results were obtained only at the end of four days. Growth and agglutination went hand in hand in a number of cultures.

In four cases of the series the typhoid bacilli were non-motile on all cultures. In about one-third of the cases the growth on potato was vigorous and visible.

Class A.—Twenty-one cases; temperature 103° or over; second week of disease.

Sterile .....	0
Typhoid bacillus present alone .....	21
Typhoid bacillus present with other organisms.....	0
Other organisms alone present.....	0

Class B.—Thirty cases; temperature 102, third week of disease.

Sterile .....	0
Typhoid bacillus, present alone.....	25
Typhoid bacillus present with other organisms.....	5
Other organisms alone present.....	0

Class C.—Thirteen cases, temperature 101, third week of disease.

Sterile .....	3
Typhoid bacillus present alone .....	9
Typhoid bacillus present with other organisms.....	0
Other organisms alone present .....	1

Class D.—Ten cases; temperature 100, fourth week of disease.

Sterile .....	3
Typhoid bacillus present alone .....	1
Typhoid bacillus present with other organisms.....	0
Other organisms alone present .....	6

Class E.—Seven cases; temperature 99, fourth week and after.

Sterile .....	4
Typhoid bacillus present alone .....	1
Typhoid bacillus present with other organisms.....	0
Other organisms alone present .....	2

Class F.—Seven cases; temperature 98.4 fourth week and after.

Sterile .....	6
Typhoid bacillus present alone .....	0
Typhoid bacillus present with other organisms.....	0
Other organisms alone present .....	1

From the above table it will be seen that in fifty-six cases in which the temperature was above 102 the bacilli were present in the blood in every case, and that in twenty-three cases in which the temperature was 100 or 101 F. the bacilli were cultivated from the blood in ten cases, or 43 per cent.

#### AUXILIARY ORGANISMS.

The most interesting result of the examination was the demonstration of auxiliary organisms in the blood stream.

In Class A, in twenty cases, no other organisms than the typhoid bacillus was found.

In Class B, in thirty cases, other organisms were found accompanying the typhoid bacillus in five cases. These organisms were all motile bacilli, decolorizing by Gram's method of staining, and identical in their growth in milk, where strong alkalinity was produced, and in their vigorous, yellow, moist growth on potato. They differed somewhat in growth on agar. None could be agglutinated with serum, 1/20. None produced glass in glucose media. In general they resembled *Bacillus alcaligenes* closely.

In Class C, in thirteen cases, but one organism (*Streptococcus pyogenes*) other than typhoid was encountered.

In Class D, in ten cases, other organisms were present in six cases. Five of these were bacilli corresponding closely to *Bacillus alcaligenes*, though two were non-motile. Cocci (non-pyogenic) were found in one case; *Staphylococcus albus* in one case.

In Class E, in seven cases, two showed other organisms, in one case a motile bacilli and in the other *Staphylococcus albus*.

In Class F, with normal temperature, in seven cases, a white coccus was found in one case.

4. Auerbach: Deutsche med. Wochft., Dec. 6, 1900.

5. Hewlett: Med. Rec., Nov. 30, 1901.

6. Kerr and Harris: Chicago Med. Recorder, Oct. 15, 1902.

7. Courmont: Bull. Soc. Medicale des Hôpitaux, de Paris, Jan. 2, 1903; Jour. de Physiol. et Path. gén., Jan. 15, 1903.

8. Rosenberger: Proc. of Path. Society of Phila., May, 1903.



## SUMMARY.

1. *Bacillus typhosus* is present in the blood in all cases of typhoid fever in the second and third weeks, when the temperature is 102 or over.

2. Bacilli of the "enteric group" of bacteria (*Bacillus alcaligenes*) are present in a considerable percentage of the cases after the second week, at first accompanying *Bacillus typhosus*, then supplanting it.

3. Later in the disease cocci may be in the blood.

4. *Bacillus coli communis* is never present in the blood of typhoid patients.

## METHYL ALCOHOL AMBLYOPIA, WITH SPECIAL REFERENCE TO OPTIC NERVE.

## REPORT OF CASE.\*

C. S. G. NAGEL, M.D.

SAN FRANCISCO.

The very meritorious report of Drs. Buller and Wood<sup>1</sup> has absolutely established the specifically deleterious effect of wood alcohol on the optic nerve. Until anatomic findings may give us a better insight into the pathology, cases offering special clinical features seem to me to be worth recording.

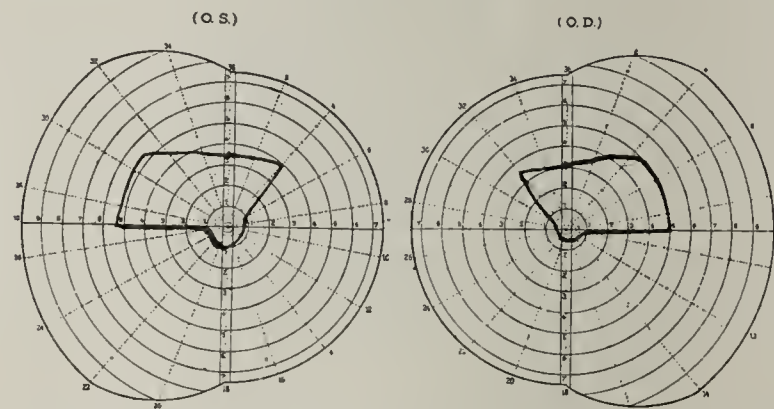
*Previous History.*—It has been my good fortune to come across the patient in Case 80 of the report referred to and to have had this individual under observation for about a year. It is only necessary to recall here that early in October, 1901, this patient became absolutely blind for a number of hours through acute wood alcohol intoxication from imbibing; then a very considerable improvement had been present for some hours, after which blindness had set in again lasting for several days. After improving for a few months, vision had been, on a whole, getting worse ever since. It is noteworthy to quote from Dr. J. F. Van Kirk's report as follows: "This case was characterized by frequent transient changes. The vision would be markedly improved for a few hours and then it would suddenly fail. Often the morning vision would be good, while exercise seemed to increase the amblyopia." The patient further stated to me that he always used to see much worse temporarily whenever discouraged about failure to secure food. He had also had occasionally "fullness of head" and attacks of pain over the head, which felt "tight" from forehead to top, but not farther back.

*Examination.*—When I first had occasion to examine him (March, 1904) vision was R. 5/15; L. fingers in 0.65 m. Anterior chambers were normal o. u. Left pupil was dilated. T. normal o. u. In each pupil there was slow minimum reaction to light. R. F. V. extremely contracted, from 50 degrees outward over ca. 50 degrees outward and upward, 30 degrees upward and 35 degrees inward—up to 5 degrees for the remaining 5/8 of the field. In other words, over 1/2 of total F. V. is missing, below and inward, and upward and outward F. V. is contracted. There are small fields for blue, red and green and no central scotoma. L. F. V. is analogous, though uniformly a very little wider, but color perception for blue only. The striking point regarding the fields is the similarity as to the position in each of the parts intact and missing.

Corpus vitreum normal o. u. Ophthalmoscopically, the disc in both eyes is white (atrophic), with well-marked lamina cribrosa, outlines sharp, arteries a very little contracted. There is a halo around each papilla. Each disc shows glaucomatous cupping upward. To do away with one other point, I will say that for some time, during the beginning of my observation, there were apparent, at times, two or three discolored small roundish spots in the macular region of right eye which had created in the mind of another casual observer the

impression of impending anatomic changes. During my long observation I have become convinced that such is not the case, and that the changes are confined in each eye, to the disc, to its immediate neighborhood and to the vessels.<sup>2</sup>

*Treatment and Result.*—For reasons which will become clear from the epirrhesis, I promptly performed a broad peripheral iridectomy in both eyes. For a short time only (ca. 2 weeks) after operation both pupils became a little smaller. The ophthalmometer showed R.  $\pm$  1.0 axis 60 temp., L.  $\pm$  3.0 ax. 75 nas. In the right eye vision remained about the same, in the left eye there was a decided improvement. Fingers were now counted (one week after operation) in 1.0 m., and 3 weeks p. o. in 1.25 m. These results of repeated examinations became the more convincing (as generally in cases of extreme amblyopia) because the patient, in trustworthy statements, had repeatedly spontaneously maintained improvement of vision from his observations in general. As a result of repeated perimetric examinations there also seemed to be a slight improvement in both F. F. V. peripherally. Such was the status to about the middle of April, 1904. Soon afterward, however, and gradually more and more pronouncedly, a decided deterioration set in again. In R. F. V. there soon remained but a small field for blue (only), and besides a perception of green could be found occasionally paracentrally. The left eye has kept a still smaller field for blue up to the end of my observation. F. F. V. could only be taken with finger fixation from about August, 1904. In the beginning of November, 1904, the patient was taken to the City and County Hospital, where a careful general examination by Dr. Schmoll revealed nothing abnormal except induration on one pulmonary apex. The patellar reflexes were rather exaggerated, no Romberg. Urine was normal. While, unfortunately, I find nothing before in my notebook regarding the point, the corneae are now of subnormal sensibility to touch. Only



fingers are counted in each eye in about 1.0 m. Left pupil was dilated. T. normal o. u.

On November 16, sympathectomy of the left superior ganglion was performed by Dr. Stillman, under chloroform-anesthesia. In taking up the ganglion and at the moment of cutting, a slight pupillary play was noted, there was no marked dilatation. Both pupils were somewhat contracted while the patient was fully under the influence of the anesthetic. Postoperative tension was a little subnormal. Ten hours after operation both conjunctivae bulbi were congested. L. T. is still subnormal (decidedly less than R. T.). Patient complained of some trouble in swallowing.

L. Pu. < R. Pu. (before operation opposite!).

Nov. 17, 1904; L. conjunctiva bulbi injected (not R.). L. Pu. < R. Pu. L. T. < R. T.

Nov. 19, 1904: L. T. < R. T. though a little higher than so far since operation. L. Pu. < R. Pu.

Nov. 24, 1904: L. T. < R. T. L. Pu. < R. Pu.

Nov. 28, 1904: Stat. id. left eye better sensibility than R.

Dec. 9, 1904: L. Pu. < R. Pu. L. T. Pu. < R. Pu. both physiologic. L. F. V. somewhat wider.

Dec. 12, 1904: Sympathectomy of superior ganglion o. d. (Dr. Stillman); chloroform narcosis. There was no change in pupil during operation. Pupil contracts with excision of ganglion. Some hours afterward R. T. < L. T. R. Pu. < L. Pu.

\*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Buller and Wood: "Poisoning by Wood Alcohol," The Journal A. M. A., Oct. 1, 8, 15, 22, 29, 1904.

2. Koller in Med. Record, July 1, 1905, in a report on wood alcohol poisoning states the same observation, comparing this evanescent feature to *chorioiditis guttata*.



Jan. 7, 1905: T. normal o. u., R. a little < L. R. Pu. a little < L. Pu. Vision to patient seems slightly better," measurably stat. id. Ophthalmoscopically, stat. id. R. F. V. somewhat better.

Whether this improvement (real or apparent) has kept up, I am unable to say, having been on a trip abroad since.

Before entering on a discussion of the special points of interest in the foregoing history, I should like to express briefly my belief that wood alcohol amblyopia sets in at first through a defective local blood supply consequent on disturbances in the general circulation, as they find their clinical expression in weak pulse, slow respiration, sweating, coma, etc. This, at least, seems to me the inference to be drawn from those cases in which a very prompt great improvement of vision had taken place, after the first, often very sudden attack of blindness, to be followed again by fresh failure of sight gradually leading to optic atrophy. As we know from the experiments of Pohl,<sup>3</sup> who found in the urine the maximum of formic acid, as the product of oxydation of wood alcohol, only after from three to four days, a cumulative effect of the poison takes place the reason, I take it, for the second (eventual) attack of grave amblyopia. The first attack of blindness would then be due anatomically to what Alfred Graefe<sup>4</sup> has described as *Ischæmia retinae*. It would be of great interest, of course, if ophthalmoscopically contraction of blood vessels could be found during the attack.

Since the prognosis is so very bad, I should advise prompt performance of iridectomy or at least keratotomy, in order to lower the intraocular pressure, in accordance with the good results obtained by thus increasing the intraocular circulation in Graefe's and Knapp's<sup>5</sup> cases of ischemia of the retina.

Neither do we know at present how to discriminate between cases in which the first attack of blindness might be overcome spontaneously, and those in which it will not, nor can anyone doubt the lowering effect on the optic nerve of the lessened blood supply, thus predisposing it for the specific effects of methyl alcohol.

If there is any foundation for the theoretic reasoning, I now beg to submit, in conclusion, that a course of procedure, as advocated, might also have a preventive effect in that regard. It is, of course, scarcely necessary to point out expressly that I did not perform iridectomy with any lingering thought for therapeutic effects as considered so far. As those I have been able to interest sufficiently will have noticed, I had become convinced that in this case a simple glaucoma had developed. My reasons therefor are as follows:

1. The great similarity in both F V, which would be very unusual in optic atrophy pure and simple, and the missing parts being the inner ones.

2. Glaucomatous cupping of discs.

3. Insensibility of corneæ.

4. Indication of halos around papillæ.

5. History of pain (cf. above).

Neither would the absence of (observed) increase of tension necessarily be against the diagnosis of glaucoma simplex, nor am I, on the other hand, indeed, unmindful that the positive symptoms enumerated may not be absolutely convincing to every one, though they have tended to become so to me in this case from the extended observation. I should like to add that the late appearance of central color scotoma in R. E. seems to

be rather in favor of the idea of a glaucomatous process complicating the pathologic changes in the optic nerves. Regarding the glaucomatous cupping, I have to add that Leber<sup>6</sup> states that exceptionally the atrophic excavation may assume a form that can not be differentiated from the pressure excavation in glaucoma simplex. Also Stelwag<sup>7</sup> makes the statement that in atrophy of the optic nerve the lamina cribrosa sometimes loses in resistance to such a degree as to recede (*nach hinten weichen*) and thus a deep cupping comes about, in exceptional cases an excavation even with steeper margins, such as develops constantly in glaucoma. Of greatest interest is the history given by Schmidt-Rimpler,<sup>8</sup> which supplies the anatomic proof for such views.

Without any other convincingly glaucomatous symptoms there was found in his case a typical pressure excavation in both eyes. Von Graefe's diagnosis was glaucoma simplex.

Before iridectomy, which had been decided on, could be done, the patient died of pneumonia. Postmortem examination showed both optic nerves throughout their whole course attenuated and flattened. Microscopically there was pronounced atrophy of the nervous fibers, which could be traced still beyond the chiasma into the tractus. The left *papilla optica* (hardened in Mueller's solution) was found to be pushed backward together with the lamina cribrosa. "Here, then, was an excavation showing absolutely the picture of glaucoma and yet being solely the result of the atrophy of the nerve."

Irrespective of the true place of T. P.'s case in reference to the excavation, it is of some value, I think, insofar as it is apt to make us ask whether so-called glaucoma simplex might not come about sometimes under normal intraocular tension if the optic nerve or lamina cribrosa has lessened resistancy. This question has repeatedly suggested itself to my mind when dealing with cases of glaucoma simplex in which there were absolutely no typically glaucomatous symptoms except a "pressure" excavation. In conversing about the point with my former chief, the late Professor Pflüger, whose mind was particularly trained to approach ophthalmologic questions from the standpoint of the physicist, he readily conceded its feasibility. Although Schmidt-Rimpler, as well as Leber,<sup>9</sup> refer in passing to the importance of the relative resisting power of the lamina cribrosa in the formation of a glaucomatous cupping, I know of only one reference in literature having a direct bearing on the point raised.

"Impossible, however, it is not that there are cases where, under the influence of the normal pressure, together with primary inflammation or weakness of opticus, the excavation takes place."<sup>10</sup>

The anatomic discoverer of the glaucomatous cupping of the disc, Heinrich Mueller, discusses in full in his classical treatise<sup>11</sup> the several possible modes of origin for the various forms of excavation of the disc, without, however, referring specifically to the formation of a glaucomatous cupping through normal pressure. He states that normal tension with lessened resistance may "modify the place of entrance." Mueller then refers to Donders as having verbally laid great stress on this

6. Graefe-Saemisch Handbuch d. Augenhkld., 1, ed., vol. viii, pp. 853-4.

7. Lehrb. d. prakt. Augenhkld., 4, Aufl., p. 228.

8. Arch. f. Oph. xvii, 1, p. 117.

9. S. Graefe Saemisch, v. 1, ed.

10. Schönte u. Koster: Ergebnisse d. Allgem. Pathol. etc. d. Auges von Lubarsch u. Ostertag, p. 403, 1903.

11. "Glaucom und Excavation der Sehnerven. In Gesammelte Schriften, etc.," edited by Otto Becker, Leipzig, 1872.

3. "Ueber die Oxydation von Methyl u. Aethylalkohol im Tierkörper," Arch. f. exper. Pathol. etc., vol. xxxi, p. 281.

4. Arch. f. Ophth., viii, 1, p. 142.

5. "Erblindung durch Netzhaut-Ischämie, etc." Arch. f. Augen u. Ohrenhkld., v. p. 203-207.



point. Von Graefe<sup>12</sup> says "if we imagine the substance of the optic nerve loosened (*geloekert*) through some internal process the papilla will give way to the normal pressure in an anomalous way." Later it was Schweigger who in 1891 (cf. Horstmann) insisted that cupping of the disc to the margin may exist without the least demonstrable increase of tension, and that "such a condition might arise from any atrophic disease of the optic nerve when there was previously a physiologic cup." Neither Schweigger nor Horstmann<sup>13</sup> refer to the normal intraocular pressure as the direct cause for such "glaucomatous" cupping in apparently non-glaucomatous eyes.

Schnabel's<sup>14</sup> views regarding true glaucomatous cupping as due to disintegration (*Zerfall*) of the optic fibers with formation of caverns, and "the glaucomatous excavation is one of these caverns"—are beside the point raised and are merely quoted for completeness' sake,<sup>15</sup> so are also Mueller's<sup>11</sup> conclusions that excavation—in general—might sometimes also be brought about by traction from without through shrinking exudate, etc.

Clearly the point is not of merely anatomic interest; if we could discriminate in glaucoma simplex without increase of tension between cases in which the "glaucomatous" cupping is due solely to simple atrophy, i. e., of fibrillae and finer septa, and those in which it is the result directly of normal pressure on diseased or congenitally less resistant tissue, it would seem that the vexed question concerning the therapeutic effect of operative measures in glaucoma simplex would become clearer.

#### DISCUSSION.

DR. E. V. L. BROWN, Chicago, said that the pathogenesis of glaucomatous cupping in optic atrophy was much discussed at last year's meeting of the Vienna Ophthalmologic Society. The position was taken that this does occur in a great many cases without any tension whatever, and is due to the atrophy in the nerve head. Just back of it are found extensive areas of atrophic nerve fibers. Schmidt-Rimpler has also reported some observations on this point.

### THE PHYSIOLOGIC ACTION OF DIONIN.\*

WALTER HAMILTON SNYDER, M.D.

TOLEDO, OHIO.

Dionin is ethyl-morphin hydrochlorate, and was discovered by Grimaux ( $C_{19}H_{23}NO_3 \cdot HCl + H_2O$ ). It is a white, odorless, bitter powder, soluble in water, 7 parts; in alcohol, 1.5; in syrup, 20. It is insoluble in ether and chloroform. The aqueous solution is neutral in reaction and keeps a long time. The general physiologic action is similar to that of morphin, but it is claimed that it is less toxic and does not produce nausea, constipation or habit. The respiratory and cardiac centers are unaffected. Applied to the eye, either as a solution or powder, it produces marked sneezing, vasodilation, edema, glandular excitation, burning and lachrymation and supposedly lymphatic extravasation, followed by analgesia, lasting from 2 to 48 hours. Wolffberg<sup>1</sup> of Breslau first used it in ophthalmic prac-

tice, but it was Darier's<sup>2</sup> report that brought it prominently before the profession.

The general literature on the drug is enormous, but I have been unable to find any experiments bearing on its actions on tissue and cells. I here cite my own:

Albino rabbit (medium size). Dionin in powder was placed in each eye in larger quantities than would be necessary if the eye was abnormal. The reaction was moderate, giving the usual appearance, only less in degree. The rabbit was killed. The globe and tissue were enucleated and placed in formalin 4 per cent. for 48 hours. Later sections from the cornea, through the ciliary region to the nerve were cut and then put through the usual technic of imbedding, sectioning, staining, etc. Control specimens were made from a normal rabbit's eye. I will here cite the findings:

Slide 1.—Magnification 210 diameters, section through cornea and ciliary region. (Fig. 1.) The lamellar spaces in substantia propria are dilated and edematous. The serous transudate involves the spaces at the junction of the cornea and ciliary region most. Is this not due to the dionin being placed directly over this region?

Slide 2.—Magnification 35 diameters. (Fig. 2.) This is same section under lower power and on close examination it is seen that the effect is greatest on the external side of the cornea and that the muscle is not affected, not even showing edema. Toward the sclera there is slight evidence of hyperemia.

Slide 3.—Magnification 210 diameters. (Fig. 3.) This is a control slide showing normal substantia propria. Compare this slide with No. 1 and see the effect dionin has had in elongating and widening the lymph spaces. In this section the lymph spaces are round, not widened or elongated as in the previous slide.

Slide 4.—Magnification 35 diameters. (Fig. 4.) This is the conjunctiva of a rabbit on whose eye dionin has been applied, suggesting the contention that the tissue changes are found only where there is tension; no edema or round cell infiltration can be found in this slide.

It might be well to introduce here an hypothesis to explain the clinical and microscopic action of dionin and to explain the clinical reports which, on comparison, at times are contradictory. Many slides were examined to arrive at certain conclusions and only the marked features photographed. From these I deduce that the action of dionin is purely local—greatest where the drug has actually rested. Its most marked action is in eyeballs in which the tension is increased, and I believe its entire action can be explained by saying that it has some disassociating action on the intercellular cement substance allowing a transudation of serum from a globe under pressure. That its analgesic action is to be explained by its lessening of tension and thus relieving pain, and by the well-known action of the derivatives of opium. It has been claimed for this drug that it is a lymphagogue, but opium lessens secretions, and the increased flow of apparent lymph, is not lymph, but serum which does not contain cells of any description. Lymph contains colorless blood cells and if the action of dionin was that of a lymphagogue, examination of the tissues would reveal the characteristic components of this fluid. I believe, therefore, that it is only a lymph stimulant secondarily; after the edema the fluid is absorbed as lymph, as it would be in edema from any cause. Careful examination of the slides reveals that locally where the drug is applied there is some change that permits fluid under pressure in the globe to pass through and into the tissue, causing edema and consequent lowering of tension. From these laboratory facts we should expect its action to be most marked in pathologic eyes, and, in these, greatest when the tension is

\*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

12. Arch. f. Ophth., III, 2, p. 547.

13. "Glaucoma Simplex," Arch. of Ophth., 33, No. 5.

14. Arch. f. Augenheilkd., 1892, vol. xxiv; Wiener klin. Wochenschr., 1901, S. 469.

15. For a critical review of Schnabel's views see "Ginsberg, Grundriss der pathologischen Histologie" des Auges, Berlin, 1903.

1. Wochft. f. Ther. u. Hyg. des. Auges. vol. iii, No. 16.

2. Ophth. Klin., No. vii, 1900.



highest. That its reaction subsequently is lessened rapidly, unless the tension is renewed, is a fact familiar to all who have used dionin.

I wish to enter into detail in a few findings not so generally admitted.

Darier<sup>3</sup> and Reber<sup>4</sup> have each reported cases of complete absorption of the lens and capsule during the use of dionin, and in a case of severe contusion of the eye

tension plus 2. Dionin and atropin were used daily. Each application would lessen the tension and it was used daily as a powder until December 28, when the fundus could be seen.

*Condition.*—Fluid was vitreous, the iris was dilated and maximum and drawn up in a mass in the inner upper quadrant.

Jan. 29, 1905; this iris had disappeared. Dr. Samuel D Risley has suggested as a possible explanation of the disappearance of the iris in this and similar cases that it inverts or

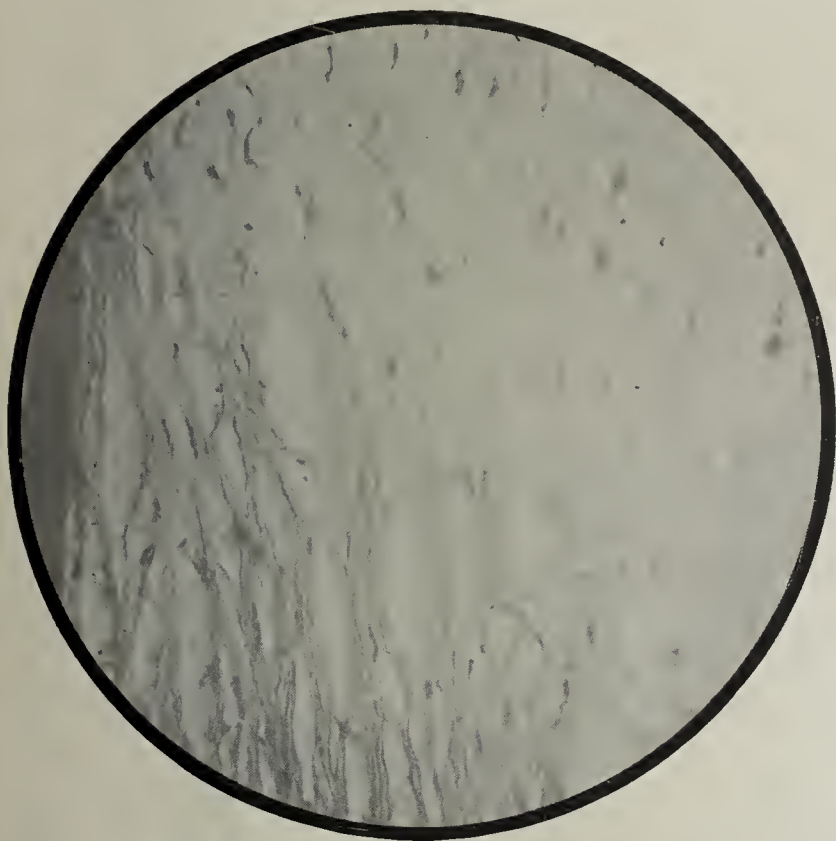


Fig. 1.—Magnified 210 diameters. Cornea and ciliary region showing the lamellar spaces in the substantia propria are dilated and edematous, especially at the corneal junction.

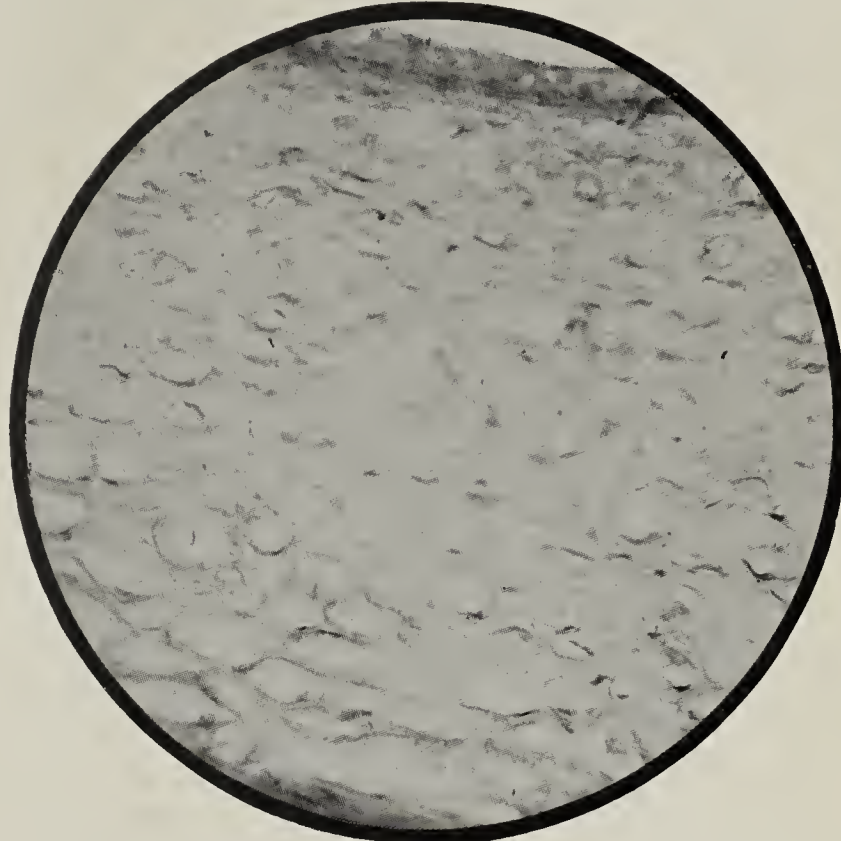


Fig. 3.—Magnified 210 diameters.—Control slides showing normal substantia propria. Compare with Fig. 1.



Fig. 2.—Magnified 35 diameters. Same section as in Fig. 1, through lower power. Note that effect on cornea is greatest on the external side. Muscle is not affected. Sclera is slightly hyperemic, showing how purely local is the action.

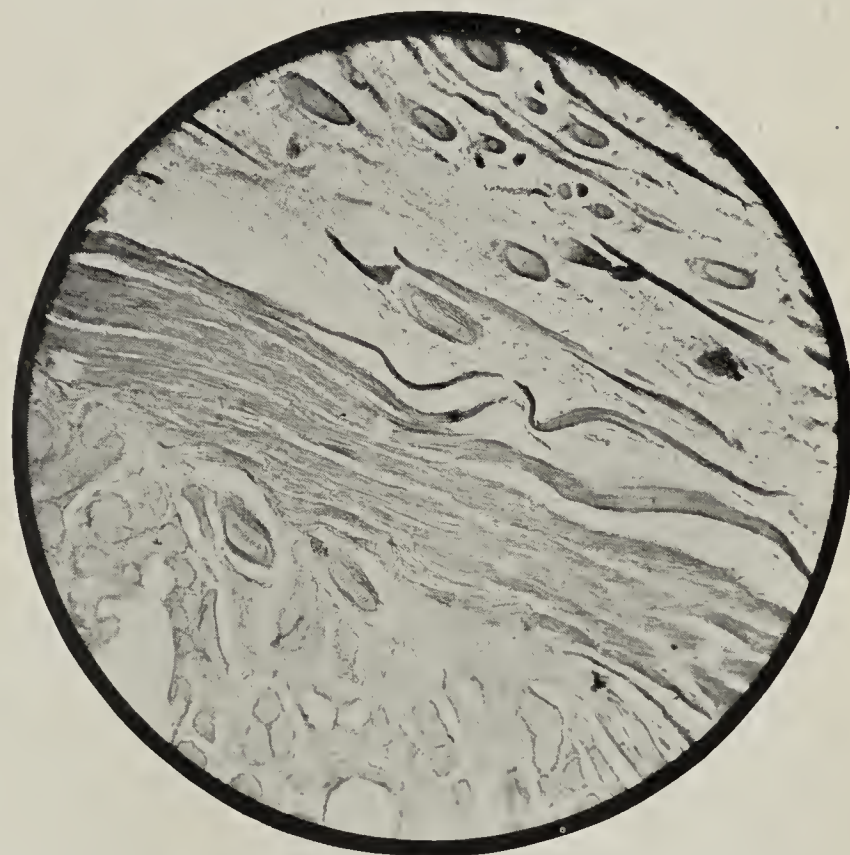


Fig. 4.—Magnified 35 diameters. Conjunctiva in fornix after dionin. No round cell infiltration or evidence of edema.

without penetration this has occurred in my own practice.

*History.*—Sept. 20, 1904, I first saw this patient and found hemorrhage in the anterior chamber, partially opaque lens—

“umbrellas” over the ciliary processes. Tension was normal, and vitreous fluid.

*Later History.*—April 2, 1905, a careful examination showed no iris, lens or capsule. With plus 8.00, combined with plus 4.00 cyl. axis 180, vision is 20/40 and a spherical plus 4 added gives Jaeger No. 1 at 17". The reaction to dionin was marked every day, something I have never seen before.

In iritis with adhesions and plus tension the use of dionin lessens the tension and permits absorption of the

3. Darier, A.: Clin. ophth., 1899, No. 23; 1900, No. 6. La Clin. Ophthal., Jan. 25, 1904.

4. Reber: Ther. Gaz., Feb., 1904.



mydriatic, and prompt relief of pain and dilation of the pupil results. In corneal ulcers, especially the peripheral type, the repair process begins as soon as the ulcer is cleared. I have observed that the more recent the inflammation and the higher the tension the better the results obtained from its use.

Konigstein agrees with this, as he states: "Dionin is almost completely abortive of parenchymatous keratitis if used in the earliest stages of the disease, but valueless in the late." Curiously enough, Graefe<sup>5</sup> gets "good results in vitreous opacities only when they are of long standing." Bourdeaux<sup>6</sup> and Batalow<sup>7</sup> think it is useful in the later stages of corneal opacity and that they clear up more quickly than without its use. In old cases I have not been so successful, but in recent cases my experience coincides with theirs. Central opacities of the cornea, especially if of long standing and with tension minus or normal are but slightly, if at all benefited in my experience. Von Arlt<sup>8</sup> has treated these patients "as long as 21 months with good results, especially in children." I have not persevered so long. Wolffberg<sup>9</sup> uses this drug in hemorrhagic glaucoma, which is seemingly logical. Bloch<sup>10</sup> states the greatest reaction occurs in pathologic condition. I should qualify this by adding "with increased tension." Sanz Blanco<sup>11</sup> "injects a 5 per cent. solution in intraocular hemorrhages with surprisingly good effects." "In one case the fundus could be seen in 5 days and in 30 days he (the patient) could read."

I have tried it in conjunctival hemorrhage with no reaction to speak of and no beneficial results over the ordinary treatment, evidently lacking the pressure factor. In beginning pannus I have cleared up the cornea and resisted permanent opacity more satisfactorily than with any previous treatment, the lid, of course, being treated for the cause.

In glaucoma, I prefer dionin to eserin, relief from pain being very marked, due, I think, to the mechanical relief from pressure. In old vitreous opacities I have had poor success, possibly because I have not used it long enough. I early abandoned the use of solutions and placed specks of the powder on two or three places on the cornea, especially finding the results better than solutions or applications in one place. This was when I thought the drug a lymph stimulant and is further proof that its action is as suggested in my hypothesis, because the action being purely local the larger number of places acted on the greater the relief from the tension. I wish here to express to W. J. Stone, B.S., M.D., my appreciation of his kindness in assisting me in the preparation of this paper.

#### DISCUSSION.

DR. E. V. L. BROWN, Chicago, referred to an article recently published on some work done in Breslau in which the author found that dionin had effect only on certain animals; not on all. The animals used were dogs, rabbits and cats, and the cats did not react in any way.

DR. W. H. SNYDER said that in rabbits the effect is very slight. It requires 100 times as much to get a reaction as in the human eye.

5. Graefe, A.: Deut. med. Wochft., xxvi, No. 12.
6. Bourdeaux, B.: Klin. Ther. Wochft., ix, No. 29.
7. Batalow, A. E.: Vrach, 1901, No. 19.
8. Von Arlt, F. R.: Heilkunde, vi, No. 11. Wochft. für Ther. und Hyg. des Auges, No. 11, 1902.
9. Wolffberg, Wochft. f. Ther. u. Hyg. d. Auges, iii, No. 4, Jan. 8, 1903.
10. Bloch, R.: Therap. Monats., viii, p. 418; Heilkunde, vi, No. 11; Deutsche Praxis, 1903, No. 25.
11. Sanz Blanco: Arch. de Ophthal., August, 1904.

### Special Articles

#### MEDICAL AFFAIRS IN THE HEART OF THE ARCTICS.

N. SENN, M.D.

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CHICAGO.

The geographic distribution of disease, the study of primitive races, of their climatic conditions, customs, habits and manner of living as etiologic influences, their methods employed in combatting disease and their resources in the treatment of accidents are subjects which can not fail to interest physicians who are concerned in the progress of their profession and the welfare of humanity the world over.

My vacation trip this summer brought me in touch



Fig. 1.—Baffin Land Eskimo.

with, and afforded me an excellent opportunity to study, one of the most interesting peoples in the world, the Eskimos of the far north, in the very heart of the Arctic region. These people are scattered in small settlements along the northern part of the west coast of Greenland, extending from Upernavik to Etah, a distance of about 600 miles. Etah is the most northern habitation of the Eskimos. It is in latitude 78° 40' N. and is less than 700 miles from the North Pole. It is in the heart of the Arctic region, where so many fearless explorers have spent their long, dark winter night preliminary to the dash for the North Pole on foot and sledges over ice and hummocks of ice. It is here where so many hopes were shattered, where so much suffering was endured and where not a few brave sailors have found a premature grave.





Fig. 2.—Eskimo family.

This unusual opportunity to visit the headquarters, the starting point of the Arctic explorers and the interesting people who live in this remote part of the inhabited world was presented to me through the courtesy of Commander Robert E. Peary, U. S. Navy, the famous explorer of the far North. Dr. Frederick Schon of Washington, D. C., and myself were the only passengers on the *Erik*, which sailed from Sydney, Nova Scotia, Monday, July 17, with a cargo of coal for the Peary Arctic expedition now under way to the much-sought-for pole. Commander Peary and his crew sailed later from the same port on the *Roosevelt*, and it was understood that we should meet in North Star Bay on or before August 10. The *Roosevelt* met us in that place

August 9, and proceeded at once to Etah. Commander Peary came on board the *Erik* to conduct the walrus hunt which was to take place in Murchison's Sound, between the two stations, and to pick up along the coast the Eskimos who were to form a part of the expedition. This trip, as well as the few days at Etah with the two ships lying side by side, gave rise to a good opportunity to become well acquainted with Commander Peary and to receive from him much valuable information concerning the Arctic region and its scanty population of Eskimos. Many of the members of the crews of both vessels were familiar with Arctic conditions and the customs and habits of the Eskimos. From these sources and the results of my own observations I have collected the material incorporated in this paper.

The real Eskimos inhabit the west coast of Greenland, north of the Danish colonies, beyond the limits of civilization. The Eskimos of the Cape York settlement were taken on board the *Roosevelt*. The *Erik* called at all the other settlements and the commander selected his material for the native part of the expedition as we went along, so that practically all of these came under my observation. The final weeding out of the undesirable took place at Etah before the *Roosevelt* sailed for the farthest North, at 3 a. m., Thursday, August 17. Twenty-one persons were left here to establish their winter quarters and to form the base of the expedition. The *Erik* left Etah Wednesday, August 23, with orders to call at Godhavn on the return voyage to St. Johns, Newfoundland, where we arrived September 5.

#### THE REAL ESKIMOS.

The Eskimos within the limits of civilization, that is, those living in the Danish colonies and settlements, in Baffin Land and Labrador, have lost their original type and have largely abandoned their primitive way of living. Intermarriage with Europeans and Americans for more than a century has resulted in a mixture of races which has either completely effaced the typical Eskimo physiognomy or has, at any rate, modified it so much that it has become almost unrecognizable (Fig. 1). Many of the Eskimos in Danish Greenland would



Fig. 3.—Eskimo woman.



Fig. 4.—Igloo (Eskimo stone hut).





Fig. 5.—Igloo.



Fig. 6.—Eskimo man and woman in a kayak.



be taken anywhere for Danes or Scandinavians, so far as their appearance is concerned, rather than for natives of the Arctics. The round, full, flat face has, in the course of many generations, been moulded into a face characteristic of the people inhabiting the countries of North Europe. Blond hair and blue eyes, something never seen in a genuine Eskimo, are by no means uncommon here. In Labrador and Baffin Sound similar changes have occurred in consequence of race mixture. The Eskimos, like other primitive races when brought in contact with foreigners, have a longing to adopt their dress and manner of life, hence those who have lived among them have adopted habits and customs entirely different from those of the untutored, genuine Eskimos.

The real Eskimos are now only to be found in the heart of the Arctic region along the strip of the coast of Greenland that I have indicated. These people live in isolation and what little communication they have with the outside world through polar expeditions has made little if any impression on their manner of living (Fig. 2).

Commander Peary has been among these people a good deal of his time for the last 14 years. He knows them well, can call them by their names and has their unlimited confidence. He knows the history of all of them who are more than 2 years of age. He speaks their language and is perfectly familiar with their habits of life and the few diseases to which they have been subject since he first visited them. He is a very careful observer and his statements can be relied on.

Although the Eskimo race is a distinct one and has little in common with the Indians of North and South America, there can be no doubt of its Asiatic origin. The Eskimos are below average size, thick-set, legs short, face flat, malar bones and cheeks very prominent, well-shaped nose, although in many of them the bridge is somewhat depressed; eyes universally brown, lower jaw well developed, teeth regular, pearly white and in perfect condition; hair straight, coal-black; beard scanty, as well as the eyebrows and eyelashes; eye slit slightly narrowed, not oblique; forehead full and only slightly receding, mouth large, lips thin and fine-cut, color of skin dusky, cheeks florid with a copper tinge, hands and feet small, even delicate. The women are much smaller than the men, many of them being not more than four feet in height. Their garments are made of fur—bearskin for trousers, which are made long for men, short for women; the former wear short, the latter long sealskin boots (Figs. 2 and 3). The coat, with hood, is made of seal or foxskin, the former for summer and the latter for winter wear. Bird skins and the fur of the Arctic hare are worn for underclothing. The native dress is admirably adapted for the climate in which these people live, and Commander Peary has adopted it for himself and wears it summer and winter.

The Eskimos are the filthiest people in the world. They never wash, not even the face and hands. The smell of the fur clothing and secretions of the skin are productive of a stench about their persons and especially in their igloos and tents that is characteristic and at first very obnoxious to the uninitiated. During winter these people live in huts (igloos) (Figs. 4 and 5), of stone or ice; in summer in tents of sealskin. Furs are used for the common family bed and each occupant, from father to babe, strips completely before retiring. They do not marry in the sense in which we use this word, but mate like animals

for convenient periods of time, which may be for life, for a year, or only for a hunting trip of a few days. Exchange of mates for an indefinite time is of common occurrence.

These people are all children, contented, peaceable, honest and hospitable; they are without a ruler and without any ambition for fame or power—an ideal socialistic community where property is held in common, politics unknown, and where all are on the same social plane.

They subsist almost exclusively on a raw animal diet, which explains the absence of a number of diseases that are common among the civilized people. Salt water contains iodine, and all animals living in it and all animals which live on sea food absorb more or less of this fickle chemical substance. None of these people has ever suffered from scurvy, which was such a common affection among the crews of the early polar expeditions and which occasionally afflicts the Eskimos who consume more cooked than raw animal food. Peary has profited by this observation, and places great importance in supplying his crew with fresh meat, and has never seen a case of scurvy among them. He has found by experience that lime juice, which formerly enjoyed such an enviable reputation as an antiscorbutic, is not only useless but harmful. Taken in the Arctic region, it acts as a cathartic and becomes distasteful to those who have used it.

The iodized raw animal food also explains satisfactorily the absence of enlarged tonsils, cervical lymphatic glands and goiter. I examined the throats and necks of many Eskimos and found the tonsils and thyroid glands in all of these in a markedly atrophic condition, and in none of them, except in two syphilitics, were there any palpable cervical lymphatics. The perfect, splendid teeth and strong lower jaw are the anatomic points of the carnivorous diet. I examined the mouths of several persons between 60 and 70 years of age and found every tooth in place and firm but ground away by long usage almost to the level of the healthy gums. The vocation of the Eskimos, both men and women, requires very little use of the legs, consequently they have suffered in length while, on the other hand, paddling of the kayak (Fig. 6), throwing of the harpoon and lance and handling of the dog-whip have resulted in the course of centuries in an unusual development of arms and chest.

Although I have no positive information on the subject, I am satisfied that the exclusion of all vegetable food from the diet has shortened the gastrointestinal canal, that the appendix, if present at all, is in the most rudimentary form and that the glands concerned in the digestion of starchy food have become atrophic, while those whose secretion is needed for the digestion of meat and the emulsification of the fats are hypertrophic. The stomach digestion of these people is something wonderful. Indigestion is about as infrequent as in the dog—in fact I believe there is the closest analogy between the anatomy and physiology of the organs of digestion of the Eskimo and the only domestic animal with which he is familiar, the dog. Commander Peary and a number of the men of both crews, who have seen much of Eskimo life, can not remember of ever having seen a case of chronic indigestion, peritonitis, or intestinal obstruction. Hair and fragments of bone taken with the food by the dog occasionally produce peritonitis in this animal, but these mechanical causes for such affections of the intestinal canal are excluded from the diet of the Eskimo. We would naturally conclude that an exclusive



animal diet would cause constipation and a uric acid diathesis with a long train of their remote consequences—headache, insomnia, skin eruptions, gout, rheumatism, etc.—but this is not the case. The large percentage of oil contained in their diet acts as a gentle laxative and protects them against a multitude of ailments which form the major part of the diseases with which the general practitioner has to deal. The Eskimo can eat with relish and without any ill consequences old, stinking blubber that would turn the stomach of a crow and that if eaten by a white man, if he could retain it, would kill him by producing ptomain poisoning.

The skin of the Eskimo, covered with filth and vermin, is remarkable for its smoothness and immunity to skin diseases. The only skin eruptions I have seen among the large number of Eskimos of all ages I examined was a patch of psoriasis over the posterior surface of the elbow of a syphilitic, and a small pustular eruption affecting one ala of the nose in an infant suffering from a nasal catarrh. The very fact that these people fear and avoid the external use of water may account for their freedom from diseases of the skin. The exposure of the hair to the midnight sun for more than three months of the year and the wearing of a loose hood of fur during the winter favors hair growth. Baldness is unknown here and even Time finds it difficult to bleach the coal-black hair and beard. Men and women of 60 and more years show only here and there a gray streak in the luxuriant hair never touched by the comb.

The special senses, except that of smell, are very keen and old age appears to have little if any influence in diminishing the acuteness of sight and hearing. The acuteness of vision for near and distant objects of these people is something that will astonish the visitor. I became aware of this on my hunting trips under the guidance of Eskimos. They could see a hare or a bird far beyond the reach of my vision and could calculate the distance with an infallible accuracy, something no one is capable of doing who is not habituated to the rarity of the atmosphere of the Arctic region.

#### DISEASES.

It would take much less space to enumerate the diseases to which the Eskimos are subject than to name those to which they appear to be almost immune so long as they live in their own climate and do not deviate from their customary habits of life.

*Tuberculosis* in any form is unknown among the Eskimos in the heart of the Arctic region. I heard no phthisical cough, saw no emaciated forms nor hectic flush; no cases of lupus, glandular, joint or bone tuberculosis and no cripples except the man who lost part of one foot from frost bite. Experience, however, has shown that as soon as these people are brought to the United States they contract pulmonary tuberculosis of the most virulent form and succumb to the disease in a few months. Of six persons brought to the American Museum of Natural History in New York all contracted the disease and in less than six months four of them were dead, one returned and recovered and one remained in New York still suffering from a more lingering form of the disease. The one who returned to his Arctic home and resumed his former manner of living made a very speedy and permanent recovery, a strong argument in favor of the Arctic region as a summer resort for tubercular patients. The focus of infection created by this patient in the settlement to which he came and where he has since lived has proved harmless during the eight years that have expired since his return.

*Rheumatism* is one of the most prevalent diseases among the Eskimos. At the North Star Bay settlement I found a man about 35 years of age in one of the tents completely crippled by this disease which, according to Peary, commenced twelve years before. He was lying helpless on his reindeer skin, with every large joint of all the limbs contracted and stiff. The left elbow was swollen, painful and exquisitely tender to the slightest touch. He was smoking and appeared to be not in the least concerned about his helpless condition, as, according to the prevailing custom among the natives, the tribe provided him and his family with food and clothing. Lumbago and sciatica frequently affect in this climate the crews of expeditions and whalers.

Venereal diseases were introduced here by the whites and have become widely diffused throughout the native population, owing to the unrestrained, promiscuous intercourse practiced everywhere. Syphilis pursues a very mild course in the natives. None of the terrible ravages of the tertiary form of this disease, with which we are so familiar, are seen here. I have no doubt that the iodine contained in their food furnishes a satisfactory explanation for this. A well-known Eskimo is known to have contracted the disease eight years ago. He has had no treatment of any kind and is now in perfect health and the father of several healthy, vigorous children. I examined a boy about 15 years of age who was then the subject of secondary lesions. I found mucus patches on the inner surface of the lower lip, general lymphatic hyperplasia but no cutaneous eruptions. The severest case of tertiary syphilis I have seen was in the case of a man about 50 years of age whose woman was infected by a member of an Arctic crew some eight or ten years ago. One of her children of a corresponding age, a girl, is a half-caste, pale and delicate. This man bore all the marks of a syphilitic cachexia; his arteries were atheromatous, a patch of psoriasis affected the posterior aspect of one of the elbow joints and the cervical and epitrochlear glands were very much enlarged. I did not see a single case of saddle-nose, of gumma, periostitis, Hutchinson's teeth or syphilitic alopecia. These facts prove conclusively that syphilis among these people pursues an unusually benign course, for which we must give credit to their liberally iodized sea food. Gonorrhea seems to follow the same benign course. Careful inquiry and abundant testimony from reliable sources combine to show that stricture, orchitis and cystitis do not exist. I questioned Commander Peary and Mr. Henson, his main man, who have spent seven winters among these natives, with special reference to the existence of urinary difficulties among old men. From their accounts it appears that prostatic obstruction does not exist, as they have seen many of the men urinate, and noticed that the stream was large and strong. The sexual life of these people and the iodized food may account for the absence of senile prostatic hypertrophy and its consequences, urinary obstruction and eventually renal disease. I saw one case of gonorrheal ophthalmia of a mild form in an adult and complete corneal opacity of one eye in the case of a young girl, caused undoubtedly by this disease. One man and a woman had each lost an eye from traumatic causes.

*Winter Anemia.*—The long winter, with its attendant darkness and long confinement in the small, badly-ventilated huts, to which is often added a lack of sufficient food, is productive of anemia and its results, debility, insomnia and nervousness. Commander Peary anticipated this change in the conditions of the blood and the defective nutrition and guards against them by keeping



his crew and the Eskimos as much as possible out of doors and busy, and supplying them with an abundance of fresh meat. He has found this prophylactic treatment equally effective with both contingents of his expedition. The general lack of nutrition during the long winter night is best shown in the case of his little daughter. She was born in Bowdoin Bay, an arm of Inglefield Gulf, in September. Her weight and size remained the same until the sun made his appearance and she was taken out daily in the open air in a dog sledge, when she commenced to grow rapidly and the blush of health and vigor appeared in her face. Nature takes a long rest in the Arctic region and this affects animal as well as vegetable life; the former comes to a standstill, the latter, for the time being, completely suspended. With the appearance of the sun reanimation takes place, which reaches its maximum during the long and uninterrupted reign of the midnight sun. The effect of the midnight sun on vegetation in the Arctic region is remarkable. What takes place in plant growth with us in months is accomplished here in as many weeks. In four to six weeks the flowering plants bud, blossom and mature their seed. Animal life during this time receives the same stimulating benefit from the sun.

*Affections of the Nervous System.*—Insanity among the Eskimos is unknown. As these people have never been given an opportunity to indulge in alcoholic drinks they are free from all affections due to alcoholism. Smoking is a new vice with them which crept in a few years ago, but as the supply of tobacco is irregular and most of the time scanty or entirely lacking, it has so far produced no ill results. The natives, however, have a strong liking for the weed and when the supply of tobacco warrants it, young and old enjoy the pipe, which makes its rounds if only one is at their disposal. I have seen children on their mothers' backs do their good share in burning up the contents of a pipe. The same causes which combine in the causation of winter anemia result occasionally in producing a nervous condition closely allied to, if not identical with, hysteria. Peary in 1900, on his trip to the northeast coast of Greenland, witnessed this condition and describes it as follows: "When we were drinking our tea one of the younger Eskimos fell in a fit and the others became hysterical. I felt a peculiar dizzy sensation myself. Recognizing the effect of our alcohol cooker in the close atmosphere of the igloo, with every aperture sealed by the newly-fallen snow, I hurriedly kicked out the door and a portion of the front wall. This relieved matters, and I sent three of the Eskimos outside to get the benefit of the fresh air, while I took the two worst ones in hand personally, and finally succeeded in quieting them down. After this they were 'ankooting' all day. The open water ahead of us, the groaning pack beside us, the bad weather and the, to them, mysterious attack of the morning, had combined to put them all in a very timid and unsteady frame of mind" (*McClure's Magazine*).

It is well known that the long winter, with its depressing effects on body and mind, often disturbs the equilibrium of the otherwise well-balanced nervous system of the natives. But the nervousness, or call it hysteria, never becomes chronic, and disappears under more favorable climatic or dietetic conditions. A similar train of nervous symptoms has not infrequently been observed in members of Arctic expeditions who wintered here and the depression in one or two cases has been so grave as to induce the poor sufferers to seek relief by committing suicide. I could not learn of a single case of epilepsy, chorea or apoplexy.

(To be continued.)

## IMMUNITY.

### CHAPTER XXXI (CONCLUDED).

#### OIDIOMYCOSIS.

Under the name of oidiomycosis may be included first, the diseases usually called blastomycosis, saccharomycosis and coccidioid infection, and second, thrush, whether local or generalized.

In 1894 Gilchrist described a skin disease, which has since been known as blastomycetic dermatitis, or blastomycosis or oidiomycosis of the skin. From a second case he cultivated a fungus which at first he was inclined to consider as an oidium but later called a blastomyces. Since that time many similar cases, especially in Chicago and the adjacent territory, have been discovered and reported by Wells, Hektoen, Hessler, Hyde and Montgomery, Ricketts and others. In many instances the specific fungi have been cultivated.

Further investigations by Rixford and Gilchrist, Busse, Ophüls and Moffit, Hyde and Montgomery and others have

brought to light the existence of systemic infections by fungi which resemble closely those found in blastomycetic dermatitis, and, in fact, cases in which the infection primarily

was limited to the skin have gone on to generalized infection. The *Saccharomycosis hominis* of Busse and of Curtis, blastomycetic dermatitis, generalized blastomycosis, and about a dozen cases in California which at one time were considered to be of protozoön etiology (Rixford and Gilchrist), are closely related or identical processes which have as their cause a group of fungi, the individual strains of which may show considerable differences.

The skin infection usually appears as a coarse warty and ulcerative lesion, in which the large papillæ and cutaneous areola are beset with minute abscesses; the

process extends gradually and eventually may involve large areas. Histologically, the tissue shows an enormous epithelial hyperplasia with intraepithelial abscesses, and a richly cellular, granulomatous condition of the subepithelial tissue, in which giant cells and small abscesses are found. When the disease is systemic, various internal organs, especially the lungs, spleen and kidneys, are the seats of abscesses and nodules which contain the parasites in immense numbers. The lungs show lobular or more extensive consolidation.

In those cases usually described as blastomycetic dermatitis or systemic blastomycosis, the fungus proliferates by budding,

and is found chiefly in the intracutaneous and subcutaneous abscesses, and in the granulation tissue and nodules of internal organs.

Its appearance in culture media and its biologic properties are subject to considerable variations, at one time growing as a mold, at another time more like the typical oidium, and again resembling some form of yeast. Ricketts considers that the genus oidium is sufficiently broad to include all the types which have been described, and that blastomyces is too narrow. The organisms which have been cultivated from the cases in California grow as molds, and they differ from those described by Gilchrist, Hektoen, Ricketts and others, in that they form endospores and apparently do not bud in the tissues of the host (Ophüls, Wolbach). Ophüls calls this parasite *Oidium coccidioides*, agreeing with Ricketts as to the generic character of the group.

The skin infection occasionally follows slight traumatism while in other instances no predisposing condition is known by the patient. The occurrence of cutaneous

lesions in crops has been noted, and suggests that in some instances they may originate as embolic foci from a pulmonary lesion which

later heals or becomes latent. In the systemic infection the primary lesion appears to be in the lungs in most cases, from which the blood and other organs, including the skin, may be invaded. Pulmonary oidiomycosis simulates pulmonary tuberculosis. In extensive involvement of the lungs the organisms may be demonstrated in the sputum. At present nothing is known concerning immunity to these infections.

Fungi of the type found in cutaneous or generalized oidio-



mycosis are widely distributed in nature, and the comparative rarity of the disease suggests that their virulence usually is low, or that susceptibility is rare; perhaps both conditions exist.

#### THRUSH.

Thrush is one form of oidiomycosis and is of particular interest because of the early date at which its parasitic nature was recognized. Langenbeck and Berg, in 1839 and 1841, are cited as the discoverers of the fungus, and they reproduced the disease by inoculations with fragments of the membrane. The parasite was studied a little later by Gruby, Robin and others and the latter gave it the name of *Oidium albicans*. Grawitz obtained it in pure culture in 1877 and demonstrated its pathogenicity for dogs and rabbits.

Cultures obtained from different cases show differences in size, morphology, chemical activities and methods of proliferation, although the variations are hardly so wide as those found in the organisms cultivated from cases of "blastomycosis."

Although thrush usually is considered a rather harmless affection, Virchow long ago showed that its filaments may penetrate the submucous tissues and even into the blood vessels. In rare instances systemic infection, with abscesses in the brain, kidney and spleen, or with consolidation of the lungs, have been noted; in these cases the conditions resemble those found in systemic "blastomycosis."

The healthy person has little or no susceptibility to thrush, although a few cases of infection have been noted in individuals who were otherwise normal. Customarily it attacks only those who are in a low state of vitality, as poorly nourished children or those in advanced age, or those whose resistance is much lowered by some other disease (typhoid, diabetes, etc.).

Phagocytosis of yeast and oidium-like cells takes place when they are placed in the abdominal cavity of experiment animals (guinea-pigs). A number of leucocytes may fuse to form a plasmodial mass around one or more of the parasitic cells.

Roger and Noisette caused an increase in the resistance of rabbits to thrush infection by the intravenous injection of small doses of the parasite. According to Noisette, an immune serum agglutinates only the strain used in the immunization.

Infections of other animals (horses, cattle) by oidium-like organisms, the trichophyton and other fungi which cause superficial diseases in the skin of man, and other fungi (aspergillus, mucor), which occasionally are pathogenic for man, will not be discussed.

### CHAPTER XXXII.

#### ANTHRAX.

From the standpoint of infection and immunity anthrax is of particular interest. It is the first disease of which the bacterial etiology was proved and in which the specific microbe was used in pure culture for the production of artificial immunity (vaccination).

Anthrax is particularly a disease of cattle and sheep, and it prevails in certain European countries, especially Russia, in Australia and in South America. It does not occur extensively in this country. Definite regions are at times heavily infected, and it is in such localities that the disease is most frequently transmitted to man.

As early as 1850 Rayer and Devaine, also Pollender, had discovered the presence of small rods and filaments in the blood of animals which had died of anthrax, and the work of Koch, Pasteur and others soon established that this rod, the anthrax bacillus, is the cause of anthrax. The discovery of Koch that the bacillus forms extremely resistant spores, explained the persistence with which the disease infects particular localities.

The anthrax bacillus is a fairly large organism, is rod-shaped, non-motile and grows with characteristic appearances on various culture media. With the proper temperature and culture medium, and in the presence of free oxygen, the formation of spores be-

gins after about twenty-four hours of growth. Their evolution is complete in from one to two days, and eventually the protoplasm of the cells disintegrates and the spores are set free. Spores are not formed in the body of an infected animal. Anthrax prevails especially in the spring and summer, and the bacilli as they are discharged with the urine or feces find in the open air and warm temperature conditions which are favorable for the formation of spores. Spore formation is not essential, however, for the continued life of the organism; at high temperatures (42 C.), and in the presence of minute amounts of acids and alkalis or of carbolic acid, strains may be so altered that they lose permanently the ability to produce spores. Under favorable conditions the spores germinate completely in from three-quarters to one and one-half hours (Grethe) by a process in which they lose their refractive appearance and assume first an oval and then a rod shape. In the body a capsule surrounds the bacillus, and it grows singly or in very short chains; in culture media it is very difficult to obtain capsules. The long threads which appear in culture media, especially bouillon, are not found in infected animals.

The bacillus itself shows no unusual resistance, but its spores are more resistant than those of any other pathogenic bacterium. When dried on a thread they have

**Resistance and Virulence.** been known to live for from ten to twelve years. Corrosive sublimate (1-2,000) kills them in forty minutes (Fraenkel), and direct sunlight in about 100 hours (Momont). *Bacillus pyocyaneus*, streptococci, staphylococci and the bacillus of Friedlander are said to antagonize its growth.

The anthrax bacillus is remarkable for its infectiousness. A twenty-millionth of a loop of a virulent culture will cause a fatal infection in mice, guinea-pigs and rabbits, when given subcutaneously. A systemic infection may be produced by feeding the spores or causing animals to inhale them. The gastric juice is able to kill the bacilli, but not the spores, which germinate after they reach the intestines.

The organism is distributed by the excretions of diseased animals, and after their death the adjacent soil becomes heavily infected by the discharges which escape from the intestines and bladder. In this situation the bacilli pass into the sporing stage, in which they remain viable and virulent for a long time.

The infection of herds usually is accomplished by the ingestion of spores which have been distributed in this way, the spores germinating after they have reached the intestines as described above. The disease may be primary in the skin in the form of malignant pustule. In man malignant pustule is the commonest type of infection, occurring especially among those who have to do with cattle and sheep. The bacilli, however, may gain entrance through the lungs as in the so-called "wool-sorter's" disease, which is caused by the inhalation of infected dust from the raw material.

The generalized infection in all animals is rapidly fatal (one to three days), and the occurrence of death is sometimes so sudden as to be called apoplecticiform; in man the mortality is about 50 per cent. Malignant pustule runs a more favorable course.

The general infections are marked by symptoms of intense intoxication and acute degenerative changes are produced in the parenchymatous organs. Massive numbers of the bacilli are found in the blood.

**Toxin!** Neither a soluble toxin nor an endotoxin characteristic for the organism has been demonstrated up to the present time (Sobernheim), although there is abundant clinical and anatomic evidence of intense intoxication. The production of mechanical injuries by the large masses of bacilli in the circulation is doubtful.

Rational prophylaxis involves the proper disposal of the bodies of animals which have died of anthrax, the exclusion of animals from fields known to be infected, suitable disinfection of stalls, and finally protective inoculation against the disease. No part of the anthrax cadaver should be used for commercial purposes because of the danger of infecting those who work



with the raw materials. Cleanliness and the usual precautions against contagious diseases should be observed by those who are exposed to infection, bearing in mind that the disease may be transmitted by way of the lungs and alimentary tract as well as by the skin.

It is probable that no disease is more perplexing from the standpoint of immunity than anthrax. The variations in susceptibility and immunity among different animals are extreme: Guinea-pigs, rabbits and mice are probably more susceptible than sheep and cattle; compared with these the dog and rat are relatively immune, whereas fowls and cold-blooded animals can be infected with difficulty. Although the microbe is readily killed by suitable serums (rabbit, e. g.), such an effect is not an index of immunity. The serum of the highly susceptible rabbit is strongly bactericidal in test-glass experiments, whereas that of the more resistant dog, or rat, has little or no bactericidal power. Because of this inconsistent relationship of the serum to immunity, and since the leucocytes have a high phagocytic power for the anthrax bacillus, Ptruschky, Frank and others, agree with Metchnikoff in assigning variations in the natural immunity of different animals to variations in phagocytic power. Bail and Pettersson, in extensive experimental work, discovered conditions which, they believe, explain the lack of correspondence between serum properties and natural immunity. In the serum of the relatively immune dog and chicken they found bactericidal amboceptors but no complement; hence the serum could show no bactericidal action in the test glass. If, however, leucocytes from the same animals were added to the serum, the latter became bactericidal. It may be assumed that in the course of infection the amboceptors are activated by complement which is discharged from the leucocytes. The failure of the bactericidal substances of the rabbit's serum to protect the animal was ascribed to the ability of the tissues to absorb the amboceptors (cited from Sobernheim). Their work is of sufficient importance to demand repetition.

Wright has shown the importance of the opsonins for phagocytosis of the anthrax bacillus.

Recovery from spontaneous infection is said to confer a certain degree of immunity of some duration.

Artificial immunity may be produced by active or passive immunization. The first attempts at vaccination were made in 1880 by Toussaint, who injected the blood of infected animals after it had been heated to 55 degrees for ten minutes. The bacilli were thus attenuated, but they were able to form spores subsequently and vaccination was not always successful. Pasteur used two vaccines. Vaccine I consisted of a culture which was attenuated by a growth at 42 C., and which contained no spores. Vaccine II was a virulent culture, and was injected in from ten to fourteen days after vaccine I. Its use is said to have caused a decrease in anthrax in heavily infected districts, with a consequent decrease of the disease in man. Various modifications of the vaccines of Pasteur have been devised by others, and they seem to be equally successful. In some instances killed bacilli and the products of bacterial growth have been used with less success. The *Anthrax-Immunoproteidin* of Emmerich and Löwe is not of established value.

Immune serum for therapeutic purposes is prepared by immunization, first with killed or attenuated cultures and then with virulent strains. The two vaccines of Pasteur may be used. Although the serum has been shown to have fairly strong protective powers, it is of less value when used for curative purposes. It produces no effect after

the blood stream has been invaded by the bacilli. Its greatest value is in the prophylactic injection of herds when anthrax has declared itself. In man it has been used chiefly in the treatment of malignant pustule in which the prognosis, even without specific treatment, is not unfavorable. The best known serums are those of Selavo, prepared from the goat and ass, of Mendez and of Deutsch. The properties on which the value of the serums depends are unknown. Sobernheim is very positive in stating that the bactericidal power of an animal's serum is not increased by immunization or infection, and the exist-

ence of an antitoxin is not recognized. As in some other instances immunization may cause an increase in opsonins which would render the serum effective by its power to cause increased phagocytosis.

The method of Sobernheim, that of mixed active and passive immunization, seems to be successful as a prophylactic measure. The vaccine consists of a mixture of antiserum and bacilli. Immune and even normal serums at times may agglutinate the anthrax bacillus, but the reaction is inconstant, and the ability of an immune serum to cause agglutination is no index of its protective power. Agglutination is somewhat difficult of determination because of the tendency of the bacillus to grow in the form of chains.

#### RELAPSING FEVER.

In 1868 Obermeier discovered in the blood of patients suffering from relapsing fever, "very fine threads exhibiting motility"; these "threads" have since been known as the *Spirochete obermeieri*,\* and are recognized as the cause of the disease. They are very thin (about 1 micron), from 10 to 40 microns in length, and of spiral form. Three types of motion are described: a screw-like, a forward and backward movement and a lateral bending. They are found only in the blood and blood-forming organs. They disappear from the blood with remarkable rapidity at the time of crisis, although they may be found in the spleen one or two days later.

The spirillum has not been grown artificially, but it may be kept alive for a number of days in the blood or serum of patients. As the micro-organisms die agglomerations are formed and they undergo granular changes.

The organism is not found in Nature, and since it occurs only in the blood of the sick, it has long been assumed that infection can be accomplished only by the inoculation of infected blood. The parasites have been demonstrated repeatedly in bedbugs which are found on the mattresses of the sickbed and monkeys have been infected by inoculating them with the blood found in the bodies of these insects, and by the bites of the latter (Tietin). It is said that they may remain alive in bedbugs for as long as thirty days. It is not altogether excluded that other vermin also transmit the disease.

The spirillum does not appear in any of the excretions, unless they happen to be of a bloody character.

Certain monkeys, those belonging to the slender nosed family (*Catarrhinæ*), may be infected by injecting the blood of patients, provided the blood used is taken during the paroxysm, i. e., at a time when the microbes are known to be in the blood. Monkeys do not contract the disease under natural conditions. Other animals are not susceptible. The incubation period in man usually is from five to seven days, and in monkeys from one and one-half to four days. Cloudy swelling of the parenchymatous organs, ecchymoses and infarcts of the spleen and kidneys are found in fatal cases; these are not specific changes, however.

Prophylaxis consists in isolation of the patient, cleanliness, and the destruction of vermin, especially bedbugs.

Relapsing fever occurs in various races of man, and so far as known none are immune.<sup>1</sup> The natural immunity of other animals is referred either to phagocytosis or to normal bacteriolysis, but the conditions probably are not thoroughly understood.

As stated above, a remarkable feature in the course of the disease is the rapidity with which the micro-organisms disap-

\* This organism is sometimes called a spirillum, incorrectly. The spirillaceæ, Migulas third family under the Order of Eubacteria, comprises organisms with these characteristics: "Cells which are twisted screw-fashion or represent a segment of a spiral. Division takes place only in one direction of space following elongation of the cell." The difference between spirillum and spirochæte is shown by the following: "3. Genus: Spirillum. Cells rigid, with polar tufts for the most part bent in the form of a half-circle as organs of locomotion. 4. Genus: Spirochæte. Cells with snake-like bending, organs of locomotion unknown."

1. According to Osler the disease has not been seen in this country since 1869 when it was epidemic in New York and Philadelphia. This was before the discovery of the spirillum.



pear from the blood at the time of the paroxysm. Metchnikoff refers this to phagocytosis by the microphages, which undergo a progressive increase during the paroxysm and decrease after the crisis. Very little phagocytosis appears to take place in the circulating blood, but in the spleen many spirilla are found within polymorphonuclear leucocytes. Tietin also found them in the parenchymatous cells of the kidney, liver and lungs. Phagocytosis is most marked at or near the time of the crisis. According to Metchnikoff, the relapse or reinfection is accomplished by spirilla which again invade the body from the spleen.

Russian observers have studied the development of a specific bactericidal power in the serum of the sick and in animals which were immunized by the injection of infected blood from man. Inasmuch as the organism can not be cultivated, bactericidal tests must be performed with the organisms as they occur in the blood or serum of the patients, and Gabritschewsky has devised a technic for this procedure.

A drop of serum from an immune animal or a convalescent patient is mixed on a slide with a drop of serum which contains the spirilla, the latter serum being taken from a patient during the paroxysm. The preparation is sealed under a coverglass and examined at intervals, and the death of the organisms is determined by their loss of motility. It is said that the bactericidal power of human blood following infection, and that of immunized animals, is increased.

In view of the facts that three or more relapses may occur and that reinfection is possible at a later period, it seems probable that man does not readily acquire immunity to the infection, although second and third relapses are said to be lighter than the first paroxysm. Monkeys which have been artificially infected several times acquire some resistance to the disease. The view of Metchnikoff that the spleen is essentially involved in recovery and immunity seems to have been disproved by the experiments of Tietin, who found that splenectomy had no influence on recovery or the development of immunity.

The serum of convalescents affords a certain degree of protection to the monkey (Gabritschewsky). Löwenthal utilized the serum of immunized horses in the treatment of the disease in man, and reported a decrease in the number and severity of relapses. The action of the serum has been referred both to its content in bactericidal antibodies, and to its ability to stimulate phagocytosis.

Melkikh states that agglutinins are formed and that they appear from the third to the fifth day of the disease.

A rapidly fatal disease of geese, spirochete septicemia, or spirillosis of geese, is caused by an organism which resembles the spirochete of Obermeier, and a similar infection has been noted in chickens in Brazil and in cattle in the Transvaal.

#### MALTA FEVER.

Malta, Mediterranean or undulant fever was discovered in the Island of Malta, is seen among British troops at Gibraltar, and cases have been discovered in the Caribbean Sea, Porto Rico, in Hongkong and in Manila. It is said to be extending. The disease usually runs a long course, which is somewhat typhoidal in character, and there may be one or more relapses. The spleen is enlarged, but the intestines are not involved.

*Bacillus melitensis*, discovered by Bruce (1887) in the spleen of patients who had died of the disease, is a minute organism, slightly oval in shape and non-motile. It has not been found in the blood.

The bacillus is found in pure cultures in the spleen, which is greatly enlarged. Its growth in culture media is very slow.

It is thought that infected water may be one means of transmission of the disease. Laboratory infections have occurred through small wounds. The disease is not transmitted from person to person.

Up to the present time the monkey is the only animal known to be susceptible to artificial infection, although the organism may have a low degree of virulence for rabbits and guinea-pigs (Durham).

One attack confers immunity, which may disappear, however, after some time (Hughes).

Agglutinins, having a value of from 1-300 to 1-500, develop fairly early in the course of the infection and the agglutination test has been used successfully in diagnosis.

An immune serum which was prepared by Wright is said to influence favorably the course of the disease.

## Clinical Reports

### QUININ AND IRON IN PNEUMONIA.

CHARLES F. NIEDER, M.D.

GENEVA, N. Y.

The results obtained by Dr. Galbraith,<sup>1</sup> of Sonora, Mex., in the treatment of pneumonia by the use of large doses of quinin sulphate and of the tincture of the chlorid of iron, as shown by the effect on the temperature, pulse and circulation, seemed to be of even greater importance than the fact that he had treated fifty consecutive cases without a death. Since reading Dr. Galbraith's last article I have treated six patients with lobar pneumonia in like manner, with very satisfactory results in every case.

CASE 1.—J. H., aged 46, laborer, was taken ill March 8, 1905. He complained of severe headache and pain in the right side of the chest.

*Examination.*—Temperature, 102; pulse, 96; respiration, 28. Percussion of chest was negative. Breath sounds were suppressed on the right side. On March 9, at 10 a. m., temperature was 104.6; pulse, 120; respiration, 36. Percussion showed congestion of the lower lobe of the right lung. Pain in side was very severe. Expectoration was bloody.

*Diagnosis.*—Pneumonia.

*Treatment.*—Forty grains of quinin were administered, and two hours later fifteen grains were given, followed by ten drops of the tincture of the chlorid of iron every two hours.

March 10: At 9 a. m., temperature was 100; pulse, 94; respiration, 32. There was consolidation of the lower lobe of the right lung.

March 11: At 10 a. m., temperature was 101; pulse, 96; respiration, 34.

March 12: At 9 a. m., temperature was 101; pulse, 94; respiration, 35.

March 13: At 10 a. m., temperature was 104.5; pulse, 115; respiration, 54. There was consolidation of the whole of the right lung and of the lower lobe of the left lung. The patient was very drowsy. Forty grains of quinin were given at 12 m., thirty grains at 2 p. m., and thirty grains at 8 p. m.

March 15: At 8 a. m., temperature was 101; pulse, 92; respiration, 42.

March 16: At 9 a. m., temperature was 98.6; pulse, 88; respiration, 40.

March 17: At 10 a. m., temperature was 99; pulse, 82; respiration, 28.

CASE 2.—D. Q., aged 38, moulder, was taken ill Sept. 6, 1905. He sat near an open window while perspiring freely on September 4. He had a very severe attack of pneumonia nine years ago.

*Examination.*—On September 6, at 8 a. m., temperature was 104; pulse, 125; respiration, 32. Percussion was negative. Breath sounds were suppressed over the lower lobe of the right side. The patient complained of severe pain in the right side.

*Diagnosis.*—Pneumonia, involving the lower lobe of the right lung.

*Treatment.*—Forty grains of quinin were administered at 8 a. m. and thirty grains at 4 p. m., followed by ten drops of the tincture of chlorid of iron every three hours.

September 7: At 9 a. m., temperature was 99.4; pulse, 86; respiration, 32. There was consolidation of the lower lobe of the right lung and severe pain in the right side.

September 8: At 9 a. m., temperature was 101.6; pulse, 92; respiration, 36. Twenty-five grains of quinin were given.

1. The Journal, July 9, 1904, and Jan. 28, 1905.



September 9: At 9 a. m., temperature was 100; pulse, 78; respiration, 34.

September 10: At 10 a. m., temperature was 98.8; pulse, 75; respiration, 28.

September 11: At 10 a. m., temperature was 99.5; pulse, 76.

September 12: At 10 a. m., temperature was 98.4; pulse, 72.

CASE 3.—A. P., aged 41, molder, had had a cold for one week. He was taken ill Sept. 12, 1905.

*Examination.*—On September 12, at 8 p. m., temperature was 104; pulse, 120; respiration, 35. His breathing was labored. There was no pain. Auscultation showed breath sounds suppressed over the lower lobe of the right lung, and percussion indicated congestion of the same area. The patient was very drowsy.

*Diagnosis.*—Pneumonia.

*Treatment.*—Thirty grains of quinin were administered at 8 p. m. and thirty-five grains at midnight, followed by ten drops of the tincture of chlorid of iron every three hours.

September 13: At 8 a. m., temperature was 99.8; pulse, 88; respiration, 32. There was severe pain in the right side, and the man was raising bloody sputum.

September 14: At 9 a. m., temperature was 100.4; pulse, 88; respiration, 34. There was consolidation of the lower lobe of the right lung.

September 15: At 9 a. m., temperature was 101.5; pulse, 90; respiration, 30.

September 16: At 10 a. m., temperature was 101.8; pulse, 90; respiration, 32. Twenty grains of quinin were given.

September 17: At 9 a. m., temperature was 100.6; pulse, 86.

September 18: At 9 a. m., temperature was 99; pulse, 78.

September 19: At 9 a. m., temperature was 100; pulse, 80.

September 20: At 9 a. m., temperature was 98.4; pulse, 74.

*Remarks.*—The results obtained in my other cases have been just as satisfactory as in these three cases.

With the exception of Case 1, at the time of the extension of the pneumonia to the other lung, none of the patients had a temperature exceeding 102 nor a pulse rate exceeding 96 after beginning this treatment.

What I wish to emphasize most is the effect of this treatment on the circulation. Instead of the high tension pulse which is usually present in pneumonia, the pulse was of nearly normal tension and of good volume. When there was cyanosis it was promptly relieved.

I trust that others will publish their results with Dr. Galbraith's treatment, so that we shall be able to arrive at a correct estimate of its value.

My experience is too limited to form satisfactory conclusions. Still, I am led to hope that the general use of this treatment will cause a great reduction in the mortality from pneumonia.

## REPORT OF A CESAREAN SECTION.

JAMES W. ROWE, M.D.

Adjunct Professor of Obstetrics, University of Cincinnati.  
CINCINNATI.

*Previous History.*—The patient was 26 years of age and weighed 96 pounds before the uterine contents were removed. She asserted that, when 2 years old, she was very sick with a fever, after recovering from which she did not walk for over a year. She was perfectly normal at birth and grew until 5 years old; since then she has grown broader, but very little taller.

*Examination.*—On examination the patient was found to be 41 inches in height. The head, face and neck were normal and the intelligence above the average. The trunk was small, but not especially deformed. From the spine of the seventh cervical vertebra to the tip of the coccyx measured 20½ inches. The extremities were markedly short, stumpy and deformed. The arm from the shoulder to the tip of the middle finger measured 14 inches. The legs were approximately 16 inches long.

*Pelvis:* The pelvic measurements were as follows: Between spines, 19.7 cm.; between crests, 21.8 cm.; between trochanters, 25.2 cm.; external conjugate, 14.7 cm. The true conjugate of the brim was estimated to be 6.5 cm.

*History of Labor.*—The patient last menstruated Nov. 23,

1904. On Sept. 11, 1905, labor began. I first saw the case on September 12 after she had been in labor twenty-four hours. At this time the os was as large as a quarter and the presenting part lay very high. Position and presentation were normal and the child was alive.

*Operation.*—The section was made following the usual technic. The uterine incision was made vertically through the anterior wall of the organ and, unfortunately, went through the placenta, so that it was necessary to work rapidly. After removal of its contents the uterus was closed with heavy cat-gut sutures one-third of an inch apart and extending through the entire thickness of the uterine wall, except the mucosa. Between these more superficial and finer sutures were placed to approximate the edges of the wound. A piece of gauze, the end of which extended through the os into the vagina, was left in the uterus. The abdominal wound was closed with three tiers of sutures. The gauze was removed *per vaginam* after twenty-four hours.

*Result.*—The patient recovered most uneventfully. Lactation began promptly and the baby flourished from the start. It weighed seven pounds and ten ounces. Mother and child were discharged after twenty-five days.

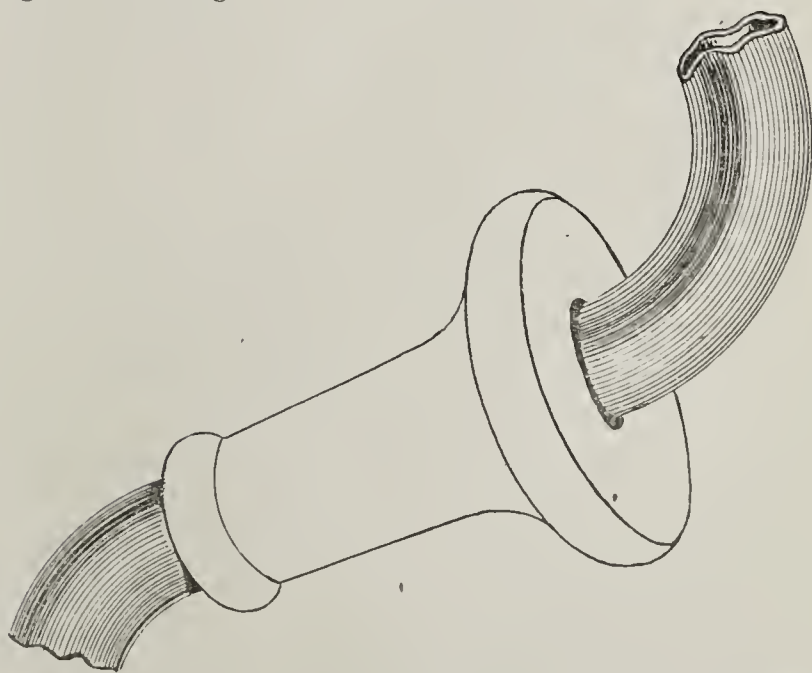
## New Appliance

### COMBINED MOUTH GAG AND STOMACH TUBE PROTECTOR.

LAURENCE M. HYNSON, M.D.

WASHINGTON, D. C.

While resident physician at the Emergency Hospital in this city several months ago and having occasion to use the stomach tube in a great number of emergency cases brought into the hospital suffering from the effects of poisonous substances (taken for suicidal intent and otherwise), acute alcoholism, indigestion, etc., and finding in many of these cases the use of the mouth gag unsatisfactory, inasmuch as it was with the greatest difficulty that one could retain the gag in position with obstreperous patients, I was led to devise a simple instrument or bobbin which has proved to be very effective and which has the double feature of being mouth gag and stomach tube protector combined. I made and used a mouth-piece of hard wood, as shown in the accompanying diagram, for the first time Sept. 6, 1904, and on subsequent occasions to great advantage.



It causes no laceration of lips, gums or tongue, and when once in position can not easily be removed by the movements of the patient's head or body. With one hand the operator holds both tube and mouthpiece in position, giving freedom of the other hand for the funnel end of the stomach tube. The gag has now been in use for several months at the Emergency Hospital of this city.

Those used so far have been made of hard wood, principally ash and hickory. The illustration is full size.



# THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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## BIOGRAPHICAL CARD INDEX AND DIRECTORY.

Since the American Medical Association began the work of accumulating personal information from the members of the medical profession for the biographical card index and the American Medical Directory, many inquiries regarding these new lines of activity have been received. Physicians all over the country have asked, "What is the biographical card index and what is its purpose? How will the American Medical Directory differ from other medical directories?" The following is presented to answer these and other questions relating to the subject and to obviate the necessity of replying to each individual inquiry.

In order to understand the object of this work, it is necessary to examine carefully the present condition of the medical profession from a social and economic standpoint. The last century, and particularly the last twenty-five years, have witnessed a remarkable progress in medicine and in the allied sciences. This progress will unquestionably continue, and the army of observers and investigators now at work in every branch of medical science can safely be trusted with the technical side of a physician's work. But all thoughtful members of the profession admit that there are many practical questions relating to the training, the work and the life of the individual physician, as well as to the community in which he lives, that require careful study and consideration, as well as intelligent and conservative regulation. The improvement of the preliminary training of prospective medical students, of medical schools and of medical courses; higher standards for licensure by state authorities; reciprocity and mutual co-operation between state boards; protection of the ignorant and the sick from the quack, the faker and the charlatan; improvement of the social and financial conditions of the physician; stimulation of the desire to improve his own condition and to increase his knowledge and usefulness—all these much-needed lines of agitation and reform are blocked in the beginning by a lack of knowledge regarding the individual members of the medical profession.

As already stated, detailed information in all technical lines has increased a hundred-fold in the last half century. Along practical and sociologic lines, there is little more known than there was fifty years ago. No one knows how many individuals are at present engaged in the practice of medicine in the United States. Esti-

mates vary from 110,000 to 140,000. Of this indefinite number, no one knows how many are properly licensed by the licensing body of the state in which they live. In many states, owing to the condition of the records, the state board itself can not tell whether a certain individual has a right to practice medicine or not. Information obtained by one state board at considerable expense and trouble is not utilized by others. Knowledge possessed by one society is not shared with other societies. Statements regarding college and year of graduation, as well as regarding state licensure, are in many cases most difficult of verification. If one desires data regarding a physician, there is no central bureau that can furnish it to him, no general clearing-house for information. Licensing bodies are continually met by the fact that they are unable to obtain reliable information whereby they may verify statements made by an applicant. There is not in existence to-day a list of the physicians of the United States whose legal qualifications to practice medicine have been verified. Out of the fifty-four state and territorial licensing bodies, only twenty-one have ever published a list of physicians legally qualified to practice medicine within their jurisdiction.

Information regarding members of the profession is difficult to obtain when desired for identifying, locating or tracing an individual physician for personal notices, biographical sketches, obituary notices, and all other purposes for which such information is desired. What has long been needed is an accurate compilation of data, made up of information obtained from official sources, such information then to be carefully edited and classified and kept corrected up to date, for the use and information of licensing bodies, and for any responsible person desiring information for legitimate purposes.

While the necessity for such classified information has been long recognized, until recently, conditions have not been favorable for its establishment and maintenance. Now with organization more or less completed, such is possible. In his annual report at the Portland session, the General Secretary of the American Medical Association said:

It has long been recognized that a permanent biographical card index of American physicians, giving data in regard to preliminary education, medical education, previous locations, etc., would be of great value to the Association and to the profession. Such an index would be of value in tracing a physician through various localities, making up matter for directories and in compiling statistics in regard to the profession. This work has been begun and is now being carried on along two different lines, namely, first, the accumulation and indexing of biographical data in regard to the members of the profession now engaged in active practice; second, the accumulation of similar data in regard to graduates of the current year and of recent licentiates of state boards of health. This has been carried on through the assistance and co-operation of medical colleges and secretaries of state licensing boards. The amount of information on hand is considerable and is steadily increasing.

This was approved by the Committee on Reports of Officers and adopted by the House of Delegates, with instructions to the General Secretary to continue the work of collecting and classifying biographical information.



In accordance with this action, a biographical card index of the medical profession has been established, and it is hoped that very soon this index will contain a card for every physician in the United States. On the card will be recorded name, place and date of birth, preliminary education, medical college and year of graduation, state license and date, medical societies, college and life insurance positions, school of practice, and specialty, if any. In connection with this fundamental information, provisions are made for recording removals, positions held and other matters that may occur in the life of the individual that are of sufficient medical interest to note. Such information is pouring into the general offices of the Association from state and county societies, from licensing bodies, from newspaper clippings, the latter alone averaging over one hundred and fifty a day. Through the co-operation of medical colleges and state boards, certified lists of graduates and licentiates, together with most of the personal information requested, have been obtained and are now being properly classified. There is now in possession of the Association a fairly complete list of graduates of American medical colleges from 1860 to 1901. This list has been supplemented and brought up to date through the co-operation of registrars and secretaries of medical colleges. Copies of the official records of more than three-fourths of the licensing bodies have been secured. The remaining records are now being copied and will soon be completed. Blanks for reports both of colleges and of licensing boards have been prepared.

Each year a supplementary list of recently graduated and licensed physicians will be procured and added to the general index. There will thus be formed a list of all medical graduates, as well as of all legally qualified practitioners, made up from official records, and carefully corrected and revised each year. Information lacking regarding individuals will be constantly added. Thus it will be seen that the information asked for is primarily intended for this index. As a reliable and official list of legally qualified practitioners, it will be of great value and will undoubtedly aid in securing general reciprocity among licensing bodies.

The second reason for desiring this information is for use in compiling a reliable and accurate directory. The directory however, is only incidental to the other work. From the index will be drawn information, either personal or official, for compiling, revising and correcting the directory, both the one now in preparation, as well as subsequent editions.

The American Medical Directory will differ from directories heretofore issued in three particulars: First, it will be a directory of the American medical profession published and owned by physicians themselves. Second, information regarding college and year of graduation and date of licensure will be verified from official sources. Third, it will furnish the same information regarding each physician, whether he be a subscriber to the directory or not. No paid-for information will be

included. It will also combine in one volume the purpose of a general medical directory, as well as a medical society blue book, since the names of all members in good standing of the constituent state associations and their component branches will appear in capital letters, as a distinctive mark of such membership. Information contained in the directory regarding each physician will include name in full, year of birth, college and year of graduation, office address and office hours.

The assistance and co-operation of all physicians, and especially all members of the organized profession, is earnestly requested in carrying on and developing this work. The greatest service that any physician can render at the present time is to furnish, promptly and accurately, information regarding himself. For the purpose of obtaining this information a blank has appeared in successive numbers of *THE JOURNAL* for the last six weeks. About 20,000 of these have been filled out and sent in.

A number of physicians have written saying: "You will find full information regarding me in the ——— Directory." As practically all directories are copyrighted works, it will be readily seen that such information is not available for the purposes desired. Other physicians have replied, saying, "You will find my complete record in the Transactions of the ——— Medical Society for the year ———." A moment's reflection will show the difficulty in tracing up the personal record in this way. The time required for a physician to fill out and return these blanks is infinitesimal; the time required for the directory office force to trace each individual is great. If each reader of *THE JOURNAL* will furnish at once, without further solicitation, the personal information regarding himself, the work of accumulating the data will be greatly simplified. On advertising page 32 of this issue will be found the information blank desired. All readers of *THE JOURNAL* who have not already done so, are urged to furnish this information at once.

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#### THE VALUE OF SINGLE CLINICAL SYMPTOMS IN THE DIAGNOSIS OF TYPHOID FEVER.

In no common disease more than in typhoid fever does the diagnosis depend on the correlation of single symptoms, and no common disease is more often incorrectly diagnosed. If the Spanish War had shown nothing else of medical interest, the information it gave us regarding the difficulty of diagnosing this disease would have been of inestimable value. Those who looked over the admirable report of Reed, Shakespeare and Vaughan must have been struck with the fact that more mistakes in diagnosis were made in connection with typhoid than with any other common condition. In civil practice, too, a similar condition has prevailed and still prevails. Too many practitioners still fail to realize that a fever that does not yield with reasonable promptness to quinin is not malaria, and that in many districts the only contin-



ued fever is typhoid. It is but a few years since Osler, in an address before a New York audience, called attention to the frequency with which malaria was given as a cause of death in that state, and with gentle and good-natured sarcasm referred to typhoid fever as "New York malaria." On the other hand, in many cases typhoid is made the scapegoat, and any obscure condition is diagnosed as typhoid fever.

Superstition, though dormant or appearing in aberrant forms, still enters into the constituent parts of humanity. In medicine, as elsewhere, superstitions die hard, and the superstition of the pathognomonic sign dies hardest of all. Who has not met the practitioner who, in diagnosing a fever case, says: "No, this can not be a typhoid-fever case, for the patient has not a typhoid tongue." If it is not the tongue it is the pea-soup discharges or delirium or a typical fever. If we are to rely on single symptoms and signs, or on groups of prominent symptoms and signs, what are the important ones in this disease? Are the more modern methods, when available, of striking value? These questions have been considered and answered in a recent paper of Treupel.<sup>1</sup> This author's analysis of his carefully studied cases shows that some of the signs and symptoms supposed to be most characteristic appear in a remarkably small percentage of cases, and they also indicate the great value of certain of the more recent methods of diagnosis.

There are certain facts of essential importance which should always be considered in reaching a conclusion as to whether a given patient has or has not typhoid fever. The history of the prodromal symptoms, either general or referred to special organs, the temperature, the pulse, and especially its relation to the degree of fever, the involvement of the respiratory organs, the condition of the tongue and of the digestive tract in general, the presence or absence of an enlarged spleen, the skin eruption, the Widal reaction and the presence or absence of typhoid bacilli from the blood. The two last-mentioned signs are relatively new, and while the Widal reaction is now generally used, blood cultures have not yet come into general favor. Treupel's analysis deals with all of these factors, and gives the relative value of each in figures. The results are interesting. The typhoid tongue, for instance, was present in only 16 per cent. of his cases, and a typical temperature curve in less than 50 per cent. Pea-soup stools were the exception and constipation the rule. Bronchitis occurred in less than 50 per cent. of the cases. Far outclassing every other sign as regards frequency of occurrence were the two new diagnostic measures, the Widal reaction (90.6 per cent.), and the presence of typhoid bacilli in the blood (92.8 per cent.). Of the signs which are appreciable to the senses, and do not need the aid of laboratory methods to bring them out, the most important are the enlarged spleen, the relatively low pulse rate, the rose spots and abdominal tenderness or meteorism.

One is tempted to ask whether the signs and symptoms of a given disease may not vary from generation to generation; whether we do not expect to find certain symptoms and signs because professional tradition has taught us to expect them. There is no doubt as to the clinical acuity of our professional forbears; so far as the unaided senses are concerned, in all likelihood they were much better observers than we are. There are good reasons on theoretical grounds why infectious diseases should become modified in the course of time, and not a little practical proof that this has actually occurred in some cases. In all probability it has taken place to some extent in typhoid fever, partly, no doubt, as the result of changes in treatment. Even the text-books suggest it. It is to be hoped that the fact will soon be more widely appreciated.

#### FEDERAL PROTECTION OF THE PUBLIC HEALTH.

One of the most important and most significant of the favorable results of the late epidemic of yellow fever has been the widespread agitation in the southern states, having as its object the creation of a public sentiment in favor of transferring to the Federal Government all matters of national and interstate quarantine. This is all the more notable because heretofore it has been chiefly the southern adhesion to a strict construction of the rights of the state that has prevented the development of a national department of health. In order to show the character of this change in sentiment, we reproduce in this issue<sup>1</sup> a few excerpts from southern press editorials, together with expressions from prominent state governors. Those interested in public health development will find these very significant.

Clearly, the present is the opportune time for asking Congress to create a department of health, to which shall be assigned certain duties in national and interstate quarantine, together with various incidental tasks, such as collecting general and accurate vital statistics. It would not seem to require any stretching of federal function to assign to this new department the sanitary policing of all the navigable waters of the nation, which, by the United States Constitution, are declared to be a part of the national domain, and are placed under the authority of Congress. By a persistent national application of this new function, it is reasonable to think that much improvement would be noted in the mortality from diseases whose infection is waterborne. To this new department would logically fall the execution of the provisions of the pure food and drug law, which will sooner or later be placed on the statute books. Other and important functions will suggest themselves, such as the problems of immigration, and of sanitation in Panama, Porto Rico, Alaska and the Philippines. In such a department all the medical activities of the government could be centralized and harmonized.

It is unfortunate that up to the present time no pro-

1. Muench. med. Wochft., 1905, vol. lli, p. 1870.

1. See page 1593.



posed law for the establishment of a national department of health has been satisfactory to all students of the subject. Certainly, however, this does not imply that a comprehensive and safe measure can not be drawn. Beyond doubt there never has been a time in the history of the country when the conditions were so favorable for the friendly and interested consideration of such a measure by Congress.

In addition to others mentioned as willing to permit enlargement of the functions of the General Government in the direction of public health duties, it must be borne in mind as highly significant that Governor Cox of Tennessee felt so much interest in the movement that he called a conference of governors, health officials and other citizens of the southern states at Chattanooga, November 9 to 11. At this conference Congressman John Sharp Williams, Democratic leader in the United States House of Representatives, was made chairman of the committee on quarantine, and this committee brought in a report recommending federal control of foreign and maritime quarantines and control of interstate quarantine by the individual states in cooperation with the Federal Government. This report having been adopted, the question is certainly before the country in active form.

#### THE POWER AND INFLUENCE OF THE PROPRIETARY ASSOCIATION OF AMERICA.

During the last two or three weeks the newspapers of the country have been publishing from paragraphs to columns of matter denouncing the "unjust attacks on a legitimate (?) business" and abusing *Collier's Weekly* for publishing "sensational articles which are calculated to mislead the public." We have never known before what a noble, self-sacrificing business that of the nostrum manufacturer is, nor have we realized how necessary to human life these nostrums are. Sophistry, half-truths and plausible arguments are so intermixed that, to the ordinary individual, it would seem that the nostrum business is not only legitimate and honorable, but absolutely necessary for the welfare of the race. Except in rare instances this matter has not appeared in the metropolitan and leading dailies, for evident reasons, but the smaller newspapers and those that are less independent seem to be the ones that are compelled to defend the "Great American Fraud." The country newspapers which use the "patent-insides" are relieved of any responsibility, for the "defense" is in that part of the paper which they buy already printed.

While these articles have appeared in the public press in all parts of the country practically simultaneously, there is such a sameness about the style, the arguments used are so similar, and in general character so uniform, that one at once concludes that they must have a common origin. This conclusion would be reached even if there were no other evidence; but the letter we reproduced last week in a comment on "A Newspaper Free from Nostrum Ads.," written by the chairman of the

press committee of the Proprietary Association, clearly proves the source. By the way, the "communication" which was sent to the newspapers with the letter referred to was the one from Mr. Bok, which appeared in *THE JOURNAL* of the American Medical Association,<sup>1</sup> in which he urged physicians to take up the fight against patent medicines. The object of the press committee of the American Proprietary Association evidently was to convey the idea that physicians are instigating the propaganda against "patent" medicine, and the dear people are being told that this is a fact and that the doctors oppose "patent" medicines for selfish reasons. Incidentally, the medical profession, the American Medical Association and *THE JOURNAL* of the American Medical Association are sadly abused.

What is this organization that has such a power over the newspapers of the country that it can compel them to speak or to be silent? Does this power lie in its numerical strength, in its wealth, or in the social influence of its members? To enlighten our readers, and, indirectly, the public, we print in this issue<sup>2</sup> a complete list of the members of this Proprietary Association of America, taken from their own transactions recently issued.

A glance at this list will give one an idea of the enormous wealth represented, so enormous that it is no exaggeration to say that it is one of the most powerful organizations in the country, from a financial point of view, and that it is not hard to believe that its members pay to the press of the country at least forty million dollars annually, as stated by one of them. Those who are interested in the nostrum question—whether as it relates to the so-called "patent" medicines advertised directly to the public or to those which are exploited to physicians—will find it worth while to give this list a careful study. In the first place, it will be found that there are a few firms in the list which are engaged in an honorable and commendable business. There may be a dozen of these, all told.

Further, it may be noted that scattered through the list are names that are familiar to readers of the advertising pages of medical journals—another evidence of the inseparableness of "patents" and "proprietaryes." Another very important fact would be evident if we had space to give the personnel of the firms; a large number of those who under one company are "patent medicine men," under another are, in a very dignified way, exploiting "proprietary" medicines to physicians.

These various firms have banded together, for what? To protect the interests of what Samuel Hopkins Adams calls "The Great American Fraud"; to protect the interests of a business that is both infamous and despicable; a business in which few men will, without blushing, acknowledge that they are engaged; a business that thrives on misrepresentation and fraud, that fattens on the gullibility and credulity of the ignorant, and that prospers by deceiving the sick and afflicted.

1. *THE JOURNAL* A. M. A., May 20, 1905, p. 1628.

2. See page 1589.



This language may seem harsh. We acknowledge that it is. But is it too harsh when all the facts are known regarding the business and the methods of at least a large majority of the firms which are listed as members of the Proprietary Association of America?

#### LIQUOZONE.

*Collier's* for the current week contains Samuel Hopkins Adams' contribution on that wonderful preparation, "Liquozone," a nostrum that has been more widely exploited, and with more extravagant claims, in the short time that it has been before the public, than any other patent medicine, so far as we are aware. The methods adopted by its promoters have been so effective that the backers and endorsers of the preparation evidently thought they had struck a gold mine, figuratively speaking. It is a pity that Mr. Adams did not "name names" when he was speaking of the promoters and stockholders who "are prominent socially and forward in civic activities," for then it would have struck at the root of the matter as far as this particular company is concerned. One of the directors, we have been informed, has recently been elected to a high office in one of the leading social clubs of Chicago, and another prominent figure in the company is a leader in a movement for bettering the political conditions in Chicago. We understand, however, that there is more to come in regard to liquozone than is to appear in *Collier's Weekly*, and the probability is that the whole concern will be so shown up that those connected with it will wish that they had never lent themselves or their "influence" to such a business.

#### THE RETIREMENT OF DR. BIDDLE.

The announcement is made in the last number of the *Journal of the Michigan State Medical Society*, of the resignation of Dr. A. P. Biddle, secretary of that society, and editor of the journal. Dr. Biddle resigns owing to increased demands of work along other lines. The Michigan State Medical Society has accepted the resignation to take effect January 1, and voices its regret at Dr. Biddle's resignation, as well as its appreciation for his faithful and energetic services. This sentiment will be echoed by all officers and members of the American Medical Association who have come in contact with Dr. Biddle during the years of his secretaryship. He has always performed the arduous duties of his position cheerfully, promptly and effectively during the time that he has occupied the secretary's office. He has seen the state medical society grow to its present proportions and the *Journal of the Michigan State Medical Society* develop into one of the best state journals in the country. It is to be hoped that Dr. Biddle's retirement from the secretaryship will not mean that he will cease to take an interest in medical organization or to work as earnestly as heretofore, for the good of his state association and of the American Medical Association.

**Active Congestion of Lungs.**—Aconite is especially indicated in inflammatory states of the respiratory organs—one-half to one drop every half-hour until an impression is made on the fever movement, then every hour or two.—Bartholow.

## Medical News

### CALIFORNIA.

**Sanitarium Opened.**—The Loma Linda Sanitarium, near Redlands, a well-equipped branch of the Battle Creek Sanitarium, was opened to the public October 1.

**Hospital Opened.**—The new hospital of the Santa Fe System, Los Angeles, a three-story building in mission style, erected at a cost of \$80,000, was formally opened November 1.

**October in the Hospitals.**—During October, 1,747 patients were treated at the five emergency hospitals in San Francisco. In the previous month 1,643 cases were treated, while in October, 1904, there were but 1,300 patients.

**Hospital Association Meeting.**—At the annual meeting of the Santa Ana Hospital Association, Drs. Charles D. Ball, Frances M. Bruner, John L. Dryer, Howard S. Gordon, James R. Medlock, Willela Howe-Waffle and John Wehrly were elected directors, and the directors thereon organized by electing Dr. Dryer, president; Dr. Bruner, vice-president; Dr. Ball, secretary, and Dr. Gordon, treasurer.

**Personal.**—Dr. Eleanor S. Yelland, Los Gatos, is visiting in Connecticut.—Dr. Carl R. Krone, Oakland, has resigned as superintendent of the East Bay Sanatorium and will resume private practice.—Dr. Ellis Harbert, Stockton, has been appointed division surgeon for the Santa Fe System.—Dr. Harry McNulty, San Francisco, formerly surgeon of the steamship *Sonoma*, has entirely recovered from his recent serious operation.

**Crusade Against Patent Medicines.**—The Board of Health of Los Angeles is reported to have begun a crusade against patent medicines which contain either poisons or alcohol. An analysis of all the more prominent patent medicines is being made, and the report will be published. There is a California law which has never been enforced which requires sellers of proprietary medicines to label the preparation with the name of any poison it may contain. Failure so to label the bottles is made a misdemeanor and a severe penalty is provided. Dealers in nostrums will be given a reasonable time in which to comply with the requirements of the law in this respect, and failure to do so will be followed by criminal prosecution. It is said that the board of health has secured from the city attorney's office the announcement that there is ample authority under the law for this crusade.

### IDAHO.

**New Regimental Surgeon.**—Governor Gooding has commissioned Lieutenant-Governor Burpee L. Steves, Weiser, as major surgeon of the Second Infantry, Idaho National Guard, vice Major Castle, resigned.

**New Hospital Opened.**—The new hospital at Idaho Soldiers' Home, Boise, erected at a cost of \$10,000, was formally accepted and occupied November 2. The 7 patients in the old building were removed to their new quarters.

**Personal.**—Dr. Robert L. Nourse, Hailey, is about to move to Boise, but before doing so he will go to Europe to take postgraduate work in the treatment of the eye, ear, nose and throat.—Dr. and Mrs. G. C. Kilgour, Roosevelt, have gone to Chicago.

### ILLINOIS.

**Cornerstone Laid.**—The cornerstone of the new St. Vincent's Hospital, Taylorville, was laid November 8 with impressive ceremony.

**Silver Wedding.**—Dr. and Mrs. J. Leaming Wiggins, East St. Louis, celebrated the twenty-fifth anniversary of their marriage October 22.

**Hospital Changes.**—Drs. J. C. and J. E. Weld, Milford, have been appointed to the staff of the Illinois Eastern Hospital for the Insane.

**Hospital at Mattoon.**—The trustees of the Memorial Methodist Hospital Association of Mattoon have recently purchased a 25-room residence and will so remodel it that it will accommodate about 20 patients.

**Pure Food Crusade.**—It is reported that the Illinois Consumers' League is to co-operate with the General Federation of Women's Clubs in the crusade for pure food. A committee has been appointed to call the attention of the women of the state to the adulteration of foodstuffs.

**Hospital Staff Elected.**—The medical staff of Blessing Hospital, Quincy, met October 30 and elected Dr. Kirk Shawgo physician-in-charge; Dr. William S. Knapheide, surgeon-in-



charge; Dr. John H. Rice, gynecologist-in-charge; Dr. Melinda C. K. Germann, obstetrician; Dr. Clarence A. Wells, anesthetist; Dr. Frederie M. Pendleton, oculist and aurist, and Dr. George E. Rosenthal, pathologist.

**Southern Medical Association.**—The Southern Illinois Medical Association met in Mount Vernon November 1 and 2 and elected the following officers: President, Dr. J. Leaming Wiggins, East St. Louis; vice-presidents, Drs. Charles C. Grizzell, De Soto, and James W. Hamilton, Mount Vernon; secretary, Dr. Edgar E. Fyke, Centralia; associate secretary, Dr. Charles W. Lillie, East St. Louis, and treasurer, Dr. Alexis T. Telford, Olney. The next meeting will be held in Shawneetown.

#### Chicago.

**Personal.**—Dr. Samuel J. Walker has been seriously ill from septic infection due to a postmortem wound.

**Senn Club.**—The Nicholas Senn Club has been incorporated in Chicago for scientific research by Drs. Byron Robinson, Orville W. Mackellar and Arthur McNeal.

**Hospital Borrows Money.**—The Sisters of the Holy Family of Nazareth have obtained a loan of \$50,000 for ten years, secured on the site of the Hospital of St. Mary of Nazareth and subject to a prior incumbrance of \$150,000.

**Refuses to Stop Examinations.**—Master in Chancery Mason on November 6 denied the motion for an injunction to restrain the civil service commission of Cook County from continuing the examination for positions on the staff of the County Hospital.

**Diphtheria.**—During the week ended November 11, 17 fewer cases of diphtheria were reported than during the previous week, and although there was an increase of more than 31 per cent. in the number of requests for bacterial examinations of suspected cases of the disease, there was a decrease of more than 27 per cent. in the positive findings.

**Deaths of the Week.**—The total deaths for the week ended November 11 were 469, 29 less than for the preceding week and 56 more than for the corresponding week of 1904. The respective annual death rates per 1,000 were 12.28, 13.04 and 11.17. The chief causes of death were: Pneumonia, 63; consumption, 49; nephritis, 45; heart diseases, 40; violence, including suicide, 35, and cancer and acute intestinal diseases, each 28.

**Alkaloidal Clinic Burned Out.**—The three-story brick building occupied in part by the *Alkaloidal Clinic*, at Ravenswood, with the presses and publishing equipment, was completely destroyed by fire November 2, at a loss of \$200,000. The large wooden building, closely adjoining, containing the offices and stock of the Abbott Alkaloidal Company, was saved. Dr. Abbott and his associates have at once taken up plans for a new start, proposing to issue a clinical journal of a broader scope than formerly.

#### INDIANA.

**Gift to Hospital.**—James M. Laboyteaux, a farmer living near Muncie, has contributed \$1,000 toward the erection of a county hospital and, if necessary, will duplicate the gift.

**New Medical Building.**—Ground has been broken for a new building for the medical department of Valparaiso University, to cost about \$50,000. The first winter term opened November 14.

**In Guardian's Charge.**—Dr. John Williams, Bowling Green, 96 years of age, who has practiced medicine for nearly seventy years in the state, was placed under the charge of a guardian November 6.

**Schools Reopened.**—The city schools and public library of Columbia City, which have been closed on account of a diphtheria epidemic, will reopen November 6.—The Potomac schools, which have been closed for a week on account of scarlet fever, were reopened November 4.

**Magazines Consolidated.**—The *Central States Medical Magazine*, Anderson, and the *Medical and Surgical Monitor*, Indianapolis, have been merged as the *Central States Medical Monitor*, to be published in Indianapolis. Dr. Samuel E. Earp will be the editor, and Dr. Samuel C. Norris will edit the eye, ear, nose and throat department.

**Personal.**—Dr. M. Hassenmiller, West Baden, has gone to Europe. Dr. Chauncey W. Dowden, Bloomington, has taken his place as house physician at the West Baden Springs Hotel.—Dr. Charles R. Dancer, house physician at the Indiana School for Feeble-minded Youth, Fort Wayne, has resigned, to take effect November 1. Dr. Budd Van Sweringen has taken charge of the work at the institution until a successor is appointed.—Dr. John W. McGowan, Oakland City, who has

been seriously ill with septicemia, is now believed to be convalescing.—Dr. Peter J. Pothuisje, Remington, has gone to Colorado.—Dr. Charles T. Bronaugh, Crawfordsville, who has been visiting in California, has returned.—Dr. Brose S. Horne, Marion, has moved to the Indian Territory.

#### IOWA.

**Semi-Centennial.**—The Fremont County Medical Society held a meeting November 1, at which a banquet was given in honor of Dr. Thomas G. Stephens, Sidney, who has just entered on his fiftieth year of medical practice.

**Northwestern Physicians Meet.**—At a meeting of the Northwestern Iowa Medical Association in Carroll October 26, Dr. Patrick J. Barry, Auburn, was elected president; Dr. A. L. Brooks, Audubon, vice-president; Dr. Giles C. Moorehead, Ida Grove, secretary, and Dr. Daniel J. Townsend, Lohrville, treasurer. In the evening a banquet was tendered the members of the association and the invited guests by Dr. Arthur L. Wright.

**Diphtheria.**—A number of country schools in Polk County are closed on account of the prevalence of diphtheria.—The schools of Anken and Elm Grove have been closed in an endeavor to check the spread of diphtheria, which has been prevalent in these towns.—There are several cases of diphtheria in Cedar Rapids.—As many as 30 cases have been reported to the city physician of Des Moines in one day.—Dubuque has diphtheria in almost epidemic form.

**Personal.**—The State Board of Health has elected Dr. Henry Albert director of the State Board of Health Bacteriologic Laboratory, Iowa City.—Dr. Robert D. Wilkins, Atlantic, was thrown violently against a seat on a train en route to Chicago October 16, breaking three ribs.—Dr. Alanson M. Pond, Webster City, has gone to Europe.—Dr. Nathaniel La K. Slamberg, Kimballton, has been appointed surgeon at the Pine Ridge Indian Agency, South Dakota.—Dr. Herbert M. Decker, Davenport, has been appointed assistant state bacteriologist.

**In the Courts.**—Mrs. Stiles, Atlantic, arrested for peddling medicines without license, plead guilty, paid the costs of the case, amounting to \$14.05, and took out the regular \$100 license.—Dr. Charles McKinnis, Ollie, charged with issuing prescriptions for liquor, has been placed under bonds of \$1,000.—Dr. James C. Smith, Woolstock, has been permanently enjoined from selling intoxicating liquor of any kind in violation of law in the town of Woolstock or in any other place within the eleventh judicial district. The costs and attorney's fees were taxed to the defendant.—"Dr." J. R. Baker, Odebolt, who plead guilty to using the mails to defraud by the sale of a medicine, has been sentenced to six months' imprisonment in the state penitentiary at Anamosa.—Dr. Palmer, Fort Dodge, has been adjudged an habitual user of drugs by Judge Richard and committed to the Cherokee State Hospital for two years.—In the malpractice suit brought against Dr. Pattison of Oelwein by Mrs. Ackerson, in which \$10,000 damages were asked, the jury rendered a verdict of \$100 for the plaintiff.

#### KENTUCKY.

**Medicine Vendor Fined.**—A patent medicine vendor was fined \$50 at Georgetown for selling medicines without a state license.

**Personal.**—Drs. Palmer G. Keency, Edward S. Wendt and Oscar A. Frickman have been elected district physicians for Newport.

**Physician Stabbed.**—Dr. Robert A. Irwine, Clay City, a well-known physician of Powell County, was stabbed several times by an ex-convict November 4 and is in a serious condition.

**Diphtheria** is prevalent in Hancock and the eastern part of Daviess County, and the schools at Panther Creek, Floral and several other places have been closed on account of the disease.

**New Hospital Started.**—Ground was broken November 5 for the foundation of the new Good Samaritan Hospital, Louisville, to be built by public subscription. Of the fund of \$50,000 required to complete the building on the plans proposed, \$26,500 is already in hand.

#### MISSISSIPPI.

**Personal.**—Dr. J. Hewlett, Meridian, quarantine inspector, has resigned.—Dr. William Neville has been appointed health officer of Macomb City.—Dr. Troy C. Sexton, Laurel, is reported to be critically ill.

**Marine-Hospital Records Burn.**—At a fire at Jackson October 2, the records of the United States Public Health and



Marine-Hospital Service, in custody of Passed Assistant Surgeon George B. Young, were totally destroyed. Surgeon Young suffered also a personal loss of \$1,000.

**Asks Large Appropriation.**—The board of trustees of the Mississippi State Insane Hospital, Jackson, has decided to ask the legislature for an appropriation of \$150,000 for the purpose of erecting new buildings and making necessary improvements. The hospital is now crowded to overflowing and the board desires to have a detached building erected for a hospital and for the treatment of tuberculous patients.

**To Examine into Insane Hospital Management.**—Governor Vardaman has appointed a commission to examine into the management of the state insane hospitals located at Jackson and Meridian, consisting of Drs. Vardaman S. McLellan, Canton; Donald P. Street, Vicksburg; Ernest Spiva, Sturgis; Jefferson D. Smythe, Greenville; James W. Gray, Jr, Clarksdale; C. H. Ramsey, Collins, and John W. Young, Grenada.

### MISSOURI.

**Personal.**—Dr. August Rhodes, Carthage, is critically ill at his home in that city.

**Smallpox Epidemic.**—Birchtree and the adjacent portion of Shannon County are suffering severely from a smallpox epidemic. There are reported to be at least 10 cases, and 4 deaths have occurred.

**Opposes Club Doctors.**—The Jackson County Medical Society adopted a resolution calling on all physicians engaged by lodges, societies and commercial institutions under contract prices, to resign at once under penalty of suspension from the society.

**Diphtheria.**—During the month of October 47 cases of diphtheria were reported in Kansas City, 14 less than on the corresponding day of 1904.—The board of health has ordered the fumigation of the Horace Mann and Linwood schools, in which districts the disease has been most prevalent.

**Patent Medicine Advertisements.**—The secretary of the St. Louis Medical Society has written to the city attorney of St. Louis, calling attention to a violation of city ordinances in the advertising of patent medicines. Some advertisements were characterized as obscene. The latter stated that the legislative committee of the society had appointed a committee consisting of Drs. George Homan, John Young Brown and Henry J. Scherck, to co-operate with the city attorney in enforcing a strict observation of the ordinances regarding advertising.

### NEW MEXICO.

**Hospital Society Organized.**—The citizens of Albuquerque, claiming that eastern and western physicians are in the habit of sending dying tuberculous patients to that city, have established an associated charity hospital for those at present in the city, and will engage in a determined effort to put a stop to the practice of sending the hopelessly ill to New Mexico in the future.

**Sanatorium to Open.**—The New Mexico Cottage Sanatorium, Silver City, is nearly completed and will be open for patients November 25. The institution will be under the personal management of Dr. Earl S. Bullock. It consists of two main buildings and fifteen separate cottages, each of which accommodates one patient. The institution will be devoted exclusively to the care and treatment of cases of laryngeal and pulmonary tuberculosis.

### NEW YORK.

**Hospital Sunday.**—The annual contribution obtained from city churches for the benefit of Ellis Hospital, Schenectady, October 22, amounted to \$1,962.41.

**Columbia Alumni Organized.**—On November 2 the Columbia Alumni Medical Association of Buffalo was organized, with Dr. Carlton R. Jewett, president; Dr. Arthur W. Hurd, vice-president, and Dr. Edwin L. Bebee, secretary and treasurer.

**New Hospital Dedicated.**—The new building erected and equipped by Mr. and Mrs. Frederick P. Proctor at Utica at a cost of about \$360,000, was formally dedicated and consecrated October 18. The hospital will accommodate 175 patients.

**Memorial Hospital Building.**—Mrs. G. D. B. Bonbright and Mrs. Robert Bartlett, daughters of the late James C. Hart, will erect a large addition to the Rochester City Hospital as a memorial to their father. The building will cost about \$50,000 and will be three stories in height.

**Medical Board Elected.**—Dr. Joseph B. Hulett has been elected president; Dr. J. LaT. Hanmer, vice-president, and Dr. Edwin M. Schultz, secretary and treasurer, of the medical

board of Thrall Hospital, at Middletown. The resignation of Dr. Edwin Fancher of the attending board was accepted and he was elected a member of the consulting board.

**Northern New York Physicians.**—The Medical Association of Northern New York met in Malone October 24 and elected the following officers: President, Dr. E. S. McClellan, Saranac Lake; vice-president, Dr. William C. Smith, Winthrop; secretary, Dr. Alfred G. Wilding, Malone, and treasurer, Dr. George H. Oliver, Malone. The association will meet in Malone next year.

**Visitors to State Hospital.**—The State Hospital, Buffalo, was visited October 23 by a royal commission of English visitors and philanthropists, who are making a tour of investigation of the institutions for the care and control of the feeble-minded in the United States. The commission was made up of W. B. Byrne, C.B., W. H. Dickinson, H. B. Donkin, F.R.C.P., J. D. Dunlop, F.R.C.P., and Mrs. Hume Pinsent.

**Diphtheria.**—Diphtheria is reported epidemic in Charlotte, and strict quarantine is being observed.—Public schools 59, 60, 64 and 65 of Brooklyn have been ordered closed pending official investigation of diphtheria which is prevalent in that section.—The public schools of Union Course have been ordered closed by the health department because the residents of that section would not allow the health inspectors to examine their children.

**Central New York Physicians.**—The Medical Association of Central New York held its thirty-eighth annual meeting in Buffalo October 24. Among the papers read was one on bony atrophy by Dr. Louis A. Weigel, Rochester, who as the result of his researches into the employment of x-rays, recently lost his right arm and three fingers of his left hand. The following officers were elected: President, Dr. David M. Totman, Syracuse; vice-presidents, Drs. William B. Jones, Rochester, and Lemuel L. Tozier, Batavia; secretary, Dr. Clarence A. Greenleaf, Rochester, and treasurer, Dr. William M. Brown, Rochester.

**Personal.**—Dr. Robert Frazer of the staff of the Riverside Accident Hospital, Buffalo, was operated on October 17 for appendicitis, and is reported as improving.—Dr. Max C. Breuer and family, Buffalo, returned from Europe October 21.—Dr. Fred M. Barney, Dolgeville, has received a government appointment in Cuba.—Dr. James E. O'Malley, Newburgh, who has been confined to his home for some time as the result of a broken patella, has resumed practice.—Dr. George H. Torney, first assistant physician at the State Hospital, Utica, has gone to California for a visit.—Dr. Douglas A. White, superintendent of the Hospital of the Good Shepherd, Syracuse, has resigned, to take effect December 1.—Bert E. Nelson has been appointed bacteriologist of the board of health of Binghamton.—Dr. Warren B. Stone has been appointed bacteriologist of Schenectady, vice Dr. Norman B. Saunders, removed from the city.—Dr. Henry H. Davidson, Northport, formerly coroner of Suffolk County, fell October 24 while walking across his office and fractured his hip.

### New York City.

**Home for Consumptives.**—Under the direction of the *Tribune* Sunshine Society, Dr. James S. Ennis is to establish a Home for Consumptives in Florida.

**New York Surgical Society.**—At the annual meeting of this society November 8 the following officers were elected: President, Dr. George Woolsey; vice-president, Dr. Joseph A. Blake, and secretary and treasurer, Dr. John A. Hartwell.

**Personal.**—Dr. William J. Robinson, editor of the *Medico-Pharmaceutical Critic and Guide*, has returned from Europe after an absence of nine months.—Drs. Murray M. Rarick and W. E. Lippold have been appointed house surgeons and Dr. E. J. Dorn, ambulance surgeon, at the Williamsburg Hospital.

**Signed False Death Certificate.**—Dr. George E. Morgan, who in July last gave a certificate of the death of Mamie Jeanette Thompson, certifying that she had died from tumor, pleaded guilty November 8 to having falsely signed a death certificate and was sentenced to ten days' imprisonment in the Tombs and to a fine of \$200.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended November 4, 363 cases of tuberculosis, with 150 deaths; 279 cases of diphtheria, with 22 deaths; 169 cases of measles, with 5 deaths; 77 cases of typhoid fever, with 11 deaths; 79 cases of scarlet fever, with 6 deaths; 9 cases of cerebrospinal meningitis, with 15 deaths, and 132 cases of chickenpox.

**Hospitals Benefit.**—A bazaar given at the Waldorf-Astoria on November 8 netted \$6,000 for the Hospital for Crippled



Children.—The late Miss Margaret A. Jones has left the Postgraduate, St. Luke's and the Presbyterian hospitals a bequest which will give to each institution more than \$200,000, the income of which is to be devoted to the care of poor patients.—The late John Inglis has left the Presbyterian Hospital \$1,000.—By the will of Rebecca M. St. John the Northern Dispensary of New York will receive \$3,000.

**Hospital News.**—The new wing of St. Vincent's Hospital, Manhattan, was formally opened November 1. The new building is seven stories high and has accommodation for 100 patients. It is fireproof and is thoroughly equipped.—Certificate of incorporation has been filed with the secretary of state by St. Joseph's Hospital, Far Rockaway, for the maintenance of a general hospital.—Bensonhurst Sanatorium Company has been incorporated in Brooklyn, with a capital stock of \$100,000, by Dr. Earl H. Mayne and others.—The new Washington Heights Hospital was formally dedicated October 15.

**Home Cure of Consumption.**—The College of Physicians and Surgeons, Columbia University, announces favorable results of a plan for the cure of tuberculosis which has been employed in an experimental way for the past two years. This plan consists in treating the patient at the clinic and his home. Advice is given both verbally and on printed slips, instructing him how to live a sanitary life, and medicine is furnished when necessary. Each patient is placed in the care of a visiting nurse, who reports to the physician the conditions found at the home. During the two years in which the plan has been in operation there have usually been about 100 cases under treatment at one time. During the past year 408 patients were treated and 2,746 visits were made by the nurse.

**Hospitals Wasteful.**—The report of the findings of the committee on hospital needs and hospital finances, which has been at work since March of this year, states that the private hospitals of New York are extravagant in the use of costly drugs and dressings and that they do not receive the support from charitable persons that their work deserves. This committee is composed of men of large hospital experience and responsibility, who suggest that there should be uniformity in keeping accounts and making reports of work done, as the public has a right to know that hospitals are run under the most economical basis consistent with efficiency in treatment. The committee also suggests that the hospitals co-operate and purchase coal "in cargo" and that by similar co-operation they might be able to compel the gas company to furnish gas at reduced rates; and also that a large saving would result from the joint purchase of material.

#### NORTH CAROLINA.

**The Prevalence of Disease.**—During September measles were reported in 8 counties, whooping cough in 18, scarlet fever in 14, diphtheria in 41, typhoid fever in 67, malarial fever in 39 and smallpox in 11.

**September Deaths.**—During September 214 deaths were reported in the state, equivalent to an annual death rate of 16.9 per 1,000. Diarrheal diseases are reported to have caused 39 deaths; consumption, 23; heart diseases, 15; typhoid fever, 13; brain diseases, 12, and malarial fever, 10.

**Society Entertained.**—The Buncombe County Medical Society, with a number of invited guests, including prominent members of the profession without the state, as well as distinguished members of the North Carolina profession, were the guests of Dr. James A. Burroughs at his home in Asheville, N. C., November 6.

**College Opens.**—The fourth annual opening of the medical department of the University of North Carolina took place at Raleigh September 15. The opening address was made by Dr. Hubert A. Royster, dean and professor of gynecology and abdominal surgery. The standard of preliminary education has been advanced. The senior class numbers 10. Dr. William DeB. MacNider has been transferred to the chair of anatomy in the department at Chapel Hill. He continues his instruction in physical diagnosis, however, in the work of the medical department. Dr. R. S. Stevens of Smithfield has been elected to the chair of clinical pathology; Dr. James W. McGee, Jr., Raleigh, advanced from lecturer to professor of pediatrics, and Dr. Robert S. McGeachy, Raleigh, made instructor in therapeutics and anesthetics. The first two years of preparatory work are done at the university proper in Chapel Hill.

#### NORTH DAKOTA.

**Postgraduate School Incorporated.**—The Sixth District Postgraduate Medical School of North Dakota has been incorporated at Bismarck.

**Personal.**—Dr. A. M. McDonald, Grand Forks, has been appointed coroner of Grand Forks County, vice Dr. Herbert W. Matthews, Emerado, resigned.

**North Dakota Medical College Opens.**—The Medical College of the University of North Dakota, Grand Forks, opened for the year September 26. The university laboratories, equipment and instruction have been so arranged that the B.A. degree of the institution will admit students to the junior year in the medical college.

#### OREGON.

**Personal.**—Dr. H. Volp, Pendleton, and family have moved to the East, where he will locate.

**Accident.**—Dr. Allan Welch Smith, Portland, formerly assistant quarantine physician of Baltimore, Md., recently met with a painful accident while hunting. His rifle was accidentally discharged, the ball passing through the palm of the hand.

**New Building for Willamette University.**—The new building for the medical department of Willamette University, Salem, is nearing completion and will be ready for occupancy about January 1. It will cost about \$15,000, nearly all of which has been subscribed by the people of Salem.

#### PENNSYLVANIA.

**Diphtheria Closes Schools.**—Two township schools near McDonald, the Robbs Run school and the Allegheny school, have been closed on account of diphtheria.

**Personal.**—Dr. J. Miller Hyson, Red Lion, landed at New York October 14 after a circumnavigation of the globe.—Dr. Frank P. McCarthy, Oil City, has taken a trip to Wyoming.—Dr. Frank B. Statler, Johnstown, who has been seriously ill with typhoid fever, is improving.—Dr. Robert G. Barekley, Milford, is recovering from a serious illness.

**Donation Day.**—At the hospital day exercises in St. Luke's Hospital, South Bethlehem, \$5,000 in cash was donated to the institution by Samuel Thomas of Hokendauqua.—At the donation day of Chester Hospital, October 19, great quantities of supplies were given to the institution and cash donations amounting to \$839.30 were also made.

**Hospital Endowed.**—Mrs. Mary Packer Cummings, Mauch Chunk, has agreed to give to the Robert Packer Hospital, which was named for her late brother, Robert A. Packer, Sayre, the income from certain real estate which will amount to more than \$3,000 a year, and has also agreed to deed to the hospital ground adjoining the institution when the extension of the institution demands it.

**Hospital Staff.**—The staff of the Good Samaritan Hospital, Lebanon, is now composed as follows: Chief of staff and consulting physician, Dr. William M. Guilford; attending physicians, Drs. William M. Guilford and Charles M. Strickler; attending surgeons, Drs. John Walter, John Beattie and Alfred S. Weiss; gynecologist and consulting surgeon, Dr. Samuel Weiss; radiologist, Dr. Alfred S. Weiss; eye, ear, nose and throat department, Drs. Frederick S. Kaufman and Warren F. Klein; dispensary physicians, Drs. J. W. Trabert and Harvey E. Maulfair.

#### Philadelphia.

**Bazaar for Hospital.**—The board of women visitors of the Hospital of the University of Pennsylvania will give a Christmas bazaar for the benefit of the hospital, in Horticultural Hall, on the afternoons and evenings of November 23-25.

**Free Public Lectures.**—The Ludwick Institute announces a course of free public lectures on "The Natural Sciences and Their Application."—A series of five lectures is to be delivered by Dr. Henry Skinner on entomology every Monday evening, beginning March 19.

**Sanatorium Dedicated.**—The dedication exercises of the Pennsylvania Sanatorium, a branch of the Battle Creek institution, were held October 31. Hon. Wilson H. Brown acted as chairman, and the dedicatory address was delivered by Dr. John H. Kellogg, Battle Creek, Mich.

**Personal.**—Dr. Nathan F. Mossell has been reinstated as medical director of the Frederick Douglas Hospital and Training School. The election of Dr. E. C. Howard as medical director was declared illegal on account of the failure to notify members of the board that an election was to be held.

**Hospital Association Election.**—The Hospital Association of Philadelphia, at its annual meeting October 27, elected officers for the ensuing year. The association now has a membership of 28. The advisability of providing for an exchange between hospitals as regards chronic patients was considered.



**Money for Health Department.**—The councils committee on public health and charities has recommended an appropriation of \$650,496 for the year 1906. Of this amount \$285,156 is required for the maintenance of the Philadelphia Hospital and \$80,140 for expenses of the office of director of public health and charities.

**Hospital Reports.**—The additional reports of the hospitals for October show that 58 patients were under treatment in the Kensington Hospital for Women; that 67 operations were performed, and that 36 new patients and 137 old patients were treated in the dispensary.—The report of the Medico-Chirurgical Hospital shows that 7,492 patients were treated.

**Reading Relief Report.**—The statement for the month of September, 1905, of the Philadelphia & Reading Relief Association shows an expenditure of \$23,009.40, out of which \$12,300 was paid for deaths and \$10,709.40 for disability. The number of deaths was 23, of which 12 were from accidental and 11 from natural causes; 1,109 new cases were reported.

**Internes Will Get Their Deposits.**—The fourteen physicians who occupied positions as internes at the Philadelphia Hospital in 1903 and who each paid a deposit of \$100, will receive their deposits as soon as the estate of the late superintendent of the hospital can be audited by the court. The deposit is required from each interne as a guarantee against loss by breakage of apparatus.

**Medical Inspection in October.**—The report of the division of medical inspection of the Bureau of Health for the month of October shows that 6,020 inspections were made, excluding schools; 506 fumigations were ordered, and 11 cases were presented for special diagnosis. The inspectors made 5,351 visits in the schools and excluded 877 children from attendance; 84 cultures were collected; 81 injections of antitoxin were given and 1,120 vaccinations were performed.

**Bequests.**—By the will of Sue M. Remak the German and Episcopal hospitals receive \$100 each.—By the will of Miss Marie E. Brasier St. Joseph's Hospital receives \$5,000 for a free bed in memory of Charles A. Brazier, and \$5,000 for a bed in memory of Elizabeth P. Brazier. She also bequeathes to the same institution certain real estate and moneys derived from other real estate. The will also devises \$10,000 to St. Vincent's Home and Maternity Hospital; \$3,000 to the Sisters of St. Francis for the maintenance and support of St. Mary's Hospital.—The Mount Sinai Hospital is devised \$100 in the will of the late George Finkelstein.

**Health Report.**—The deaths for the week aggregated 438. This is an increase of 44 over the number reported last week, and an increase of 15 over the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 6; whooping cough, 4; diphtheria, 9; tuberculosis, 57; cancer, 26; diabetes, 6; apoplexy, 14; heart disease, 41; acute respiratory disease, 42; enteritis, 19; Bright's disease, 46; suicide, 5; accidents, 25; marasmus, 9. There were 251 cases of contagious diseases reported, with 18 deaths, as compared with 178 cases and 17 deaths for the previous week, an increase of 73 cases of contagious disease for the week.

**Vital Statistics.**—The report of the division of vital statistics of the health bureau for October shows that 1,580 deaths, 2,800 births and 963 marriages were reported. The report of the division of milk inspection shows that 5,200 examinations were made aggregating 116,954 quarts, and that 508 quarts were condemned. There were made 937 microscopic and 5 chemical examinations. The report of the bacteriologic laboratory reveals that 775 diphtheria cultures were examined; 415 specimens of blood for typhoid fever; 950 specimens of milk were analyzed bacteriologically; 111 specimens of sputum were investigated, and 8 disinfection tests were performed. The report further shows that 2,513,700 units of antitoxin were distributed. The chemical laboratory reported 95 analyses.

#### UTAH.

**State Building Condemned.**—It is reported that one of the most costly of the buildings occupied by the State Mental Hospital, which was constructed only two years ago at a cost of \$30,000, has been condemned as unsafe and likely to collapse at any time.

**Health Officers Confer.**—At the session of the Association of Health Authorities of Utah, held in Salt Lake City, the following officers were elected: Dr. John S. Gordon, Ogden, president; Dr. Fred W. Taylor, Provo, vice-president; Horace Smith, Salt Lake City, secretary, and Dr. David O. Miner, Nephi, treasurer.

#### WISCONSIN.

**Smallpox in State Institution.**—On account of 10 cases of smallpox discovered among the students of the State Institute for the Blind, Janesville, the institution has been placed under strict quarantine.

**Diphtheria.**—Washington Harbor schools and churches have been closed and strict quarantine is being maintained on account of an epidemic of diphtheria on Washington Island.—The public school of Eland has been closed on account of diphtheria.

**Unlicensed Practitioner Arrested.**—Arthur Budan, Milwaukee, was arrested October 3 on a warrant sworn out by the secretary of the State Board of Medical Examiners, charged with practicing medicine without a license. Budan was arrested on a similar charge about a year ago. He claimed to be a graduate of the Harvey Medical College of Chicago, which is not recognized by the state board.

**Personal.**—Dr. John Van R. Lyman, Eau Claire, has returned from Europe.—Dr. J. Fremont Corbett, Weyauwega, has gone to Southern California for his health.—Dr. H. H. Williams, Sparta, has moved to Colorado.—Dr. Otto B. Bock, Sheboygan, has been appointed assistant surgeon of the Wisconsin National Guard, with the rank of first lieutenant, and has been assigned to the Second Infantry.—Dr. Thomas Fitzgibbon, Milwaukee, returned from Europe October 28.—Dr. John W. Coon has been made superintendent of the Milwaukee County Hospital, vice Dr. Ernest C. Grosskopf.

**Must Report Accidents.**—The new law, which went into effect November 1, provides that:

It shall be the duty of any physician to report any accident to any person whom he shall be called on to care for professionally when such person is thereby incapacitated for pursuing his usual vocation for a period of at least two weeks. The cause, nature, and results of such accident, the place where and the condition of the person at the time it occurred shall be fully described in the report of said physician. The returns of such accident shall be made by the physician and by the public officer, and the fees therefor and the penalties for non-compliance on the part of either the physician or the public officer, shall be the same as in cases of births and deaths.

#### GENERAL.

**Plague in Hawaii.**—Dr. Hobdy of the United States Public Health and Marine-Hospital Service reports 2 deaths from plague at Honolulu, October 30.

**Malaria on the Isthmus.**—It is reported that malaria is prevalent among the laborers on the canal and among the population of Colon and Cristobal. Among the greatest sufferers are the recently arrived laborers from Barbadoes and the West Indies.

**The Medical News Absorbed.**—It is announced that the A. R. Elliott Company has purchased the *Medical News* of New York City and will consolidate it with the *New York Medical Journal*, Jan. 1, 1906. It will be a regret to those who have appreciated the *Medical News* to have it disappear from the ranks of eastern journalism. It has been understood that since the removal of the *Medical News* to New York it has been gradually losing ground, a fact not at all due to any lack of able editorial supervision or good material furnished in its reading pages. The *Medical News* has stood for high-class journalism, and it is hoped that all its good features will be retained by the purchasers.

**Medicolegal Papers Wanted for International Congress.**—The committee in charge of the International Medical Congress, which will be held in Lisbon from April 19 to 26, 1906, has written asking for the contribution of papers on the following subjects and their medicolegal relations, and saying that as yet no titles of communications touching on any of these subjects have been received from this country:

The signs of virginity and defloration.  
Handmarks and finger prints.  
The mechanism of death by hanging.  
The value of bacteriologic examination of vulvo-vaginal discharges in the determination of venereal contagion.  
The signs of death by drowning.  
Ecchymoses.  
Spontaneous and criminal abortions.  
Blood stains.  
The relations between the seat of cerebral contusions and the point of application of the agent which produced them.  
Epilepsy.  
When is the induction of abortion permissible?  
The best legislation for the protection of the "medical secret."  
The effects of the civil and penal law toward the newborn living infant.  
Organization of medicolegal services.

Any who intend to take part in the discussions of this section, or to prepare papers on these or other subjects, should inform the secretary of the American committee, Dr. Ramon Guiteras, 75 West Fifty-fifth Street, New York.



**Women Nurses for the Navy.**—Surgeon-General Rixey advocates the employment of women nurses in the navy. The medical department of the army is provided with a corps of trained women nurses, and their adaptability to service conditions and efficiency in institutions under military control have been fully established. Their services, says Dr. Rixey, would be useful in the naval hospitals, insuring for the sick of the navy as careful nursing as is now given to the sick of the army. Women nurses would also be of value in teaching and training the men of the hospital corps, and, in the event of war, besides being utilized on hospital ships, they could, in large part, take the place of the men in the naval hospitals, thereby releasing the latter for service with the force afloat.

**Health Report of the Philippines.**—The report of the Board of Health of the Philippine Islands for July states that 644 children were born in Manila during the month, a birth rate of 34.49 per 1,000 inhabitants. Seven hundred and ninety-five deaths were reported; of these 747 were residents and the others transients. There were 140 deaths from convulsions of children under 5 years of age, and 107 from pulmonary tuberculosis. Diarrhea and enteritis caused 85 deaths of children under 2 years of age and 52 deaths of older individuals. There were 3 deaths from bubonic plague.

**Epilepsy Association to Meet.**—The fifth annual meeting of the National Association for the Study of Epilepsy, etc., will be held at the Academy of Medicine, 17 Forty-third Street, New York City, the afternoon and evening of November 29. All persons interested are invited. The program includes the following subjects and authors:

Reports on Progress in the Public Care of Epileptics in New Jersey, Dr. H. M. Weeks, Skillman; in Kansas, Dr. L. M. Perry, Parsons; in Texas, Dr. John O. Preston, Abilene; in Indiana, Hon. Ezra Mangtling, Washington; in Australia, Miss Alice Henry, England.

Organic Epilepsy, Drs. D. R. Brower, Chicago, and Morgan B. Hodskins, Palmer, Mass.

The Management of the Individual Epileptic, Dr. Edgar J. Spratling, Forsyth, Ga.

Value of Hydrotherapy in Epilepsy, Dr. Guy Hinsdale, Hot Springs, Va.

Can a Colony for Epileptics be Made Self-sustaining and, if so, How? Dr. Thos. C. FitzSimons, Wilkesbarre, Pa.

Blood Pressure Observations in Epilepsy, Dr. Edward A. Kennedy, Palmer, Mass.

Epileptic Automatism, Dr. Edward Cowles, Boston.

Traumatic Psychic Epilepsy, Dr. Pearce Bailey, New York City.

Hospital Care and Treatment of Epileptics. Dr. Arthur O. Morton, Palmer, Mass.

Cases will be reported by Dr. Everett Flood, Palmer, Mass. Secretary of the association and by Drs. Matthew Woods, Philadelphia; N. B. Ross, Sonyea, N. Y.; W. P. Spratling, Sonyea, N. Y., and W. G. Chase, Boston.

**Yellow Fever News.**—In all, New Orleans has had 3,400 cases of yellow fever, with 451 deaths, a mortality of 13.26 per cent. At the present time there are only four or five cases under treatment.—Vicksburg reports that its epidemic expenses were between \$15,000 and \$20,000.—At Pensacola conditions are greatly improved, less than 40 cases being under treatment. In all, Pensacola has had over 560 cases, with some 80 deaths, a death rate of 14.28 per cent.—Charleston, S. C., on October 30 abandoned its quarantine.—One of the most serious sequels of the epidemic in New Orleans is now to the fore. On November 5 it was announced that Dr. Joseph Holt, who for years was president of the Louisiana Board of Health, had issued a circular letter making very grave charges against Dr. E. Souehon, president of the Louisiana State Board of Health, and Dr. Quitman Kohnke, health officer of New Orleans. Their conduct of the early days of the epidemic is directly attacked and their motives are impugned. This scandal threatened to raise its head during the epidemic. Now it evidently must be thrashed out to a finish, until reputations are cleared of suspicion. It is very unfortunate and yet full investigation will for all parties be preferable to repetition of gossip and scandal.—Later and more reliable reports from Natchez indicate that the city did not have a non-intercourse system, but a rigid exclusion of people from infected points, others being admitted by certificate. Almost from the beginning the Adams County Medical Society appointed a committee of seven, which acted as an advisory board of health.—On November 10, though nearly all quarantines are down, the press published a queer story of the detention by the Texas authorities of Miss Dorothy Tennant and her entire "College Widow" Company. They are said to have been appearing in towns that have not been infected, and, according to the story, a strong protest is being made, especially at the prospect of the company living a week in quarters recently tenanted by negroes and Italians.—Havana, Cuba, on November 10 reported 2 cases of yellow fever, both of the patients being alleged to be recent arrivals from New York. Evidently a different explanation will come later.

## FOREIGN.

**The Chair of Obstetrics at Edinburgh.**—The curators of Edinburgh University have appointed Sir Halliday Croom to succeed Professor Simpson as teacher of obstetrics in that institution.

**Supposed Yellow Fever Scare in Cuba.**—A case supposed to be yellow fever was reported from Guantanamo; the patient died and the autopsy showed gastric ulcer and chronic nephritis, but no lesions of yellow fever.

**The Medical Mayor of Lyons Appointed Governor of Madagascar.**—Dr. Augagneur has been mayor of Lyons for several years and has made a fine record for his administration. His innovations and the energy with which he conducts affairs have long won for him in Lyons the title of the "emperor." We learn that he has recently accepted the position of governor of Madagascar.

**The Virchow Monument in Berlin.**—The memorial to Virchow is to be erected on the Karlsplatz, and \$16,000 are already in hand for the purpose. Nearly half this amount was raised by subscription, the municipality making up the balance. Prizes of \$600, \$400 and \$200 have been appropriated for the most suitable design for the memorial, the artists being left unrestricted as to style and size.

**Congress of Criminal Anthropology.**—The sixth Italian Congress of Criminal Anthropology is to convene at Turin April 26, 1906. There will be an exhibition in connection with the congress, and the friends and admirers of Professor Lombroso are planning a public manifestation in his honor on the occasion. A committee has the matter in charge; the chairman is Professor Pagliani, president of the medical faculty of the University of Turin.

**Ewald Festival Number of Berliner klin. Wochenschrift.**—Prof. C. A. Ewald has been connected as editor with the *Berliner klinische Wochenschrift* for twenty-five years, sharing the editorial responsibility with Prof. C. Posner. On the occasion of his sixtieth birthday, October 30, a special festival number was issued dedicated to him. It contains over 132 pages, while the weekly issue is generally from 18 to 26 pages. Twenty-eight articles are contributed by friends or former pupils and thirteen more by workers in the hospital under his charge. The dedication refers to the beautiful German custom of celebrating in this way the decennial anniversaries of its scientific leaders. It is assumed that a scientist and instructor will be most pleased and proud to be presented with the evidences of serious work done by those who stand the closest to him, scientific communications from his pupils who have received the stamp of his own spirit. "Such a *Festschrift* or *Festnummer* reflects the personality and the worth of the one thus honored better than any other tribute that could be offered." Two at least of the articles in the *Festnummer* are from America.

**Italian Congress for Internal Medicine—Phenic Acid Treatment of Tetanus.**—This congress (the fifteenth) was held at Genoa, October 24-29. The chief subjects were: "Etiology of Malaria," "Anemia of Parasitic Origin," and "Surgical Treatment of Gastrointestinal Affections." Great interest was aroused by the favorable statistics presented by Baccelli in regard to his method of treating tetanus by subcutaneous injections of phenic acid. Behring has reported a mortality of 44 per cent. with his serum, and Tizzoni 30 per cent. with his, but Baccelli's method has had a mortality of only 10 per cent. in 200 cases, while Woods has had only one death among 34 patients thus treated. Babes' research on dogs, rabbits and pigeons has confirmed the positive action of phenic acid on experimental tetanus. Baccelli proclaims that phenic acid is not only a powerful moderator of the reflexes, but also an excellent antithermic and good antitoxie. The perfect tolerance for it of the most seriously affected patients he regards as a proof that it is needed. "The tolerance for the remedy is directly proportional to the indication for it." He never gives more than 1 gm. or at most 1.5 gm. per day. Queirolo's experience has confirmed Baccelli's. He gives .5 gm. to .7 gm. a day and has never noted any inconveniences nor the slightest kidney disturbance. Ascoli stated that he had kept close watch of all the cases treated by Baccelli, and had become thoroughly convinced of the value of the treatment. As much as .5 gm. should be given without hesitation, pushing to .7 or .8 gm. if necessary, supervising the urine. He added that, when used in treating neuralgia and myalgia, doses up to 0.1 gm. a day should be currently injected. Its success in these affections was what impelled a trial in tetanus. All the speakers agreed that, except in the fulminating or extremely rapid cases of tetanus, the phenic-acid treatment gives results superior to those realized by any other technique to date.



# THE SENN BANQUET

TESTIMONIAL BANQUET AND PRESENTATION OF MEDALLION AND LOVING CUP—A SPLENDID TRIBUTE OF  
PRAISE AND ESTEEM FROM THE MEDICAL PROFESSION

A testimonial banquet was given to Dr. Nicholas Senn, Chicago, at the Auditorium Hotel, Saturday evening, Nov. 11, 1905.

There was an attendance of 686, and from forty to fifty physicians, approximately, were turned away because proper accommodations could not be provided for them—a matter of great regret to the committee of arrangements. There were representatives present from twenty states. Dr. William A. Evans, Chicago, acted as toastmaster. Messages of congratulations were read from several prominent physicians in different parts of the United States, who regretted their inability to attend this notable event.

Dr. Joseph D. Bryant, New York City, presented a gold medallion to Dr. Senn, miniature replicas of which were distributed among those in attendance. On one side of the medallion was a likeness of Dr. Senn; on the other the inscription: "To Nicholas Senn, the Master Surgeon, from his Fellows, November 11, 1905." Dr. L. G. Nolte, Milwaukee, Wis., presented Dr. Senn with a silver loving cup, given by his former private pupils.

Between the speeches were interspersed musical selections by the Swiss Quartette and singing by the banqueters, Dr. Norval H. Pierce leading. Drs. Fernand Henrotin, Daniel R. Brower, Jacob Lang, and William E. Quine related very amusing and interesting anecdotes about Dr. Senn. Addresses were made by Drs. Witherspoon and McMurtry.

The occasion was a memorable one. Good fellowship prevailed, and Dr. Senn, the center of attraction, received a tremendous ovation.

## This Banquet One of a Series.

Toastmaster Evans, after calling the meeting to order, said that, in a certain sense, this testimonial to Professor Senn is not the result of Chicago effort, but represents the spontaneous sentiment of the profession of the Mississippi Valley. Viewing the matter from that standpoint, he said there was no reason why a word of welcome should not be said to any man within the sound of his voice. But, on the other hand, there are many men who have journeyed to Chicago from afar in order to add their testimony, their presence, and their words to the testimonial that is given by those who live in the city of Chicago. In behalf of the central committee of arrangements, he extended a welcome to the visiting physicians from the Mississippi Valley, from the eastern seaboard, from the gulf states, and from the states of the Pacific. While Professor Senn is the beneficiary of this meeting, we are no less gainers by it. This is a series of banquets started some years ago, and

there are hundreds present who remember how a similar banquet served to sustain the declining years of a man whom the profession all honored, and there are those who every day make acknowledgement of the fact that at that selfsame moment this section of the country was made a better land to live in and a better land in which to practice medicine. Dr. Evans referred to the banquets given to Christian Fenger and

N. S. Davis, after which he introduced Dr. Joseph D. Bryant, New York City, who presented Dr. Senn with the gold medallion.

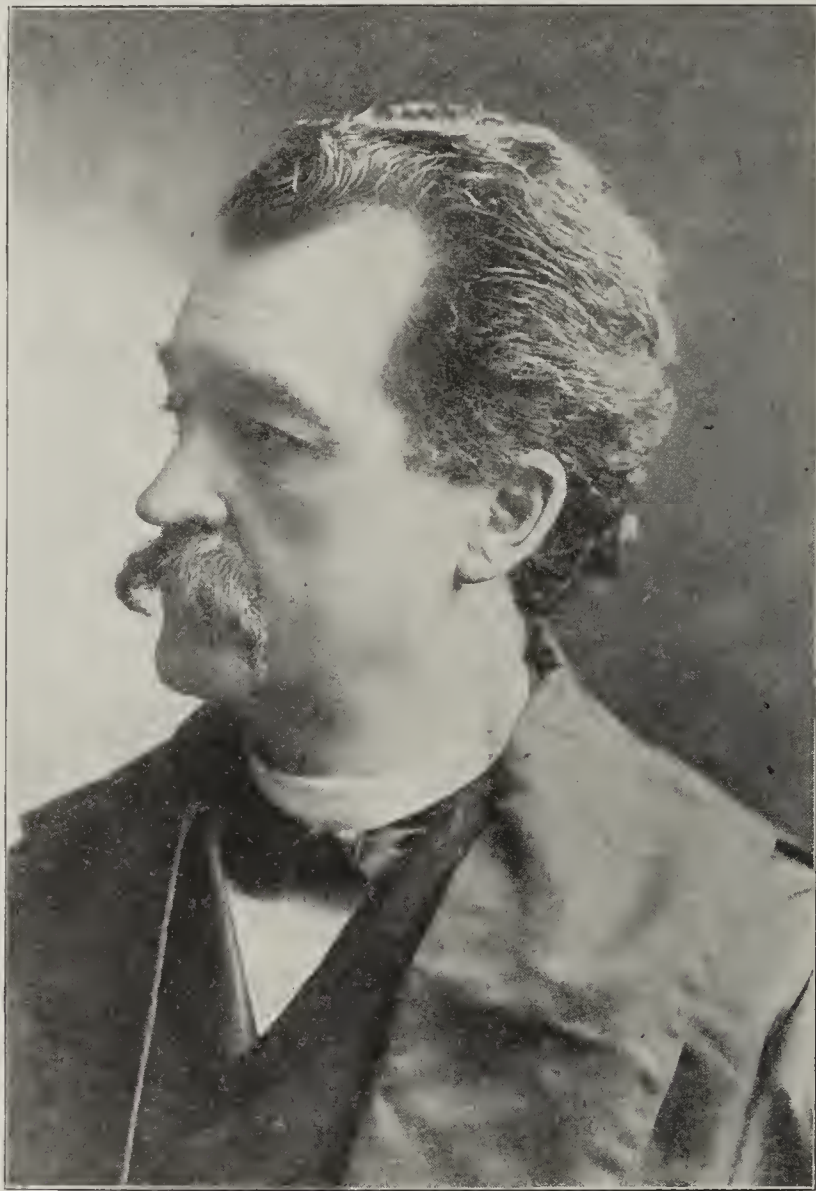
## Presentation of the Medallion.

DR. BRYANT said that he knew of nothing that gives him greater comfort than to be able to fulfill the humble position that he was requested to do, the opportunity of spanning, by a few sincere, honest words of affection and praise, the brief interval between the bestowal of a token of distinguished regard and its acceptance by Dr. Senn, whom the profession so much delight to honor. It is fitting that one whose professional career began about the time of that of Dr. Senn should be chosen for this gracious purpose; one whose effort to emulate his achievements added much to the total of his own; one whose respect for him, begotten of years of friendly intercourse, has deposited in his heart a regard for him that knoweth no abatement.

Along the pathway of medical endeavor for nearly a quarter of a century noted and enduring examples illustrative of the wise forethought and generous co-operation are seen

in the cause of advanced standing. Instances of his surgical technique foretell notable results that now proclaimed great surgical triumphs. The organization of military medicine, of no recent date, has yielded an abundant harvest because of his early conceptions and continued earnest culture. The books made by him, those given by him, will testify, respectively, to the bright sunshine of active life and the somber shadow of recollection. Human afflictions, which before his time yielded only to indomitable fate, now yield to the outcome of the inspiration of his teaching and the handiwork of his technique. Long-deferred and defeated hopes are now revealed in the happy opportunities contributed by the saving graces of reparative wisdom and skill of which he has given the lion's share.

Dr. Senn is classed a distinguished man, a distinguished surgeon—distinguished not only because of his surgical attainments, but because of the high standard of his ethical instincts and ennobling attributes of a generous nature. May I not, at this time, as a humble servant of joyous friends, present to him, in their behalf, this beautiful symbol of the love and respect which they cherish for him; the likeness of a sterling





man, embossed on pure gold, and bearing the legend of true distinction? (Here Dr. Bryant presented Dr. Senn with a gold medallion, the audience arose, waved handkerchiefs and cheered lustily.)

He expressed the hope that this token, emblematic of that which is noblest in human character, may serve to admonish doubting souls to strive for the highest and best of aims. (Applause.)

#### Loving Cup Presented.

The next speaker introduced was Dr. L. G. Nolte, Milwaukee, Wis., who presented a silver loving cup in behalf of Dr. Senn's former private students, and in so doing said: "As a token of love and affection, Dr. Senn, I present you with this cup (handing the cup to Dr. Senn), the emblem of love, and wish you a great many more years of usefulness, and trust that you may spend the afternoon of your life in good health." (Applause.)

At this juncture, at the suggestion of a South Dakota physician, who was unable to be present, the toastmaster requested the audience to rise and drink a toast to the late Christian Fenger, the teacher of Nicholas Senn, which was accordingly done.

#### Dr. Senn's Reply.

The toastmaster then introduced Dr. Senn, who was enthusiastically received. He rose amid the waving of handkerchiefs and hearty cheers, and when quiet was restored said, among other things: "I accept from your hands, Dr. Bryant, this beautiful medallion, and assure you that I would rather accept it from your hands than from the hands of any one I know of. I appreciate this tribute. I value it much more highly than I would a decoration by a royal hand." (Applause.) "That means the judgment of one man. This is an expression of love, respect and good wishes of the noblest of all professions." (Applause.) "There are two things in this world, Dr. Bryant, that have always an intrinsic value; one is labor, the other is gold. This medallion will be cherished and highly valued as a souvenir of this memorable gathering. It is to me an evidence that my labors, arduous as they may have been, have not been entirely in vain. I thank you, Dr. Bryant, for your presence and for your eloquent address. I wish also to thank Dr. Nolte as the spokesman of my old students, and wish to tell him that I may have been in the past a somewhat severe master; I may have seemed to my students unjust at times (cries of never, never). But let me say to you I have never asked a student to do what I would not do myself." (Applause.)

Dr. Senn then read a poem, the text of which, he said, was taken from one of the most famous of the ancient philosophers—Seneca. The title of the poem was "For Life is Short, and Art is Long."

In conclusion, Dr. Senn said: "Let me return my heartiest thanks, first, to the members of the committee of arrangements, and particularly to Dr. Evans. I thank all the gentlemen who have come from afar to bring me tributes from the profession. I thank the Swiss choir for their sweet songs, and I thank each one of you for your presence, for your friendship, for your respect, and for your good wishes." (Loud and prolonged applause.)

#### Mayo on "American Surgery."

The next speaker was DR. WILLIAM J. MAYO, Rochester, Minn., who spoke to the toast, "American Surgery." Dr. Mayo said that there is a surgery in this country that is so typical and characteristic that it can be said to be "American surgery." There was a time in which it did not exist. Twenty years ago the surgery of the United States of America was the surgery of the world, based on clinical observation and a most inadequate pathologic foundation. The early contributions to surgery in America did not come entirely from the seacoast cities, although great and noteworthy were they, but they came from this country as a whole. Bigelow, Mott, Morton and many others from the seacoast did most notable things; but we must recollect that Sims, Battey and McDowell came from the South; and we had, in Indianapolis, Bobbs, who did the first operation on the gall bladder, and Connors, who first removed the stomach in the Mississippi Valley. We had Woleott, of Milwaukee, who operated first on the kidney; then we had

Brainard and Gunn and Edmund Andrews, of Chicago. But twenty years ago we were behind in surgical pathology. Here and there men of European education had come to this country and established spheres of influence for scientific work. The work of Fenger, of Chicago; Lange, of New York, and others, while to a certain extent local in character, was of incalculable benefit to the people of the entire country. The mass of the profession of this country twenty years ago were behind the Germans in pathology. Germany in scientific surgery had passed us by. The mass of the profession in this country did not know the position they occupied until Senn's "Principles of Surgery" was published. (Applause.) This book was popular. It had its effect in diffusing knowledge and surgery in this country became instantaneous. This book did more to teach the profession how little they knew and how much that was being accomplished than any one thing that had happened. Following this were notable contributions to surgical pathology by Roswell Park, by John Collins Warren, of Boston, and others. At about this time there also appeared the great book of Gerster. It taught the profession how to apply the new knowledge which Senn, Fenger and others had brought forth. There appeared at this time, too, a series of letters from abroad, published in THE JOURNAL of the American Medical Association, and written by Senn, describing in clear-cut, forcible language the conditions as they actually existed in German clinics. These letters told the profession what they did, what they thought, and how they did it. Dr. Senn had written up the work of these men in such an absorbing and fascinating style that every man felt as though he himself had visited these clinics, and had seen these men work. These letters were a stimulus for every medical student, who desired to do surgery, to go to Germany or be drawn there as by a magnet. Every man who did surgery felt he could not do justice to his patients if he had not been abroad, and consequently he slaved and saved for the purpose. Multitudes of American students went to Germany, so that there were more medical students in Germany than in all the other foreign countries combined. American surgery was soon Germanized in the United States under the leadership of Dr. Senn. In ten years America was Germanized in surgical pathology. American students, who had attended German clinics, brought back what was best in each one and all of this was grafted on American surgery. In America, more than in any other place, there is now taught what may be called a living pathology. The scientific German accepts little that does not emanate from the deadhouse or does not come from the laboratory.

Another characteristic in this country which has been carried out more thoroughly than in any other place abroad is this: We see borderline cases in which the surgeon and physician must work in harmony. Joint investigations are necessary. Therefore, the laboratory, postmortem examinations, the physician, the surgeon, must enter into the making of scientific surgery.

At a time when American surgery was relatively held in contempt, Senn, by a series of brilliant articles on practical subjects, such as pancreatic disease, branchial cysts, etc., made the surgeons of the world respect America. It is fitting, therefore, that the profession should acknowledge their indebtedness to this man, whose work has been an inspiration to ambitious Americans, and to know that by hard work a reputation can be built up in the West that is durable, and for this and many things more the profession owes a lasting debt to Senn. (Applause.)

#### Tribute from the Army.

COL. PHILIP F. HARVEY, U. S. A., the next speaker, said that Dr. Senn has not only made substantial surgical contributions to the medical service of the army, but has extended many favors and rendered many kindnesses to the members of his corps.

#### Tribute from American Medical Association.

DR. LEWIS S. MCMURTRY, Louisville, Ky., said that Dr. Senn does not belong to the profession of Chicago; he belongs to no section, to no locality, but to the profession of the entire country. Besides, he is an American. (Applause.)

In the great advances that have been made in medicine and surgery during the past twenty years, surpassing in their extent and progress all that has been known in medical science



in any century, the most potent influences in this great advancement have been the medical societies and medical press. They have played an important part in the stimulation of original research, in the development of individuality, and in the diffusion of knowledge. The local medical societies have grown both in size and number; they have become great post-graduate schools from which no pupil ever graduates.

There are medical societies which have varied functions. There are national associations for the development of special work, as the American Surgical Association, American Gynecological Society, etc. These societies are performing various important functions in the advancement of medical science in this country. They are limited in membership, and consist almost exclusively of authors, teachers and men who are known to be in the advanced rank as authorities in the various departments of medicine and surgery.

The American Medical Association has a function almost exclusively its own, almost unique, among the medical organizations in this country, namely, to reach the great body of the profession, to federate into one great organized body, through county, district and state societies, the organization of the profession which will be in accord with the spirit of the age, as seen in every department of human endeavor, and to diffuse knowledge among the members of the profession by the publication of a great weekly medical journal, and to bring the profession into close touch, so that great work can be accomplished. It has been the special purpose of this association to reach after the country doctors, the village practitioner, physicians in small towns, and bring them in close touch with one another. This association has, within the past few years, grown to be one of great power, and yet its work has scarcely begun. There are 130,000 physicians in the United States who need to be brought into the district and county societies and within the influence of this great national organization. In this work there have been leaders, among them the founder of the association—Dr. Nathan Smith Davis. Furthermore, through Dr. Senn's achievements, his influence has been felt in the association for years. His contributions to the Section on Surgery and Anatomy have been valuable. The association is the largest body of medical men in the world, and is destined to accomplish work along lines that will be more and more appreciated by the mass of the profession than any other medical society in existence. (Applause.)

#### The Medical Man Versus the Surgeon.

DR. JOHN A. WITHERSPOON, Nashville, Tenn., after captivating the audience by the stories he told in his droll way, said that if medical men had made diagnoses early enough surgeons would have saved thousands of patients they have lost. Since there is so much abdominal surgery being done, there is ample excuse for internists to make diagnoses as early as possible, because surgeons have so frightened the appendix that it curls up behind the cecum and internists can not find it. (Laughter.)

After brief reference to the late Spanish-American war, Dr. Witherspoon said that, should war threaten this country again, the boys of the fathers who wore the gray, and the boys of the fathers who wore the blue, will march side by side, and they will want no man as their surgeon more eagerly than Nicholas Senn. (Applause.) He is not only a great surgeon, but he has shown his patriotism. He is a good citizen. He is ever ready, on any and all occasions, to bare his face to the bayonet of any foe that may threaten this grand and glorious country. Therefore, the profession doubly owes him honor. (Applause.)

#### Dr. Senn as a Military Surgeon.

DR. CHARLES ADAMS, Chicago, representing the Association of Military Surgeons, said that this organization has now many hundreds of members with one heart, and this beats for its founder, Dr. Nicholas Senn. He recounted Dr. Senn's contributions to military surgery and the active part he has taken in the deliberations of that body.

#### Dr. Senn as a Traveler.

DR. DANIEL R. BROWER, Chicago, spoke of Dr. Senn as a traveling companion and of the trip he took with him around the world via Siberia. He referred to Dr. Senn's international reputation as a surgeon and to the manner in which he

was royally and hospitably entertained by distinguished surgeons and physicians in the various cities they visited. Dr. Senn proved himself to be a very agreeable and delightful traveling companion, and their trip proved to be one triumphal march.

#### Dr. Senn in American Medical Literature.

DR. CHARLES A. L. REED, Cincinnati, said that Dr. Senn had contributed largely and liberally to the value and quality of the great mass of surgical literature. In the last twenty years his contributions to American medical literature amount to more than 250 entries, 238 of which relate to surgical subjects. In the list of titles are 12 printed volumes, some large, some small, but all of them important, many of them being used as text-books, others as standard works of reference in the majority of medical schools in the western hemisphere. Of these contributions a number have been translated into foreign languages. The range of subjects embraces practically every department of surgery. For the most part, these contributions are absolute protocols of original investigation. They cover, among other subjects, the surgery of the pancreas, stomach, the intestines, gall bladder, etc. Dr. Reed commended Dr. Senn's example in broad citizenship, a life actuated by an altruistic spirit of personal self-sacrifice, by a spirit of patriotism. (Applause.)

#### Dr. Senn as a Thorough Diagnostician.

DR. WILLIAM E. QUINE, Chicago, spoke of his association with Dr. Senn as an interne at the Cook County Hospital. He has seen Dr. Senn as an interne engaged in controversy with the members of the attending staff of that institution—men who represented the strongest elements of the profession—in relation to problems of diagnosis, and he has seen him floor every one of them, though boy he was. The intensity of his earnestness, the thoroughness of detail in his methods, impressed Dr. Quine and inspired him in his work. It was something of a liberal education to be under the inspiration and guidance of such a man. He investigated thoroughly every case from the very foundation to the most minute and most intricate of its ramifications. Dr. Quine said that he was sure that Dr. Senn will close his professional career as he began it and as he has lived it through every day of his life—with sincerity, with intelligence, with dignity of effort, and with an eye single to the best interests, the greatest happiness of his fellow-men, and the greatest advancement of his brethren in the medical profession. (Applause.)

The singing of "Auld Lang Syne" brought the proceedings to a close.

#### CANADA.

**Less Typhoid in Montreal.**—During the whole of 1904 there were 574 cases of typhoid fever in Montreal. The disease has not been near so prevalent during 1905. In the first ten months of the year there were 294 cases, whereas in the same time in 1904 there were 493.

**Clergyman Arrested for Practicing Medicine.**—The Rev. W. J. Arnold, a well-known Anglican clergyman of Margaret's Bay, Nova Scotia, has been prosecuted by the medical board of Nova Scotia for practicing medicine without a license. The prosecution was not successful, as the minister did not collect any fees.

**More Applicants for License.**—Twenty-five candidates presented themselves before the examining board of the College of Physicians and Surgeons of British Columbia at the annual examinations held a few weeks ago. Eighteen were successful. The number of applicants for license was greatly in excess of any former year.

**Hospital Additions.**—A deputation waited on the Ontario government last week, asking aid to provide additional accommodation for the Gravenhurst and Toronto Free Consumption Hospitals. The former has room for 25 patients, the latter for 100.—The new Alexandra Hospital, Montreal, for contagious diseases among Protestants, will be ready for patients in January.—The Western Hospital, Toronto, is erecting a new addition at a cost of \$10,000.—A sanitarium for consumptives in Quebec province is shortly to be erected. A company has been organized and has received 500 acres of land from the Quebec government.—Niagara Falls, Ont., is to have a hospital at a cost of \$17,000.



## Pharmacology

### Resolutions on Patent Medicines.

The Wabash County Medical Society at a recent meeting adopted the following resolutions, which were sent us by Dr. G. C. Kingsbury:

**WHEREAS:** The traffic in patent medicines is attended with serious consequences to the individual, often imperiling and destroying life, and,

**WHEREAS:** The science of medicine is, by the use of such nostrums prevented from extending its beneficent work, and,

**WHEREAS:** The many publications of our country devote so much space to the advertising of such harmful mixtures containing so large a percentage of alcohol, and,

**WHEREAS:** You have undertaken a fearless, energetic and practical exposure and attack on this enemy to life and science, we, therefore,

**Resolve:** That the science of medicine owes you our sincere appreciation for so truthful a presentation of the evils, deceptions, and the facts regarding this baneful industry to the public, and advertisers of these nostrums, and,

**Resolve:** That the medical journals should assist in destroying this traffic which is so inimical to the progress of medical science, and lives of the people, and

**Resolve:** That this society send these resolutions to THE JOURNAL of the American Medical Association, and the *Illinois State Medical Journal*.

### BIOPLASM.

#### A Concrete Instance of the Manner in Which Remedies Supposed to be Ethical Are Exploited to the Laity.

The accompanying advertisement has been appearing in the newspapers for some time, and its resemblance to the old advertisement of the "Rev. Joseph T. Inman" of lost-manhood fame, aroused the curiosity of a member of THE JOURNAL force—or it may have been an innate desire to keep in touch with things. In any event, he, as a layman, answered the advertisement, and, in due time, an imitation typewritten letter was received. In it was rehearsed the old, old story of how the writer had for years

**LOCOMOTOR ATAXIA CURED!**

After suffering for ten years the tortures that only an ataxic can know, Mr. E. P. Burnham of Delmar, N. Y., has been relieved of all pain and restored to health and strength and the ability to resume his usual pursuits by an easily obtained and inexpensive treatment, which any druggist can furnish. To any fellow-sufferer who mails him a self-addressed envelope, Mr. Burnham sends free the prescription which cured him.—[Adv.]

Enjoins Prison Goods in Europe.

[SPECIAL T. RECORD HERE]

ELGIN, ILL.

COURT

suffered the tortures, etc., how he had tried all kinds of physicians, all kinds of patent medicines, serums, various climates, etc., until he heard of the virtues of the medicines which finally cured him. Accompanying the circular letter was a sheet containing the prescription, with full directions. But it was not the "Rev. Joseph T. Inman" trick in all its apparent simplicity; it was Inman improved. Here is the first prescription: "Bioplasm (Bower) series No. 235a, No. 212, in sealed bottles; 2½ oz., containing about 175 tablets, costs \$1.50." Then followed the directions. Farther down the sheet is the second preparation, which is: "Sal Lithin. Take a heaping teaspoonful," etc. Bioplasm! Sal Lithin!! Certainly we have seen these names before. "These prescriptions may be had of almost any druggist. If not, send to the manufacturers, Bioplasm Company, 100 William Street, New York."

Of course! We pick up certain medical journals and find that "Bioplasm" and "Sal Lithin" are "ethical proprietary" preparations, put up for physicians' use, for are they not advertised in medical journals? We wondered whether or not the Bioplasm Company was aware of the generous work that E. P. Burnham is doing, but this wonder only lasted ten days, for then came a letter from the company itself, with circulars, testimonials and other literature, all appealing directly to the credulous laymen, and especially to those suffering from that terrible affliction, locomotor ataxia. Of course, the literature said that bioplasm is endorsed by physicians, and, in fact, testimonials from medical men were among the literature sent to this layman by the company.

We shall have something more to say about this wonderful cure-all, bioplasm, in the immediate future.

### The Great American Fraud, Liquozone.

SAMUEL HOPKINS ADAMS.

Twenty years ago the microbe was making a great stir in the land. The public mind, ever prone to exaggerate the importance and extent of any new scientific discovery, ascribed all known diseases to microbes. The infinitesimal creature with the mysterious and unpleasant attributes became the leading topic of the time. Shrewdly appreciating this golden opportunity, a quack genius named Radam invented a drug to slay the new enemy of mankind, and gave it his name. "Radam's Microbe Killer" filled the public prints with blazonry of its lethal virtues. As it consisted of a mixture of muriatic and sulphuric acids with red wine, any microbe which took it was like to fare hard; but the ingenious Mr. Radam's method of administering it to its intended prey, via the human stomach, failed to commend itself to science, though enormously successful in a financial sense through flamboyant advertising. . . .

In time some predaceous bacillus, having eluded the "killer," carried off its inventor. His nostrum soon languished. To-day it is little heard of, but from the ashes of its glories has risen a mightier successor, "Liquozone." Where twenty years ago the microbe reveled in publicity, to-day we talk of germs and bacteria; consequently Liquozone exploits itself as a germicide and bactericide. It dispenses with the red wine of the Radam concoction, and relies on a weak solution of sulphuric and sulphurous acids, with an occasional trace of hydrochloric or hydrobromic acid. . . . Yet the Liquozone Company is not a patent medicine concern. We have their own word for it.

"We wish to state at the start that we are not patent medicine men, and their methods will not be employed by us. . . . Liquozone is too important a product for quackery."

The head and center of this non-patent-medicine cure-all is Douglas Smith. Mr. Smith is by profession a promoter. He is credited with a keen vision for profits. Several years ago he ran on a worthy ex-piano dealer, a Canadian by the name of Powley (we shall meet him again, trailing clouds of glory in a splendid metamorphosis), who was selling with some success a mixture known as "Powley's Liquefied Ozone." This was guaranteed to kill any disease germ known to science. Mr. Smith examined into the possibilities of the product, bought out Powley, moved the business to Chicago, and organized it as the Liquid Ozone Company. Liquid air was then much in the public prints. Mr. Smith, with the intuition of genius, and something more than genius' contempt for limitations, proceeded to catch the public eye with this frank assertion: "Liquozone is liquid oxygen—that is all."

The object of the company was not to make money, but to succor the sick and suffering. They say so themselves in their advertising. For some reason, however, the business did not prosper as its new owner had expected. A wider appeal to the sick and suffering was needed. Claude C. Hopkins, formerly advertising manager for Dr. Shoop's Restorative (also a cure-all) and perhaps the ablest exponent of his specialty in the country, was brought into the concern, and a record-breaking campaign was planned. This cost no little money, but the event proved it a good investment. President Smith's next move showed him to be the master of a silver tongue, for he persuaded the members of a very prominent law firm who were acting as the company's attorneys to take stock in the concern, and two of them to become directors. These gentlemen represent, in Chicago, something more than the high professional standing of their firm; they are prominent socially and forward in civic activities; in short, just the sort of people needed by President Smith to bulwark his dubious enterprise with assured respectability.

In the Equitable scandal there has been plenty of evidence to show that directors often lend their names to enterprises of which they know practically nothing. This seems to have been the case with the lawyers. One point they brought up: was liquozone harmful? Positively not, Douglas Smith assured them. On the contrary, it was the greatest boon to the sick in the world's history, and he produced an impressive bulk of



testimonials. This apparently satisfied them; they did not investigate the testimonials, but accepted them at their face value. They did not look into the advertising methods of the company; as nearly as I can find out, they never saw an advertisement of liqozone in the papers until long afterward. They just became stockholders and directors, that is all. They did as hundreds of other upright and well-meaning men had done, in lending themselves to a business of which they knew practically nothing.

While the lawyers continued to practice law, Messrs. Smith and Hopkins were running the Liquozone Company. An enormous advertising campaign was begun. Pamphlets were issued containing testimonials and claiming the soundest of professional backing. Indeed, this matter of expert testimony, chemical, medical, and bacteriologic, is a specialty of liqozone. To-day, despite its reforms, it is supported by an ingenious system of pseudo-scientific charlatanry. In justice to Mr. Hopkins, it is but fair to say that he is not responsible for the basic fraud; that the general scheme was devised, and most of the bogus or distorted medical letters arranged, before his advent. But when I came to investigate the product a few months ago, I found that the principal defense against attacks consisted of scientific statements which would not bear analysis, and medical letters not worth the paper they were written on. In the first place, the liqozone people have letters from chemists asseverating that the compound is chemically scientific. . .

[Mr. Adams goes on to say that, on investigation, he found that the technical indorsement obtained by this company, when analyzed, failed to bear out the claims of liqozone as a medicine. Inquiries conducted along medical lines revealed the fact that the published indorsements were either misstatements or a garbled version of what really had been written about liqozone. One physician, a hospital interne, who was paid to make bacteriologic tests of the germicidal power of liqozone, stated that it had shown such powers, but that the product was worthless medicinally. The last half of his report was suppressed; only the first half was printed under the designation of "Report made by the ——— Hospital." Another statement was said to have been published by a Dr. "W. H. Myers" in "The New York Journal of Health." Dr. Myers and that journal, Mr. Adams says, are purely fictitious. Another testimonial purporting to come from a physician was found to have been written by a veterinary surgeon. The Suffolk Hospital and Dispensary in Boston, through its president, Mr. Smith, testified in glowing terms to the remedial value of liqozone, but the hospital medical authorities know nothing of liqozone and never prescribed it. One testimonial was found to be genuine, having been written by a "cancer-cure" specialist, who stated that the letter was "not solicited." Letters addressed by Mr. Adams to various institutions in Chicago elicited the information that it either had never been used or that it had been experimented with for external application or that a few private patients had purchased it, but on no recommendation from the physicians. Attempts made personally to peruse the "overwhelming number of medical indorsements" failed, the officials of the company claiming that these indorsements were "in the press" and could not be shown.]

. . . In a pamphlet issued by the company and since withdrawn occurs this sprightly sketch:

"Liquozone is the discovery of Professor Pauli, the great German chemist, who worked for twenty years to learn how to liquefy oxygen. When Pauli first mentioned his purpose men laughed at him. The idea of liquefying a gas—of circulating liquid oxygen in the blood—seemed impossible. But Pauli was one of those men who set their whole hearts on a problem and followed it out either to success or the grave. So Pauli followed out this problem, though it took twenty years. He clung to it through discouragements which would have led any lesser man to abandon it. He worked on it despite poverty and ridicule," etc.

Alas for romance! The scathing blight of the legal mind descended on this touching story. The lawyer-directors would have none of "Professor Pauli, the great German chemist," and liqozone destroyed him, as it had created him. Not totally destroyed, however, for from those rainbow wrappings, now dissipated, emerges the humble but genuine figure of our old acquaintance, Mr. Powley, the ex-

piano man of Toronto. He is the prototype of the Teutonic savant. So much the liqozone people now admit, with the defence that the change of Powley to Pauli was, at most, a harmless flight of fancy, "so long as we were not attempting to use a name famous in medicine or bacteriology in order to add prestige to the product." A plea which commends itself by its ingeniousness at least. . . . Just as to peruna all ills are catarrh, so to liqozone every disease is a germ disease. Every statement in the new prospectus of cure "has been submitted to competent authorities, and is exactly true and correct," declares the recently issued pamphlet, "Liquozone, the Tonic Germicide"; and the pamphlet goes on to ascribe, among other ills, asthma, gout, neuralgia, dyspepsia, goiter, and "most forms of kidney, liver, and heart troubles" to germs. I don't know just which of the eminent authorities who have been working for the Liquozone Company fathers this remarkable and epoch-making discovery. It might be Professor Pauli, or perhaps the sulphuric-acid-proof firm of Dickman & Mackenzie. Whoever it is ought to make the definite facts public, in the interests of humanity as well as their own. Monuments of discarded pill boxes will celebrate the liqozone savant who has determined that dyspepsia is a germ trouble. The discovery that gout is caused by the bite of a bacillus and not by uric acid is almost as important an addition to the sum of human knowledge as the determination of a definite organism that produces the twinges of neuralgia, while the germ of heart disease will be acclaimed with whoops of welcome from the entire medical profession. The old claim is repeated that nothing enters into the production of liqozone but gases, water, and a little harmless coloring matter, and that the process requires large apparatus and from eight to fourteen days' time. I have seen the apparatus, consisting of huge wooden vats, and can testify to their impressive size. And I have the assurance of several gentlemen whose word (except in print) I am willing to take, that fourteen days' time is employed in impregnating every output of liquid with the gas. The result, so far as can be determined chemically or medicinally, is precisely the same as could be achieved in fourteen seconds by mixing the acids with the water. The product is still sulphurous and sulphuric acid heavily diluted, that is all. . . .

[Mr. Adams further states that of the chemists and bacteriologists employed by the Liquozone Company there is not one who will risk his professional reputation on the simple and essential statement that liqozone taken internally kills germs in the human system. Under the direction of Mr. Adams, and in the presence of Dr. Gradwohl, representing the Liquozone Company, a series of guinea-pig tests was made by the Lederle Laboratories. The result was that liqozone was found to have absolutely no curative effect, but did, when given in pure form, lower the resistance of the animals which had been inoculated with anthrax, diphtheria and tuberculosis, so that they died a little earlier than those not treated. Dr. Gradwohl was satisfied of the fairness of the tests and declared that, in his opinion, the tests had proved the total ineffectiveness of liqozone as an internal germicide. Mr. Adams says that these experiments showed further that liqozone may decrease the chances of the patient's recovery with every dose that is swallowed, but certainly would not increase them. Mr. Adams continues as follows:]

Since the announcement of this article, and before, *Collier's* has been in receipt of much virtuous indignation from a manufacturer of remedies which, he claims, liqozone copies. Charles Marchand has been the most active enemy of the Douglas Smith product. He has attacked the makers in print, organized a society, and established a publication mainly devoted to their destruction, and circulated far and wide injurious literature (most of it true) about their product. Of the relative merits of "Hydrozone," "Glycozone" (Marchand's products), and "Liquozone," I know nothing; but I know that the Liquozone Company has never in its history put forth so shameful an advertisement as the one reproduced on this page [which appeared in *THE JOURNAL*, Sept. 23, 1905, p. 936], signed by Marchand, and printed in the *New Orleans States* when the yellow-fever scare was at its height.

And Hydrozone is an "ethical" remedy; its advertisements are to be found in reputable medical journals.—Excerpts from *Collier's Weekly*, Nov. 18, 1905.



# MEMBERSHIP OF THE PROPRIETARY ASSOCIATION OF AMERICA

COPIED FROM THE TWENTY-THIRD ANNUAL REPORT

The following is a list of the members of the Proprietary Association of America, taken from the "Twenty-Third Annual Report" of that body:

**ALLCOCK MANUFACTURING CO., NEW YORK.**  
Allcock's Porous Plasters.  
Brandreth's Pills.  
Allcock's Corn and Bunion Shields.

**ALTA PHARMACAL CO., ST. LOUIS.**  
Melachol.  
Phaselln.  
Rheumagon.

**THE ANASARCIN CHEMICAL CO., WINCHESTER, TENN.**  
Anasarcin Tablets.  
Anasarcin Elixir.

**ANDREWS MANUFACTURING CO., BRISTOL, TENN.**  
St. Andrew's Wine of Life Root.  
St. Andrew's Nerve Builder.  
Aunt Dinah's Egg Cream Liniment.

**THE ANGLO-AMERICAN DRUG CO., NEW YORK.**  
"Mrs. Winslow's Soothing Syrup."

**ANHEUSER-BUSCH BREWING ASSOCIATION, ST. LOUIS, MO.**  
"Malt-Nutrine."

**THE ANTIKAMNIA CHEMICAL COMPANY, ST. LOUIS, MO.**  
Antikamnia preparations.

**ARMSTRONG CORK CO., PITTSBURG, PA.**  
Corks and Cork Specialties.

**DR. SETH ARNOLD MEDICAL CORPORATION, WOONSOCKET, R. I.**  
Arnold's Cough-Killer.  
Arnold's Anti-Bilious Pills.  
Arnold's Soothing and Quieting Cordial.

**ASCHENBACH & MILLER, PHILADELPHIA.**  
H. H. H. Medicine.  
Mishler's Bitters.  
Phila. Bird-food Company's Preparations.

**THE ATHLOPHOROS CO., NEW HAVEN, CONN.**  
Athlophoros.  
Athlo-Tablets.  
Athlo-Ointment.

**J. C. AYER CO., LOWELL, MASS.**  
Ayer's Sarsaparilla.  
Ayer's Hair Vigor.  
Ayer's Cherry Pectoral.

**THE BARKER, MOORE & MEIN MEDICINE CO. (INC.) PHILADELPHIA.**  
Barker's Horse, Cattle and Poultry Powder.  
Barker's Nerve and Bone Liniment.

**BEGGS MANUFACTURING CO., CHICAGO.**  
Beggs' Blood Purifier.  
Beggs' Cherry Cough Syrup.  
Beggs' Diarrhoea Balsam.

**THE R. T. BOOTH COMPANY, ITHACA, NEW YORK.**  
Hyomel Catarrh Cure.  
Mi-o-na Dyspepsia Cure.

**THE BRADFIELD REGULATOR CO., ATLANTA.**  
The Mother's Friend.  
Bradfield's Female Regulator.

**THE J. W. BRANT CO., LTD., ALBION, MICH.**  
Wheeler's Nerve Vitalizer.  
Kirk's Kidney Tea.  
Brant's Balsam.

**L. M. BROCK & CO., LYNN, MASS.**  
Mrs. Dinsmore's Cough and Croup Balsam.  
Mrs. Soule's Eradicator.

**FREDERICK BROWN COMPANY, PHILADELPHIA.**  
Frederick Brown's Essence of Jamaica Ginger.  
Mutter's Cough Syrup.

**JOHN L. BROWN & SON, BOSTON.**  
Brown's Bronchial Troches.  
Brown's Camphorated Saponaceous Dentifrice.  
Brown's Vermifuge Comfets.

**LYMAN BROWN, NEW YORK.**  
Seven Barks.  
Globe Pills.  
Peptic.

**BROWN MANUFACTURING CO., GREENVILLE, TEN.**  
Ramon's Liver Pills and Tonic Pellets.  
Ramon's Tonic Regulator.  
Ramon's Nerve and Bone Oil.

**II. E. BUCKLEN & CO., CHICAGO.**  
Dr. King's New Discovery.  
Electric Bitters.  
Bucklen's Arnica Salve.

**JOSEPH BURNETT COMPANY, BOSTON.**  
Cocaine.  
Flavoring Extracts.  
Kalliston.

**DR. W. S. BURKHART, CINCINNATI.**  
Vegetable Compound.

**ALBERT L. CALDER, PROVIDENCE, R. I.**  
Calder's Saponaceous Dentine.

**THE CALENDULINE CO., CHICAGO.**  
Lowry's Calenduline Dressing.  
Lowry's Eye Tonic.

**CALIFORNIA FIG SYRUP CO.**  
Syrup of Figs.

**J. W. CAMPION & CO., PHILADELPHIA.**  
Wishart's Pine Tree Tar Cordial.  
Wishart's Pine Tree Tar Plasters.  
Aithene Skin Soap.

**W. D. CARPENTER CO., CHICAGO.**  
Nutritone.  
Poultritone.

**CARTER MEDICINE CO., NEW YORK.**  
Carter's Little Liver Pills.  
Carter's Little Nerve Pills.  
Carter's Iron Pills.

**CENTRAL VIAVI CO., KANSAS CITY, MO.**  
Distributors of the Viavi Preparations in Nebraska, Iowa, Kansas, and Missouri.

**THE CENTAUR COMPANY, NEW YORK.**  
Castoria.  
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CAPITAL DRUG CO., AUGUSTA, ME.  
 Dr. Kinsman's Heart Tablets.  
 Dr. Kinsman's Complexion Wafers.  
 Dr. Kinsman's Asthma Remedy.

CAPUDINE CHEM. CO., RALEIGH.  
 Hick's Capudine.  
 Hick's Castoline.  
 Dr. Nagle's Cough Cure.

CAWTHON-COLEMAN CO., SELMA, ALA.  
 Lenoir's Eczema Cure.  
 Henry's Magic Relief.  
 Henry's Antiseptic.

CRUTCHFIELD-TOLLESON CO., SPARTANSBURG, S. C.  
 Red Warrior Liniment.  
 Fe-No-Pep-Zone.  
 Taka-Tonic.

CYSTOGEN CHEM. CO., ST. LOUIS.  
 Cystogen.  
 Cystogen Aperient.  
 Cysto-Lithia.

DAGGETT & RAMSDELL, NEW YORK.  
 Daggett & Ramsdell's Perfect Cold Cream.  
 Headache Cologne.  
 Perfect Cold Cream Soap.

D. D. D. CO., CHICAGO, ILL.  
 D. D. D. Remedy.  
 Fruit Froth.  
 Dennisal Dermic Dissolvent.

W. P. DIGGS & CO., ST. LOUIS.  
 Dr. Classe's German Remedy.  
 Dr. Classe's Cough Syrup.  
 Gay-U-Ba.

B. A. FAHNESTOCK CO., PITTSBURG.  
 B. A. Fahnestock's Vermifuge.  
 Dr. Harris' Summer Cordial.  
 Dr. Harris' Cramp Cure.

FINLAY, DICKS & CO., LTD., NEW ORLEANS.  
 Chillifuge.  
 Mul-en-ol.  
 Liver Ac.

S. B. GOFF'S SON & CO., CAMDEN, N. J.  
 Goff's Cough Syrup.  
 Goff's Herb Bitters.  
 Goff's Oil Liniment.

THE LESTER H. BREENE CO., MONTPELIER, VT.  
 Greene's Warranted Syrup of Tar.  
 Greene's Neu-Rol Pills.  
 Greene's Corn Cure.

THE HALLIER PROPRIETARY CO., BLAIR, NEB.  
 Barb Wire Liniment.  
 Pain Paralyzer.  
 Sarsaparilla and Burdock Comp.

HALLOCK-DENTON CO., NEWARK, N. J.  
 Clinton's Cough Syrup.  
 King Liniment.  
 Hart's Liver Pills.

HARRISON & ROTH CO., EVANSTON, WYO.  
 Harrison's Op. Antidote.

HENRY HEIL CHEM. CO., ST. LOUIS.  
 Borobenphene.  
 Glycobenphene.  
 Diamond Eczema Cure.

THE HERB MEDICINE CO., SPRINGFIELD, O.  
 Lightning Hot Drops.  
 Lightning Laxative Quinine Tablets.  
 Laxative Horse, Cattle and Poultry Powders.

HERMIT REMEDY CO., CHICAGO.  
 Hermit Salve.  
 Hermit Gastrene.  
 Hermit Purifica.

B. F. JACKSON & CO., INDIANAPOLIS.  
 Brazillian Balm.  
 Toxicola Tablets.  
 Renal Tea.

THE ANDREW JERGENS CO., CINCINNATI.  
 Woodbury's Facial Preparations.  
 Jergens' Pumiss Soap.  
 Tonka-Talpa Soap.

KATHARMON CHEM. CO., ST. LOUIS.  
 Hagee's Cordial of Cod Liver Oil Compound.  
 Katharmon.  
 Antipuralgos.

L. W. LEITHHEAD DRUG CO., DULUTH.  
 Leithhead's Vet. Remedy.  
 Leithhead's Saker Kur.  
 Leithhead's Headache Cure.

THE DR. J. H. McLEAN MED. CO., ST. LOUIS.  
 Liver and Kidney Balm.  
 Strengthening Cordial.  
 Volcanic Oil Liniment.



MCNEIL MEDICINE CO., HARRISBURG.  
McNeil's Pain Exterminator.  
Keller's Catarrh Cure.  
McNeil's Consumption Cure.

MORGAN & ALLEN, STEPHEN DEMBY,  
SUCCESSOR, NEW YORK.  
Constitution Water.  
Constitution Life Syrup.

P. NEUSTAEDTER & CO., NEW YORK.  
Dr. S. Sillsbee's External Pile Remedy,  
Anakesis.  
St. Bernard Vegetable Pills (Krauter-  
Pellen).

ALLEN S. OLMSTED, LE ROY, N. Y.  
Allen's Foot Ease.  
Mother Gray's Austrian Leaf.  
Mother Gray's Sweet Powder.

SOLOM PALMER, NEW YORK.  
Perfumes and Sachets.  
Toilet Articles and Soap.  
Palmer's Lotion and Soap.

THE PENN CHEMICAL DRUG CO.,  
PITTSBURG.  
Carboline.  
Seven Seals.  
Elixirine.

J. J. PIKE & CO., BOSTON, MASS.  
Pike's Centennial Salt Rheum Salve.

R. PRETZINGER & BRO., DAYTON, O.  
Pretzinger's Catarrh Balm.  
Cough Bush.

F. AD. RICHTER & CO., NEW YORK.  
Anchor Pain Expeller.  
Anchor Congo Pills.  
Anchor Sarsaparillian.

THE ROESSLER & HASSLACHER CHEM.  
CO., NEW YORK.

MARTIN RUDY, LANCASTER, PA.  
Rudy's Pile Suppositories.  
Dean's French Female Pills.  
Dean's Vaginal Suppositories.

S. T. W. SANFORD & SONS, LONG  
ISLAND CITY.  
Dr. Sanford's Liver Invigorator.

SHERROUSE MEDICINE CO., NEW OR-  
LEANS.

Dr. Tichenor's Antiseptic Broncho-da.  
J. T. SHUPTRINE, SAVANNAH.  
Tetterine and Tetterine Soap.

THOMAS SISSON & CO., HARTFORD.  
Griswold's Family Salve.  
Hartford Smelling Salts.

THOMPSON BOTTLE COMPANY, GAS  
CITY, IND.  
Bottles.

THE TONSILINE CO., CANTON, O.  
Tonsiline.

DR. J. F. TRUE & CO., AUBURN, ME.  
Dr. True's Elixir.  
Dr. True's Worm Wafers.  
Dr. True's Horse Worm Powder.

THE TURCK CO., BROOKLYN, N. Y.  
Turck's Comp. Emulsion.  
Dr. Cole's Catarrh Cure.

GEO. J. MALLAU, NEW YORK.  
Crème Simon.  
Ache Allay.  
Carabana Water.

WALTER M. WILLET, SAN FRANCISCO.  
Wakelee's Camelline.  
Camelline Soap.

WINCHESTER & CO., NEW YORK.  
Winchester's Family Pills.  
Cough Cordial.  
Pile Suppositories.

THE M. A. WINTER CO., WASHINGTON.  
Nature's Health Restorer.

WYTENBACH CHEM. CO., EVANS-  
VILLE, IND.  
Pruni Heroin.  
Yerba-Quinia.

ZOA-PHORA CO., KALAMAZOO, MICH.  
Zoa-Phora.

## Marriages

ELMER E. EVANS, M.D., to Miss Hazel V. Camp, both of East Oakland, Cal., October 24.

FRANCIS WELSH, M.D., Hospital, Ill., to Miss Lena Ackerman of Yorkville, Ill., recently.

THOMAS ELLIOT BUCK, M.D., to Miss Lulu T. Tillewein, both of St. Louis, November 1.

THOMAS D. PALMER, M.D., Canon City, Colo., to Mrs. Emma Baily Sherrill, November 8.

T. EDWARD BAILLY, M.D., to Miss Stella Fortmann, both of San Francisco, November 15.

THOMAS E. HOXSEY, M.D., to Miss Leila Posey, both of Spokane, Wash., November 7.

EDWARD BARR, M.D., Rome, Ky., to Miss Annie Ellis of Masonville, Ky., November 2.

CHARLES RENEAU ANDREWS, M.D., to Miss May Waldo, both of Atlanta, Ga., November 8.

JAMES HOUSE BUTE, M.D., to Miss Claire Robinson, both of Houston, Texas, November 8.

PAUL LANGE CORT, M.D., to Miss Mary Reeder Scudder, both of Trenton, N. J., November 16.

J. H. ALESHIRE, M.D., to Mrs. Addie Miller, both of Plainville, Ill., at Palmyra, October 31.

RUSSELL J. SHULL, M.D., Hugo, I. T., to Miss Virginia Claggett of Marlboro, Va., November 1.

HOMER THRALL JOY, M.D., to Miss Elizabeth Van Buren, both of New York City, November 9.

THOMAS P. WEST, M.D., Bedford City, Va., to Miss Sallie C. Ford of Lynchburg, Va., November 1.

LOAMIN J. SMITH, M.D., Ridge Springs, S. C., to Miss Lucile Provence of Tuskegee, Ala., October 31.

GEORGE WINSLOP LAWTON, M.D., to Miss Susie Schmiedling of the City of Mexico, November 11.

THOMAS MEARES GREEN, M.D., to Miss Emma Perrin West, both of Wilmington, N. C., November 16.

CLARENCE MAXFIELD FRYE, M.D., Rock Falls, Ill., to Miss Birdie Ferris, of Sterling, Ill., November 7.

C. BERNARD VOIGT, M.D., Mattoon, Ill., to Miss Pearl Warner of Shelbyville, Ill., at Chicago, November 6.

HENRY WALTER GIBBONS, M.D., San Francisco, to Miss Hazel Noonan of Los Angeles, Cal., November 15.

BURNLEY LANKFORD, M.D., Norfolk, Va., to Miss Henrietta E. Grant, at Charlottesville, Va., November 8.

WILLIAM H. MORGAN, M.D., Keatchie, La., to Miss Lillioire C. Decker of Spottsylvania County, Va., November 8.

WALTER PHILIP EIDMANN, M.D., to Miss Cora E. Jackson both of St. Louis, Mo., at Belleville, Ill., November 8.

SAMUEL EVANS WATKINS, M.D., to Miss Mary Leontine Campbell, both of Washington, D. C., November 2.

SAMUEL PEACHY LATANÉ, M.D., to Miss Elizabeth Faulkner Shaw of Marco, Fla., at Valdosta, Ga., November 2.

WILLIAM K. NEWTON, M.D., Paterson, N. J., to Miss Cornelia Ridgely Hunt of Washington, D. C., November 15.

HERBERT LEE KNEISLEY, M.D., Westminster, Md., to Miss Daisy Sophia Bester, at Hagerstown, Md., November 9.

JOHN CHARLES MACGILL, M.D., Catonsville, Md., to Miss Annie Campbell Gordon Thomas, at Baltimore, November 8.

## Deaths

George Benson Dunmire, M.D. Jefferson Medical College, Philadelphia, 1865, a member of the American Medical Association, the Medical Society of the State of Pennsylvania and once its treasurer, Philadelphia County Medical Society, Pathological Society of Philadelphia and Obstetrical Society of Philadelphia; hospital steward of the One Hundred and Twenty-fifth Pennsylvania Volunteer Infantry in the Civil War, died at his home in Philadelphia, October 31.

George W. Hudspeth, M.D. St. Louis Medical College, 1878, a prominent physician of Little Rock, Ark., a member of the American Medical Association, American Public Health Association, Arkansas Medical Society, and Pulaski County Medical Society; ex-member of the Arkansas State Board of Health, died at St. Joseph's Hospital, Memphis, Tenn., October 29, after a prolonged illness from septicemia following an operation on the kidney, aged 54.

Samuel E. Bibby, M.D. Howard University Medical Department, Washington, D. C., 1883, colonel and surgeon general of Idaho, a member of the American Medical Association and of the Association of Military Surgeons of the United States; for several years physician at the Lapwai Indian reservation; regimental surgeon in the Idaho National Guard through the Cocur d'Alene riots, died at his home in Grangeville, Idaho, November 3, aged 52.

Alexander Powe Hall, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1859, of Mobile, Ala., surgeon in the Confederate service throughout the Civil War, and one of the volunteer physicians who served through the yellow fever epidemic in Memphis, Tenn., in 1878, died at the Providence Infirmary, Mobile, October 22, from injuries received in a street car accident the day before, aged 69.

William Henry Borden, M.D. University of Buffalo Medical Department, 1849, a member of the American Medical Association, the oldest member of the Wisconsin Medical Society; surgeon of the First Wisconsin Volunteer Heavy Artillery in the Civil War; for many years a member of the board of visitors of the State University, died at his home in Milton, Wis., from senile debility, October 30, aged 81.

Cornelius N. Lyman, M.D. Transylvania University Medical Department, Lexington, Ky., 1843, a member of the American Medical Association; from 1883 to 1887 a member of the General Assembly of Ohio, and especially identified with the interests of the various benevolent institutions of the state, died at his home in Wadsworth, Ohio, October 24, aged 86.



Frederick Templeton Zabriskie, M.D. College of Physicians and Surgeons in the City of New York, 1895, formerly of Phoenix, Ariz., but for two years a practitioner of Pittsfield, Mass.; a member of the Berkshire District Medical Society, and a young surgeon of great promise, died at his father's home in New York City, from pneumonia, November 4, after an illness of two weeks, aged 34.

Elias L. Bissell, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1861, surgeon of the Twenty-second and afterward of the Forty-fourth New York Volunteer Infantry in the Civil War, died at his home in Buffalo, N. Y., November 1, from heart disease, aged 72.

Alfred N. Marion, M.D. McGill University Medical Department, Montreal, 1864, surgeon in the army during the Civil War, agent at the Tulalip Indian Reservation, Wash., in 1887, and thereafter clerk of the United States Court in Walla Walla and a practitioner in Seattle, died suddenly at his home in Seattle, October 20, from nephritis, aged 65.

Hal Walker Manson, M.D. University of Nashville and Vanderbilt University medical departments, Nashville, Tenn., 1867, a Confederate veteran, in 1897 a member of the Texas legislature, died at his home in Rockwall, Texas, October 27, after an illness of several weeks, aged 64.

Helen Frances Warner, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, a graduate of Vassar College in 1867, one of the pioneer women physicians of Detroit, died at her home in that city October 23, after an illness of six years, aged 62.

J. B. Bouchard, M.D. University of the Victoria College, Coburg, Ont., 1877, for twenty-five years physician to the east division of the Montreal police force, died at his home in that city November 6, from disease of the throat, after an illness of two years, aged 49.

George W. Kemp, M.D. Charity Hospital Medical College, Cleveland, Ohio, 1863, assistant surgeon of the One Hundred and Thirteenth Ohio Volunteer Infantry in the Civil War, died at his home in Marseilles, Ohio, October 24, after a long illness, aged 83.

Lafayette Charles Loomis, M.D. University of Georgetown Medical Department, Washington, D. C., 1863, of Winthrop Heights; Washington, D. C., one of the founders of Adelphian Academy, Brockton, Mass., died at Frederick, Md., October 17, aged 81.

Clarence B. McClure, M.D. Kentucky School of Medicine, Louisville, 1871, formerly assistant physician at the Central Indiana Hospital for the Insane, Indianapolis, died at his home in Jeffersonville, Ind., October 28, from disease of the liver, aged 57.

Anthyme S. Menard, M.D. University of Vermont Medical Department, Burlington, 1888, whose injury October 19 by a runaway horse was noted in THE JOURNAL of October 28, died from his injuries October 20, at his home in Holyoke, Mass.

James Herbert Austin, M.D. Toronto University, 1893, formerly of Kansas City, Mo., and El Paso, Texas, died at his home in Toronto, November 5, from tuberculosis, after an illness of six years, aged 34.

Morris B. Gerberich, M.D. Pennsylvania, 1887, president of the Lebanon (Pa.) common council, died at his home in Lebanon, Pa., after a short illness, from intussusception of the bowel, November 1, aged 44.

Charles G. McKinley, M.D. Starling Medical College, Columbus, Ohio, 1852, for many years a practitioner of Olathe, Kan., died at his home in Kansas City, Mo., October 24 from senile debility, aged 84.

Edward E. French, M.D. Pennsylvania, 1887, of Trenton, N. J., died in St. Francis' Hospital, Trenton, October 20, from nephritis, after an illness of four years, aged 49.

Carlos Wilcox, M.D. Des Moines, 1887, died at his home in Huron, S. D., October 2, from cerebral hemorrhage, after a long illness, aged 67.

John Frank Lane, M.D. St. Louis, 1889, of Linn, Mo., was drowned while attempting to ford a flooded creek near his home, October 24.

Joseph P. Gregory, M.D. University of Louisville Medical Department, 1873, died suddenly at his home in Gainesville, Ark., October 16.

Penfield B. Goodsell, M.D. Vermont Medical College, Woodstock, 1852, died at his home in Roxbury, Boston, October 24, aged 70.

Charles T. Weatherly, M.D. Atlanta (Ga.) Medical College, 1874, died at his home in Benton, Ala., October 23, aged 53.

## Miscellany

### THE DEMAND OF THE SOUTH FOR FEDERAL CONTROL OF QUARANTINE.

The following excerpts are from editorials that have recently appeared in newspapers of the southern states. To these are added quotations from a few northern papers. We comment editorially on the subject on page 1576.

#### Alabama.

"With a rational but thorough national quarantine law, with the government health department in full control, we might expect fairness and intelligence in carrying out and enforcing its provision. . . . The ability of the federal government to handle such matters is universally recognized, and the ability of local governments to combat the foe is suspected if not entirely scouted. . . . After all objections have been proposed and considered there remains the plain fact that the health and lives of millions of people should be among the first consideration of a government of and for all the people. If that can only be assured by a national law—and that appears evident—then there should be no more objection to such law."—*Birmingham Advertiser*.

"The hope is that the marine-hospital doctors can wholly eliminate the disease in New Orleans before frosts fall. If they can do that public sentiment will demand that interstate and international quarantine be placed in the hands of the federal government, thus doing away with the rivalry between states, with all commercialism, in a matter pertaining to health and life. The public health outranks trade at every step. The *Atlanta Journal* joins the increasing ranks of those who demand federal control of quarantine. Public sentiment is rapidly crystallizing in all the cotton states in a demand for federal control of quarantine."—*Birmingham Age-Herald*.

#### Florida.

"Pensacola asks that all seaport towns join her in this request, and also the request that congress pass a general quarantine law, and we see no objection whatever to such action if the nation is more successful and resourceful in its methods of operating such law than the states are."—*Pensacola News*.

"But precautions against the transmission of disease through the ordinary means of transportation, where they are necessary at all, must be subject to some general regulation, such as the federal officers alone can exercise."—*Jacksonville Times-Union*, from Philadelphia *Public Ledger*.

#### Georgia.

"One result of the yellow fever epidemic in Louisiana has been to convert many doubters and scoffers to a firm belief in a national quarantine system and government control in case of epidemic."—*Savannah Press*.

#### Louisiana.

"It is recognized that the desired uniformity of quarantine, that will be equally strong in all its parts, can be secured only through the federal government."—*New Orleans Democrat*.

"The ruinous and barbarous quarantines established by small communities against the world, the stoppage of United States mails and interstate traffic has resulted in a demand by the press of the country for a scientific and uniform quarantine service such as can be exercised and maintained only by the national health organization."—*New Orleans States*.

"The *Times* rejoices to know that the Louisiana Press Association, through its president, Charles E. Schwing, of Plaquemine, has begun an agitation looking to federal control of the quarantine regulations throughout the country. This paper, at the very beginning of the present yellow-fever epidemic, pointed out the senselessness of some of the quarantines established by various communities, and advocated placing this power of quarantine in the hands of the national government. In a subsequent article, the *Times* sought to emphasize the importance of uniform regulations among the states, pointing out that this could not be hoped for unless needed authority is vested in a supreme, independent and impartial department, such as the Public Health and Marine-Hospital Service of the United States."—*Shreveport Times*.



## Missouri.

"Adequate and uniform precautions can not be taken unless under the direction of some central authority. This means that the whole scheme of quarantine at the great ports of the country should be under charge of the national authorities. . . . National quarantine is what the country wants for all its ports, and the coming Chattanooga conference ought to start a movement which will secure congressional legislation along that line."—St. Louis *Globe-Democrat*.

"Governor Blanchard expresses himself as being in favor of federal control of maritime quarantines and is also inclined toward such control of interstate quarantines."—From an interview with Governor Blanchard of Louisiana.

## Mississippi.

"For the protection of the coast—seaports—I am in favor of vesting absolute authority in the federal government."—From an interview with Governor Vardaman.

## Tennessee.

"As a matter of economy, then, as well as policy, desirability and safety, as explained yesterday, the entire South should take up this federal marine quarantine at once and use its best endeavors to induce the government to establish it at the earliest possible moment."—Memphis *Commercial-Appal*.

"The board of health of Pensacola, Fla., has adopted strong resolutions favoring national control of quarantine regulations at all southern seaports and urges the Florida congressional delegation to urge the same. The sentiment expressed by the people of Pensacola has become very general in the south since this last outbreak of fever at New Orleans, and there are strong reasons for believing that the opposition hitherto manifested by southern representatives will be withdrawn and the principle of national control of quarantine established. The press of the south is very nearly unanimous for the proposition."—Chattanooga *Times*.

"There is a growing sentiment in the South, and all over the country as for that, for a federal quarantine law. The *News*, like a great many other newspapers in the South, has not jumped into this popular wave and demanded that a law be passed at the next session of congress establishing federal quarantine, but under sensible regulations we believe that such a plan would be best for the whole country."—Chattanooga *News*.

"In view of these facts, it is declared to be the sense of the Pensacola board of health 'that the quarantine of all seaport towns should be under the charge and control of the general government.' The *American* unqualifiedly indorses the conclusion of the Pensacolans. It has long been the opinion of this newspaper that the general government is the only power capable of handling quarantine matters in such emergencies."—Nashville *American*.

## Texas.

"Indeed, now that the importance of a strict quarantine is appreciated, and to avoid those embarrassments which proceed from conflicts of state laws and quarantine, the whole matter of public health, as far as contagious or infectious diseases are concerned, may be turned over to the federal government, with the consent of the states."—Galveston *News* and Dallas *News*.

## Northern Opinions.

"Sentiment in favor of a national quarantine service appears to be practically unanimous among those who are able to take an unprejudiced view of the matter. The Philadelphia *Press* remarks that the more rapid, the more complete and the more sweeping the change from the patchwork state quarantines wrangling on the Gulf to federal authority the better. State quarantine has lasted its day. It is an expensive and useless nuisance. It is no more needed than state harbor lights, a state immigrant service or any other regulation of foreign or interstate commerce. The day for shotgun quarantine has passed in this country. The New York *Evening Post* thinks that a national quarantine service is brought distinctly nearer by the appeal of Louisiana to the federal government and suggests that congress will undoubtedly be called on to make the powers and the duties of the national government larger and more precise in all that relates to oversight of the public health. These views are in entire accord with what was said

by the *Bee* some days ago. . . . The demand that is being made for a national quarantine service should not be allowed to die out with the subsidence of the yellow fever, but should be pressed on congress until there is legislation giving the national government absolute control over quarantine. Existing law does not go far enough."—Omaha (Neb.) *Bee*.

"The question of physical health is put first, and it is very important. An outbreak of yellow fever in the south, with no common purpose or provision to meet it, throws the people into a panic that produces scenes and acts of almost indescribable inhumanity. Shotgun quarantines are a disgrace to civilization, and the only remedy—if there is a remedy—is in concert of action and standing means to meet such emergencies. The national power should be invoked."—Washington (D. C.) *Star*.

"In no section of the United States is the principle of home rule as formulated in the doctrine of state rights so firmly established as in the South. Southern communities are tenacious of their local police powers. This being so, some surprise may be felt at the unanimity of the sentiment now prevalent throughout the portion of the South which has experienced or feared the yellow fever in epidemic form in favor of the surrender of their quarantine system to the federal government and of turning over the campaign against the mosquito to the Marine-Hospital Service."—New York *Times*.

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## Queries and Minor Notes

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ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

## STATUS OF GASTRECTOMY.

NORTH PLATTE, NEB., Nov. 8, 1905.

*To the Editor:*—I would like to know through THE JOURNAL the present status of the operation of removing the whole stomach and whether the operation has ever been performed with satisfactory results.

D. T. QUIGLEY.

ANSWER.—The entire stomach has now been removed several times for carcinoma and patients have lived for from several months to two years, usually dying from metastatic carcinoma. Cases suitable for total removal of the stomach are, of course, rare. So far as the functional results are concerned after complete removal of the stomach, they have been satisfactory.

## POSTGRADUATE COURSE IN BERLIN.

WORTHINGTON, MINN., Nov. 9, 1905.

*To the Editor:*—In THE JOURNAL, November 4, you gave a brief review of a post-graduate course to be given in Berlin next spring at the time of the dedication of the "Empress Friedrich House." Can you give me the time when these lectures will take place and the address of some one with whom I can correspond for further information?

HENRY WIEDOW.

ANSWER.—The cycle of lectures is to be given during March and April, 1906. Professor R. Kutner is general secretary of the postgraduate movement (Zentralkomitee für das ärztliche Fortbildungswesen). His address is Elsholzstrasse 13, Berlin W. 30. He is editor of the journal issued by the central committee. His report for the five years since the committee was organized was recently published by J. S. Preuss, Berlin, in a book of 114 pages, giving the details and work accomplished by the postgraduate movement in Prussia.

## METHYLENE BLUE TEST FOR TYPHOID URINE.

PARKERSBURG, W. VA., Oct. 28, 1905.

*To the Editor:* A friend of mine has called my attention to a new test of the urine, methylene blue, in typhoid fever. Will you give some information about it, where we can find literature concerning it, etc.?

W. H. SHARP.

ANSWER.—The test is sometimes called Russo's test. The original paper is found in *Riforma Medica*, vol. xxi, No. 19, 1905. A partial abstract of the paper appears in THE JOURNAL, vol. xlv, 1905, p. 363. The technic of the test is very simple and is as follows: Four drops of a 1 to 1,000 aqueous solution of methylene blue are added to 4 or 5 c.c. of suspected urine. If the reaction is positive the mixture turns to an emerald or mint green hue. A light green or bluish green tint shows a negative reaction. The positive reaction is not affected by boiling the urine or the previous ingestion of such compounds as phenacetin, salol, quinin, calomel, etc. It is given as early as the second day of the disease and persists throughout its course. The mint green hue is first noted and the emerald green hue appears as the dis-



ease progresses. If the course is favorable the tone becomes more and more bluish, while if unfavorable the emerald tint persists. The chief point in favor of the test is its simplicity. It is also quite as reliable as the diazo reaction of Ehrlich. It is, however, given in cases of measles, smallpox, chronic and suppurative tuberculosis. It is not given in varioloid, varicella, scarlet fever, miliary tuberculosis, appendicitis and other conditions. The difficulty in the application of the test comes in the ability to recognize the various tints of green which may be present. With a little practice, however, the positive reaction may be readily detected. The fact that the test is not given in a miliary tuberculosis, appendicitis, varicella, etc., makes it invaluable as an aid in differential diagnosis.

State Boards of Registration

COMING EXAMINATIONS.

Board of Registration in Medicine in Massachusetts, State House, Boston, November 4-15. Secretary, E. B. Harvey, Boston.  
Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.  
State Board of Health of Louisiana, New Orleans, November 14-15. Secretary, F. A. Larue, New Orleans.  
State Board of Health of West Virginia, Clarksburg, November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.  
Wyoming Board of Medical Examiners, Cheyenne, December 6. Secretary, S. B. Miller, Laramie.  
Examining Board representing the President and Fellows of the Medical Society of Delaware at Dover, and the Homeopathic Board, Wilmington, December 12. Secretary, P. W. Tomlinson, Wilmington.  
Ohio State Board of Medical Registration and Examination, Columbus, December 12-14. Secretary, F. Winders, Columbus.  
Medical Examining Board of Virginia, Richmond, December 12-15. Secretary, R. S. Martin, Stuart.  
State Board of Health of Missouri, Kansas City, December 19-21. Secretary, J. A. B. Adcock, Warrensburg.  
Board of Medical Examiners State of California, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.  
Board of Medical Examiners of Maryland, Baltimore, December 13-16. Secretary, J. McScott, Hagerstown.

Montana October Report.—Dr. W. C. Riddell, secretary of the Board of Medical Examiners of Montana, reports the written examination held at Helena, Oct. 3-5, 1905. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 24, of whom 16 passed and 8 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Syracuse University.....	(1902)		80
Kentucky School of Medicine.....	(1902)		77.7
University of Tennessee.....	(1901)		75.1
University of Minnesota.....	(1894) 77.6; (1904) 80,		81.6 84.4
Barnes Med. Coll. ....	(1905)		75.1
Hahnemann Med. Coll., Chicago.....	(1898)		82.7
American Medical Missionary, Coll., Chicago.....	(1903)		79.1
University of Vermont.....	(1903)		75.8
Med. Coll. of Virginia.....	(1904)		76.9
Med. Coll. of Ohio.....	(1897)		82
Jefferson Med. Coll. ....	(1905)		82.7
University of Boston.....	(1905)		78.7
Rush Med. Coll. ....	(1903)		77.4
	FAILED.		
Hamline University .....	(1903)		41.3
Rush Med. Coll. ....	(1900)		64
Illinois Med. Coll. ....	(1898)		68.5
University of Nebraska .....	(1905)		55.1
Missouri Med. Coll. ....	(1878) 26.5; (1884)		50.4
University of Vermont.....	(1895)		59.4
American Med. Miss. Coll., Chicago.....	(1905)		71.5

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending November 11:  
Hess, Louis T., asst.-surgeon, ordered to Fort Lawton, Wash., for duty.  
Collins, C. C., asst.-surgeon, ordered to Fort Walla Walla, Wash.  
Pyles, Will L., asst.-surgeon, ordered to Jefferson Barracks, Mo., for duty.  
Rafferty, Ogden, surg., granted two months' leave of absence.  
Reynolds, Chas. R., asst.-surgeon, assigned to duty as surgeon on transport *Logan*, next voyage to Manila, where, on arrival, he will report to commanding general, Philippines Division, for assignment to duty.  
Wadhams, S. H., asst.-surg., granted 30 days' leave of absence, with permission to apply for 30 days' extension.  
Adair, Geo. W., asst.-surgeon general, granted 15 days' leave of absence.  
DeWitt, Wallace, asst.-surgeon, granted 30 days' leave of absence.

Frick, Euclid B., surgeon, ordered to assume temporary charge of chief surgeon's office, Department of Dakota, during the absence of Col. Adair, on leave of absence.  
Edwards, Jas. F., asst.-surgeon, granted leave of absence from November 17th to and including December 31, 1905. His resignation as an officer of the army has been accepted by the President, to take effect December 31.  
Purnell, Julius M., contract surgeon, ordered to Alcatraz Island, Cal., for temporary duty.  
Barney, Fred M., contract surgeon, arrived at Fisherman's Point, Cuba, for duty.  
Daywalt, George W., contract surgeon, left Fort St. Philip, La., on sick leave for seven days.  
Waddell, Ralph W., dental surgeon, arrived at Fort Crook, Neb., for duty.  
Boak, S. Davis, dental surgeon, left Fort Washington, Md., on leave of absence.  
Carpenter, Alden, dental surgeon, arrived at Boise Barracks, Idaho, for duty.  
Ames, Roger P., contract surgeon, arrived at Fort Saint Philip, La., for duty.  
Jones, George H., contract surgeon, returned to duty at Fort Fremont, S. C., from leave of absence.  
Byars, Caspar R., contract surgeon, returned to Fort Sam Houston, Texas, from duty at Fort Sill, Okla.  
Dickenson, Clarence F., contract surgeon, left Fort Logan, Colo., and arrived at Fort Douglas, Utah, to accompany 22d Battery, Field Artillery, on overland march to Fort Riley, Kans.  
Slater, Ernest F., contract surgeon, arrived at Washington Barracks, D. C., for temporary duty.  
Adair, George F., contract surgeon, left Fort Wadsworth, N. Y., on leave of absence for fifteen days.

Navy Changes.

Changes in the Medical Corps U. S. Navy, for the week ending November 11:  
Riggs, C. E., surgeon, detached from the *Dolphin* and ordered home to wait orders.  
Spratling, L. W., surgeon, detached from the naval station, New Orleans, and ordered to the navy yard, League Island, Pa., November 15.  
Thompson E., surgeon, ordered to the navy yard, Charleston, S. C.  
McDonald, P. E., P. A. surgeon, detached from the naval dispensary, Washington, D. C., and ordered to the *Dolphin*.  
Plummer, R. W., P. A. surgeon, detached from the navy yard, Charleston, S. C., and ordered to the naval recruiting rendezvous, Kansas City, Mo., November 15.  
Riggs, R. E., asst.-surgeon, ordered to the *Franklin*.  
Michaels, R. H., asst.-surgeon, detached from the naval recruiting rendezvous, Kansas City, Mo., and ordered home to wait orders.  
Diehl, O., surgeon, detached from the *Baltimore* and ordered home to wait orders.  
Spear, R., surgeon, ordered to the *Baltimore*.  
Pryor, J. C., surgeon, detached from the naval medical school, Washington, D. C., and ordered to the naval dispensary, Washington, D. C.  
Brownell, C. de W., surgeon, ordered to the naval recruiting rendezvous, Providence, R. I.  
Richards, T. W., surgeon, ordered to the naval hospital, Norfolk, Va.  
Thompson, J. C., surgeon, detached from the naval recruiting rendezvous, Providence, R. I., and ordered to the Asiatic station, via the *Lawton*, sailing December 1.  
Murphy, J. F., asst.-surgeon, detached from the naval recruiting rendezvous, Buffalo, N. Y., and ordered to Washington, D. C., December 4, for examination for promotion, and then to wait orders.  
Guthrie, J. A., asst.-surgeon, detached from the navy yard, League Island, Pa., and ordered to the naval recruiting rendezvous, Buffalo, N. Y.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 8.  
Lavinder, C. H., P. A. surgeon, granted leave of absence for one month from November 6.  
McMullen, John, P. A. surgeon, granted leave of absence for one month from November 7.  
Currie, D. H., P. A. surgeon, relieved from special temporary duty in New Orleans and from temporary duty in San Francisco, and directed to proceed to San Francisco quarantine station for duty.  
Amesse, J. W., P. A. surgeon, relieved from special temporary duty in New Orleans and from duty in Seattle, Wash., and directed to proceed to Ellis Island, N. Y., reporting to medical officer in command for duty.  
Berry, T. D., P. A. surgeon, granted leave of absence for one month to take effect from date of being relieved in New Orleans.  
Rucker, W. C., assistant surgeon, granted leave of absence for seven days.  
Collins, Geo. L., assistant surgeon, leave of absence granted Assistant Surgeon Collins for sixteen days from October 31, 1905, amended to read sixteen days from November 1.  
Ashford, F. A., asst.-surgeon, granted leave of absence for five days from November 4, under provisions of paragraph 191, regulations.  
Mullan, E. H., asst.-surgeon, granted leave of absence for five days from November 2.  
Mullan, E. H., asst.-surgeon, granted extension of leave of absence for five days, from November 7.  
de Valin, Hugh, asst.-surgeon, relieved from special temporary duty at New Orleans and directed to proceed to Baltimore, reporting to medical officer in command for duty and assignment to quarters.  
Alexander, E., acting asst.-surgeon, granted leave of absence for six days from November 10.  
Cleaves, F. H., acting asst.-surgeon, granted leave of absence for five days, beginning November 6.  
Goldsborough, B. W., acting assistant surgeon, granted leave of absence for two days from November 4.



Stevenson, J. W., acting assistant surgeon, granted leave of absence for thirty days from November 6.

Tappan, J. W., acting assist.-surgeon, granted seven days leave of absence from November 6, under provisions of paragraph 191, regulations.

McDonald, Jeannette, medical inspector, granted leave of absence for eighteen days, from October 23.

Stearns, W. L., pharmacist, granted three days leave of absence effective from date of being relieved.

Goodman, F. S., pharmacist, granted leave of absence for twenty days from December 12.

Thurston, E. J., pharmacist, granted leave of absence for fifteen days, from November 10.

Spangler, L. C., pharmacist, granted leave of absence for thirty days from November 5.

#### BOARD CONVENED.

A board of officers was convened to meet at the Bureau on call of chairman for physical examination of Chief Engineer H. F. Schoenborn, R. C. S. Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon H. McG. Robertson, Recorder.

#### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the week ended November 13:

##### SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 21-28, 5 cases.

Louisiana: New Orleans, Oct. 21-28, 5 cases.

Michigan: Kalamazoo, Oct. 27-Nov. 4, 2 cases.

Ohio: Springfield, Oct. 26-Nov. 3, 1 case.

##### SMALLPOX—FOREIGN.

Africa: Cape Town, Sept. 16-23, 1 case.

Brazil: Para, to Oct. 14, 56 cases, 14 deaths; Rio de Janeiro, Sept. 17-Oct. 8, 36 cases, 9 deaths.

Canada: Toronto, Oct. 28-Nov. 4, 1 case.

Chile: Antofagasta, Oct. 14, 65 cases, 18 deaths; Coquimbo, 16 cases, 5 deaths; Iquique, Sept. 30-Oct. 7, 23 cases, 5 deaths.

Cuba, La Salud, Oct. 28, 1 case, imported from Canary Islands.

Ecuador: Guayaquil, Oct. 3-17, 12 deaths.

Great Britain: Liverpool, Oct. 14-21, 7 cases.

India: Madras, Sept. 30-Oct. 6, 3 deaths.

Italy: General, Oct. 12-19, 16 deaths; Catania, Oct. 5-12, 2 deaths.

Mexico: City of Mexico, Aug. 26-Oct. 21, 26 cases, 12 deaths.

Russia: Odessa, Oct. 7-14, 8 cases, 1 death.

Spain: Barcelona, Oct. 10-20, 4 deaths.

Turkey: Constantinople, Oct. 1-15, 5 deaths.

##### YELLOW FEVER—UNITED STATES.

Florida: Pensacola, Aug. 29-Nov. 3, 555 cases, 78 deaths.

Louisiana: Assumption Parish, to Oct. 21, 48 cases, 2 deaths; East Carroll Parish, to Oct. 26, 341 cases, 41 deaths; Iberia Parish, to Oct. 21, 14 cases, 1 death; Jefferson Parish, to Nov. 3, 507 cases, 55 deaths; Lafourche Parish, to Nov. 3, 447 cases, 60 deaths; Orleans Parish, New Orleans, July 21-Nov. 8, 3,389 cases, 459 deaths.

Mississippi: Vicksburg and vicinity, Aug. 30-Nov. 4, 180 cases, 27 deaths.

##### YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Sept. 17-Oct. 8, 9 cases, 3 deaths.

Ecuador: Guayaquil, Oct. 10-17, 1 death.

Honduras: Choloma, Oct. 17-24, 3 cases, 1 death; San Pedro, 2 cases.

Mexico: Coatzacoalcas, Oct. 22-28, 1 case; Omealca, 4 cases, 4 deaths; Tezonapa, Oct. 22-28, 1 case, 1 death; Tierra Blanca, 1 case, 1 death; Tuxtepec, 7 cases, 6 deaths; Vera Cruz, 2 cases.

Panama: Bocas del Toro, Oct. 14-21, 2 cases.

Venezuela: Maracaibo, Aug. 20-27, 1 case, 1 death.

##### CHOLERA—FOREIGN.

Germany: General, to Oct. 21, 280 cases; 90 deaths.

India: Madras, Sept. 29-Oct. 6, 119 deaths.

##### PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 30, 2 deaths.

##### PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Sept. 17-Oct. 8, 37 cases, 17 deaths.

India: General, Sept. 16-23, 4,695 cases, 3,192 deaths; Bombay, Oct. 3-10, 26 deaths; Karachi, Oct. 1-8, 19 cases, 18 deaths.

Peru: Lima, Sept. 21-30, 4 cases, 2 deaths; Mausehe, 3 cases, 2 deaths; Paiza, 3 cases.

Zanzibar: Zanzibar, Oct. 28, present.

## Medical Organization

### Public Lecture on Disease and Hygiene.

The Oakland (Cal.) *Enquirer* inquires: "The Chicago Medical Society is offering a series of free public lectures. Why are such things denied the people of this city? Are not physicians of Oakland as able, progressive and public spirited as those of Chicago?" The people of every city are entitled to such lectures. The county medical society has the machinery to provide them.

### California and Texas.

DR. McCORMACK'S WESTERN TRIP.—Dr. McCormack continues his western tour. Reports from California indicate a varying degree of response on the part of the profession, but agree that a very great deal of good has been accomplished. October 24 Dr. McCormack addressed a joint meeting of the Santa

Barbara, Monterey and San Luis Obispo (Cal.) county medical societies. At Pasadena, October 26, he addressed a meeting of the Pasadena branch of the Los Angeles County Medical Society. From California Dr. McCormack entered Texas, addressing meetings at El Paso, October 30, and at San Antonio on November 1. The latter was the semi-annual meeting of the Fifth Councilor District Medical Society, and the program included papers by Dr. John B. Deaver and Dr. Joseph Price of Philadelphia and Dr. Lewis McMurtry of Louisville. There was a two days' session and over one hundred members were in attendance. Dr. McCormack addressed the physicians of Austin on November 3, and was to have addressed the Jefferson County Medical Society on November 4, but a delay caused cancellation of that engagement. He met with the Galveston County Medical Society November 6, and on the following day addressed the Harris County Medical Society at Houston.

## Society Proceedings

### COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.

American Dermatological Association, New York, Dec. 28-30.

Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### AMERICAN ACADEMY OF MEDICINE.

*Thirtieth Annual Meeting, held in Chicago, Nov. 9-10, 1905.*

The President, Dr. Winfield S. Hall, Chicago, in the Chair.

### Report of Committee on Laws Regulating the Practice of Medicine.

DR. CHARLES MCINTIRE, Easton, Pa., secretary, presented the details of the changes in the laws and the statistical part of the report in printed form. The academy began the study of laws relating to the practice of medicine in 1880, and the report gives some of the results of this 25 years' investigation. Some of the imperfections of these laws are: 1. The lack of uniformity. 2. The relation of vagarious practitioners. Each state, by special legislation, by exemption in general legislation, or by sufferance, permits certain classes of people to perform the office of a physician without the tests required by the state for doctors in medicine. The report suggests that the general practice acts should recognize this by providing for "limited licentiates in medicine," who would be examined only on the elementary subjects. As these laws are to protect the people, they should not take cognizance of any special system. Each one should have liberty to treat disease after his own sweet will, but only after he has demonstrated to the state officials that he possesses such knowledge as the legislature has decided is necessary for the proper protection of the citizens. 3. The laws do not accept the statement of the medical college as final. This has been thought to have been necessary because some medical schools have been found not to have acted in good faith. The result is a somewhat mechanical statement of requirements. Time will right this, and the future laws will accept a diploma without going behind the returns. 4. Another weakness is the provisions for the transfer of a legal practitioner from one state to another. The report suggests that authority be given to each board to accept the license of another state at its value and to make such additional tests as may be required. 5. The laws too frequently fail to protect those who are licensed. They should provide for some official whose duty it is to search out and prosecute the unlicensed and those who are abusing their licenses. The report favored having osteopaths represented on state medical examining boards.

### DISCUSSION.

DR. CARL H. VON KLEIN, Chicago, referred to the gradual evolution that is taking place toward higher medical education. America is not behind in this progressive movement. In some medical schools the courses of instruction are equal to those established in foreign countries, but the preliminary education of American medical students has not reached as high a standard in this as it has in foreign countries.



DR. LEARTUS CONNOR, Detroit, called attention to the origin of medical laws, who originated them, and for what purpose. He said there are two parties involved—*first*, the people, and, *second*, the physicians themselves. Physicians can not enact laws themselves, but they join with the people in accomplishing this. But physicians have been the prime factors in establishing these laws, sometimes with a selfish purpose in view. He thinks that if physicians had looked disinterestedly after the interests of the people first, rather than their own interests, there would have been no need of any medical laws.

DR. B. D. HARISON, Sault Ste. Marie, Mich., did not agree with the recommendation in the report that osteopaths should be admitted as members of state medical examining boards, and recognized as a part of the medical profession. The Supreme Court of Kentucky holds that the osteopath is a *masseur*. It is held by the Supreme Court of another state that osteopathy comes within the field of medicine. He referred to the Michigan law regarding osteopathy and osteopaths, and said it is only a matter of time when osteopaths will be driven out of that state. He favors letting them alone, as they will work out their own salvation or damnation.

DR. R. O. BEARD, Minneapolis, believes that if we raise the standard of the medical profession we will not need medical legislation half so much as it is needed now. It is a question of the "survival of the fittest," and he thinks it will not be very long, after the medical profession has attained that standard of educational and professional fitness, before the bogus colleges will be relegated to the position of barbers, plumbers, etc. The legislative side of the question is more difficult to deal with, as physicians are not expert and successful in securing the enactment of laws.

DR. JOHN M. DODSON, Chicago, said that, urged by the medical profession, some literary schools have arranged their work so as to prepare young men better for the study of medicine. Some institutions of general learning are now pursuing the plan of supplying courses in chemistry, physics, general biology, and others in human anatomy, histology, bacteriology and embryology. The work they are doing should be recognized for what it is worth and not be arbitrarily rejected. He believes that the position which the Minnesota State Board of Medical Examiners has taken, in regard to examining graduates from other states than Minnesota, is absolutely untenable from a legal point of view, inasmuch as the Minnesota law does not say that a student shall have spent four years in a medical college, but says the student must have spent four years in the study of medicine in a recognized college. He thinks the whole question resolves itself into an interpretation of the law by the board, which is applied to the college instead of the individual.

#### Report of the Committee to Tabulate the Value of the First Degree.

DR. DONLY C. HAWLEY, Burlington, said that the committee found it necessary to make a prefatory study before attempting the definite work assigned to it. This study included two questions: 1. What is a college course intended to do? 2. What are the elements which, when compounded, make the physician? 1. A college is a factory where the value of the finished product depends on the character of the raw material furnished. It also depends on the process employed; but no process will cause a transmutation of metals. Unless the gold be in the ore, none can be found in the end-products. 2. To obtain material on which to base the answer to this question, a circular letter was sent to a large number of physicians, medical teachers and others, and college presidents. The replies received were studied by the committee, and are also included in the report as an appendix.

The questions were: 1. What is the character to be desired of the neophyte in medicine? To what extent can it be developed by educational processes? And what class of studies is adapted to bring it about? 2. What mental discipline is essential that a student may profitably benefit by a medical course? 3. What facts should be in possession of the intending medical student before he enters on his medical studies? Can the acquisition of these facts be used to train the character and the mind?

It is admitted that sometimes the man with a limited training outstrips his fellow with greater scholastic advantage.

There must be something underlying which educational processes can not supply. He must be self-reliant, able to arrive at fair conclusions based on accurate observation, and to follow such conclusions with confidence. He must also have a bull-dog tenacity, a love of seeking scientific facts apart from preconceived theories, and sympathy with mankind. These are foundations, and every trait which will make an honorable man and cultured gentleman will be helpful. Having a student of this type, what should be the mental discipline to produce the best result? He should be taught to observe accurately and to interpret honestly the results of observation, to know how to study, to think logically, and train his memory to be of ready service. He should be educated, first, for the man, then for the physician. And, on the whole, the course in colleges leading to the A.B. degree seems to be fitted for this better than any other course. Besides, the mind so furnished should be in possession of certain facts to be used directly in the prosecution of medical studies. These include a knowledge of elementary physics, that it may understand its application in physiology and elsewhere; such a knowledge of chemistry as to make it necessary to teach only medical chemistry in a medical course; and general biology that the student can understand the study of life processes in man in an intelligent manner.

#### DISCUSSION.

PROF. C. S. LOSEY, Northwestern University, Chicago, emphasized that part of the report of the committee that students preparing for medicine should be advised to elect or to select studies in their college course, so that they may have two or three years of work in chemistry and biology, and that they be advised to take up such studies as histology, embryology and comparative anatomy. Some institutions are pursuing such a course at the present time.

DR. LEARTUS CONNOR, Detroit, said a four-year course of study in medicine will give a man a broader outlook; it will give him imagination to look forward to what he ought to become; to have a broad sympathetic outlook of those with whom he has to do. The service of the physician reaches far beyond the peddling of pills or the opening of abdomens. The practice of medicine requires a vigorous body, and a college course ought to show the student what sort of body he has; whether he can endure the long strain of days and nights, of anxious thought about critical cases, etc. A man can not go through college and mingle with others without becoming a thinking machine, more or less. The man who has not got a good imagination, who can not see his operation before him with his eyes shut, so to speak, is not an educated physician. He is a mechanism and not a doctor.

DR. CARL H. VON KLEIN, Chicago, emphasized the value of an academic training preliminary to the study of medicine. The man who is academically well trained, other things being equal, makes a good physician. A man should not be discouraged because he fails in his first examination, as there are notable instances of men who failed in their first examinations, yet subsequently became great. Among others, he instanced Bismarck.

PROF. H. B. WARD, University of Nebraska, said that the heterogeneous character of our educational system in the United States as a name means nothing; that there must be some other form of test applied, some other measure than the mere name of an institution, if we expect to get anything like uniformity in the preliminary preparation of students before their entrance on the study of medicine. Those who have not followed the development of modern college education are not aware of the extent to which, even in small colleges, the elective system has been introduced. Formerly a college course meant in the same section of country, or in a group of affiliated colleges, more or less, the same training; not only four years, but four years applied relatively to certain lines, with some philosophy, some mathematics, some science, some literature, and some history. The modern college has made a departure from this. Even the most conservative colleges have introduced different courses which go under different names, but which in many, if not in all, cases lead to the same degree, and in general the degrees of B.S. and B.A. are apparently on a par with reference to future training. He deplored the fact that there is not a series of recognized studies leading



toward medicine as there is toward theology, law and other vocations.

PROF. JAMES G. NEEDHAM, Lake Forest University, favors teaching general biology in colleges, letting the medical schools teach it as it applies to the human body. He would have the colleges teach general embryology and vertebrate embryology, but let the medical schools teach those aspects of embryology that apply to the human being and to the practice of medicine. The same should be done in other subjects. These colleges can teach certain branches to greater advantage than they are now being taught in medical schools.

DR. BURTON D. MYERS, University of Indiana, said he has been studying seriously the best means of developing and furnishing a preliminary education. The aim of those in authority in this university is not to establish another medical school, but a medical department of the better kind, and they are ready to require four years of collegiate work, if they are convinced that this would be essential. The man who enters on the practice of medicine ought to be able to use the English language correctly, to express himself clearly and concisely. He ought to be able to read French and German.

The report was further discussed by Drs. Daniel T. Nelson, John M. Dodson, Professor Halsey, R. O. Beard, and B. D. Harison.

The committee asked that the report be referred to the council for action and recommendation as to whether the investigation shall be continued, and it was so done.

#### Report of the Committee on Teaching Hygiene.

DR. HELEN C. PUTNAM, Providence, R. I., visited over seventy classes in domestic science in 18 different cities and about as many in nature study, in elementary, high, normal and special public schools. The actual practice of principles of hygiene in domestic science and the actual observation of biologic details and physical phenomena in the teaching of the sciences (called nature study in elementary schools) were briefly compared with the method of memorizing from books and talks. The committee reserved its recommendations until it has reported on the other direct methods of teaching hygiene in the public schools.

#### Altruism in the Medical Profession.

DR. WINFIELD S. HALL, Chicago, stated that the first law of life is the preservation of self; but the second and higher law is the preservation of others. He summed up the biologist's interpretation of egoism and altruism in the following general principles: (1) All the activities of living organisms may be classified as egoistic, those that nourish and protect the individual; and altruistic, those that maintain and protect the race. (2) Altruistic activities invariably involve on the part of the individual sacrifice of self for the good of the race. Every profession, every occupation, in life affords its opportunities for altruism, but he who chooses the medical profession must do so with the knowledge that to be a useful and successful member of that profession he must subordinate self to the welfare of his fellow-men. The true physician is selfless, above all, for the patient's welfare, and not only ministers to his immediate needs, but seeks so to instruct him that, when restored to health, he may, by right living, maintain it continuously, thus needing no further professional service from his physician. This is a manifestation of altruism so nearly universal in the medical profession that the physician loses caste in his profession if he fails in the discharge of this obligation. A higher degree of altruism is manifested by those who sacrifice a gain commensurate with their abilities in order to inspire, guide and uplift the youth. The work of the true teacher is always altruistic. The teacher must always take a part of his remuneration in the satisfaction which he derives from the molding of a character and in the joy which he experiences in the inspiration of lofty ambition.

The higher the order of altruism, the fewer there are who attain it. Voluntary sacrifice of life in order that other lives may be saved is the highest order of altruism. This height of sacrifice has been attained by a comparatively small number only; a number, however, that should include the names of many unknown heroes who have gone to their death while ministering to the sick in plague-stricken places, leaving no record of their heroism. Organized for the purpose of advancing the

standards of medical education, of advancing the boundaries of medical science, of elevating the profession and of preventing disease, the work of the American Academy of Medicine has been altruistic from the time of its organization to the present. The field of its activities is ever widening and always along altruistic lines. If he were asked to make a general recommendation, it would be that the academy accept as its field of endeavor the altruistic responsibilities and activities of the medical profession, definitely outlining a program of research to be prosecuted along various lines, such as education, school hygiene, state medicine, ethics, etc. This research should be followed by carefully directed and persistent effort to accomplish that which the research reveals to be advantageous to society.

DR. CASEY A. WOOD, Chicago, delivered an interesting lecture, which was elaborately illustrated by numerous colored stereopticon slides, on the "Eyes and Eyesight of the Lower Animals."

#### Officers.

The following officers were elected: President, Dr. Donly C. Hawley, Burlington, Vt.; vice-presidents, Drs. Helen C. Putnam, Providence, R. I.; George W. McCaskey, Fort Wayne, Ind.; Henry B. Favill, Chicago, and James T. Searcy, Tuscaloosa, Ala.; secretary and treasurer, Dr. Charles McIntire, Easton, Pa.; assistant secretary, Dr. Samuel C. Stanton, Chicago.

The next meeting will be held in Boston, June 2 and 4, 1906.

(To be continued.)

#### MEDICAL SOCIETY OF THE STATE OF DELAWARE.

Annual Meeting, held in Wilmington, Oct. 10, 1905.

The president, Dr. Alexander Lowber, Wilmington, in the Chair.

(Continued from page 1254.)

#### Sanatorium Treatment of Consumption.

DR. ALEXANDER LOWBER, Wilmington, in his annual address, stated that, during the year 1900, there were 110,000 deaths from consumption in the United States. He urged teaching the general public that tuberculosis is an inoculable disease, conveyed largely through the agency of the sputum; the avoidance of promiscuous expectoration; the necessity for proper disinfection by the state boards of health; the sanitary supervision of workshops, places of public resort, hotels, steam and trolley cars, etc. Early diagnosis, informing the patient of the nature of his illness, and the treatment of the general condition of the patient, are essential factors, as the further advanced the disease is the less chance there is for recovery. Sanatorium treatment is essential, and among the important features thereof he mentioned constant life in the open air; sleeping either in the open air or in a room sufficiently open on all sides; good feeding; judicious exercises; stimulation of the vital forces, and special respiratory exercises to increase the lung capacity, together with special, individual instructions to every patient. He enumerated the number of sanitariums in the different states and territories, as well as in foreign countries, and gave a résumé of the work they had accomplished.

#### DISCUSSION.

DR. J. J. BLACK, New Castle, urged that the profession appeal to the legislature in order to secure the establishment of a state sanatorium. The place to attack consumption is in the slums, among the indigent and ignorant. Much can be done to prevent the spread of the disease by educating these people to the proper care of themselves and the proper precautions necessary for the safety of others. He did not believe that climate had much influence on the effect of the sanatorium treatment.

DR. GEORGE WILLIAM MARSHALL, Milford, stated that he believed the chief reason the state sanatorium had not been established was the lack of funds in the state treasury.

DR. A. ROBIN referred to the practice, when the sanatorium treatment is begun, of giving the patient a large number of eggs, which are sometimes indigestible, owing to the large amount of hydrochloric acid and gastric juice required for their proper assimilation. He believed that the reason a meat



diet is so successful is because it stimulates the secretion of the gastric juice and produces more hydrochloric acid.

DR. W. H. HANCKER, Farmhurst, stated that in the institution established for the care of the tubercular insane they had cured nearly all the cases referred to them, with the exception of those in the very advanced stages, the treatment employed being outdoor exercise, plenty of fresh air, nourishment and a meat diet, in conjunction with the eggs.

#### Autointoxication as a Causative Factor in Disease.

DR. ALBERT ROBIN, Wilmington, classified autointoxication as endogenous and exogenous. Endogenous autointoxication includes the toxins generated by the various tissue cells in the course of their normal biologic activity, the so-called cytotoxins, and the poisons formed during nutrition metabolism. Exogenous autointoxication is caused by the poisons generated in the gastrointestinal tract as a result of bacterial action, as well as the specific toxins generated by bacteria. The cytotoxins are closely related to the bacterial toxins and they cause disease in the same manner. Their continuous menace to the organism is overcome by the antitoxins which are continuously generated in the body by certain cells, probably those of the ductless glands. When this natural immunizing balance is disturbed, disease is the result. Nephritis, hepatic cirrhosis, and various nervous diseases are probably caused by the failure of the organism to neutralize its own toxins. The metabolic poisons generated in the course of normal nutrition are oxidized in the liver and eliminated through the emunctories. Failure of such oxidation and elimination causes disease. The exogenous poisons and toxins are also neutralized by immunizing substances, oxidized in the liver and eliminated through the emunctories. Autointoxication, therefore, may result (1) from non-neutralization of the cytotoxins which are normal end-products of cellular life; (2) from failure on the part of the liver to destroy the poisonous products of metabolism (hepatic insufficiency); (3) from the failure on the part of the kidneys to eliminate the free toxins (renal insufficiency), and (4) from gastrointestinal disturbances which favor intestinal fermentation. The rational treatment of autointoxication resolves itself into an early recognition of the underlying factors, and the application of such remedies as stimulate the production of antitoxic substances by the tissue cells, the destruction of the poisons by the liver and their elimination by the various emunctories.

#### Acute Septic Inflammations of the Mouth and Throat.

DR. J. A. ELLEGOOD, Wilmington, referred to the gravity and high mortality of many cases of acute septic processes occurring in this region, and stated that from an etiologic and pathologic standpoint they are identical with erysipelas as occurring in other parts of the body. The clinical character is peculiar on account of their primary occurrence in the mucous membrane, the peculiar and complex anatomic arrangement of the parts involved, and the proximity to the larynx. The clinical features of some of the more severe forms are described. Ludwig's angina is referred to as being an inflammation of the same nature as a septic laryngitis or pharyngitis, the distinction being more of an anatomic than of an etiologic character. Acute inflammation may be followed by ulceration. Milder forms occur, varying in degree from the slightest ulceration to those displaying the greatest malignancy. On account of the anatomic structure of the parts, the tonsils most frequently are the seat of primary infection, and most cases begin as an apparently ordinary form of tonsillitis. Although a great variety of micro-organisms are capable of exciting or taking part in septic processes, the streptococci and staphylococci are regarded as the chief offending agents, at least, in the milder cases. Among the predisposing causes, attention is called to the probable influence of autointoxication, and to the possible good results that may be attained by means of intravenous injection of saline solutions, both with and without general blood-letting. Serum therapy is discussed at length. In case a bacteriologic diagnosis is impossible, the use of an antistreptococcal or of a polyvalent serum is advised. Particular stress is laid on prophylaxis.

#### Thrombosis of the Popliteal Artery Complicating Typhoid.

DR. WILLIAM CHANDLER PIERCE, Wilmington, cited the case

of a man, age 38 years, who had been under the treatment of a physician for two weeks for typhoid fever. Examination confirmed this diagnosis and also revealed marked discoloration of the left leg from the knee down; the leg, foot, toes and skin were very dry, smooth and like leather to the touch, the discoloration ranging from black on the toes to dark-brown and gray on the foot, and shades of brown and gray on the leg. The leg emitted a distinct odor. On inquiry it was elicited that four days previously the patient had suffered from pain in the back of the leg, and that at this time the leg began to change color. There was no pulse in the popliteal artery and no glycosuria. A diagnosis was made of dry gangrene following thrombosis of the popliteal artery complicating typhoid. Amputation of the lower third of the thigh was advised when the patient's condition should improve sufficiently to admit of it. The patient died shortly afterward in convulsions.

#### Fracture of Patella.

DR. JAMES A. DRAPER, Wilmington, cited the case of a man who had fallen from a telephone pole, sustaining a compound fracture of the thigh about midway, and a fracture of the patella. The fracture of the thigh was treated by wiring, and there is no appreciable shortening. In the treatment of fracture of the patella, he had applied a ring pessary and posterior splint, which has proven very satisfactory.

#### Discussion on Autointoxication.

The discussion on the papers was opened by DR. H. BROOKER MILLS, Philadelphia, who called attention to the fact that, while Dr. Robin's paper primarily related to autointoxication, the others also bore on this subject, as the patient in the case reported by Dr. Pierce clearly died from a general poisoning or autointoxication resulting from a local origin, and many cases of infection of the mouth cause a general intoxication. He reported the case of a Civil War veteran, who had been treated by a number of prominent physicians, for 237 carbuncles, when finally autointoxication was discovered and treated, and the man cured. He also referred to two cases of epilepsy, who had had attacks for years, at least every two weeks, in which he had made the diagnosis of autointoxication of intestinal origin, and originated treatment along the usual lines therefor, including intestinal enemata, with the result that the disease is now entirely cured, apparently neither patient having had an attack within the past two years. He called attention to the necessity for a thorough movement of the bowels daily, and carefully distinguished this term from a daily movement, and, in the detection of these conditions, urinalyses and the determination of the amount of indican, acetone and urea are of the utmost importance. The fecal examination, he felt, should not be omitted, as, while it might be somewhat difficult and require considerable apparatus and time, the results would more than compensate the physician therefor. The use of large doses of purgatives was not recommended; calomel in doses of 1/12 of a grain every hour for twelve hours, followed next morning by phosphate of sodium, a teaspoonful in a glass of hot water one hour before breakfast was cited as a valuable remedy, and, if this does not sufficiently open the bowels, colonic irrigation by means of a long, soft rubber rectal tube should be employed. He called attention to the important part which the skin played in the function of elimination, and urged the stimulation of its activity by drinking large quantities of water between meals. Venesection was considered a mode of relief, but was not felt to be practicable in many, especially the very anemic cases. In conclusion, he called attention to the facts (1) that autointoxication is much more common than it is realized, and (2) that many diseases, local and constitutional, which seem to be difficult of diagnosis are, in reality, due to this condition, and urged the correction thereof, not by large doses of powerful drugs, but simply by emptying the colon by means of the bladder, bowels and kidneys and by careful dietetic and hygienic regulations.

DR. J. A. ELLEGOOD, Wilmington, felt that Dr. Mills did not make sufficiently clear the difference between autointoxication and ptomain poisoning, the former being produced by chemical leucomains arising from within the body caused by the disturbance of the normal metabolic changes, while the latter are caused entirely by extrinsic substances, and that there was a danger of attributing too many conditions to autointoxication.



DR. SWITHIN CHANDLER, Philadelphia, stated that auto-intoxication arose solely from causes arising within the body, and not by the absorption of germs introduced from without, and that, while he believed it was important to lay stress on the proper evacuation of the colon, this would have no effect on the conditions produced by germs from without the body, etc. Attention should be given, he stated, to the secondary, as well as the elementary effect of any article—for instance, food that produces uric acid should not be given, not so much for the fact that it produces uric acid as because of the changes that will take place between the proteids and uric acid to make up the by-products and cause auto-intoxication, and the kidneys should be observed, as much because of the irritation produced as because of their function of elimination. The cases reported by Drs. Ellegood and Pierce, he felt, were cases of toxemia, but not auto-intoxication.

DR. WILLARD SPRINGER, Wilmington, called attention to the fact that the infection in Dr. Pierce's case arose within the body, and that consequently it was an auto-intoxication.

DR. CLEAVER stated that in cases of diabetes and other similar conditions which result in blocking up the secretion of the urine there is no doubt that marked toxemia does occur, and cited such authorities as von Jaksch and Nothnagel in support of this position. While he did not feel that flushing of the colon would relieve all cases of diabetes, he believed there was no doubt that some pronounced toxemias were cured thereby.

DR. A. ROBIN, Wilmington, felt that many of the cases of strict infection were complicated by auto-intoxication and secondary toxemia, as in the case of gangrene, the secondary infection occurring therein was produced by the formation of putrefaction from the gangrene, which is just as much auto-intoxication as anything else. The same is true in a case of secondary infection in a case of typhoid, the typhoid bacillus is the primary infection, but auto-intoxication may arise from other matters generated within the body by reason of this specific germ. He called attention to the fact that he believed the reason the auto-intoxication was not manifest in all cases was due to the fact that there were certain other cells in the body producing antitoxins, which neutralize the toxins produced by the liver and other organs, and called attention to the necessity for stimulating the function of the antitoxin cells.

DR. H. BROOKER MILLS, Philadelphia, stated that, while he did not believe all cases of diabetes or epilepsy could be cured by colonic irrigation, yet, if they could be proved to be due to reflex or other irritation having its origin in the gastrointestinal tract, he believed this to be the most important agency known to medicine for the relief thereof. He felt that in any cause in which the poison arose within the body it must be classed as auto-intoxication, and believed that the cases of both Dr. Pierce and Dr. Ellegood could be properly classed under this class.

The next annual meeting is to be held in Wilmington Oct. 9, 1906.

#### NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

*Regular Meeting, held Oct. 3, 1905.*

The President, Dr. Arthur P. Hitchens, in the Chair.

#### Ventrosuspension of Uterus.

DR. SWITHIN CHANDLER directed particular attention to the importance of absolute certainty in diagnosis, and stated that fixation should be undertaken only by a surgeon competent to perform the most difficult abdominal operation. He reviewed the various operations employed, including the intraperitoneal shortening of the round ligaments, the Alexander operation, and considered the suspension of the uterus by suturing the fundus uteri to the peritoneum to be the ideal procedure, but did not believe in the use of the pessary. He also urged careful technic, and particularly that no blood be left in the abdominal incision.

#### DISCUSSION.

DR. M. P. WARMUTH felt that the fixation operation was the one that should be done in the majority of cases, at the same time repairing any lacerations of the pelvic floor and removing endometritis, if present, by curettage. He reported several

cases of ventrofixation which had subsequently caused complications, which are particularly likely to occur during subsequent pregnancies.

DR. LUTHER C. PETER felt that if the statistics of the operator were supplemented by those of the general practitioner they would probably show up somewhat different, and referred to the case of a multipara, aged 30, in whom an Alexander operation had been done with absolutely no results.

#### Etiology and Treatment of Constipation.

DR. HERMAN A. BRAV stated that constipation is more frequent in females than in males and in adults than in children. One of the prominent causes in women is uterine trouble, and among the results are rectal disease, anal fissure, ulceration of the rectum and sigmoid flexure, proctitis and periproctitis. Headache, loss of memory and inability to concentrate thoughts are prominent symptoms. The causes of the condition are mechanical obstruction; defective peristaltic action; deficient intestinal secretion; deficiency of liquid; nervous instability, etc. The underlying cause should be diagnosed and treatment directed to the removal thereof. Stricture of the sphincter and he believed to be one of the chief causes, and this should be remedied by dilation under local or general anesthesia. The treatment he outlined as follows: Light diet; plenty of fruit, such as oranges, figs, apples, stewed prunes; drinking a tumblerful of water on rising in the morning; regular hour for defecation; avoidance of sedentary life; purgatives should not be given, and only medication of the mildest possible kind. The injection of olive oil, use of electricity and massage, in conjunction with hygienic and dietetic measures, are of value. The exact treatment must be decided for each individual case.

#### DISCUSSION.

DR. SWITHIN CHANDLER emphasized the importance of paying strict attention to the diet, and called attention to the fact that some of the cereals, if taken repeatedly, have a tendency to cause the condition, and urged as a routine measure the thorough examination of the patient to discover the causative element.

DR. WENDELL REBER referred to the fact that many cases of constipation show a peculiar condition of the optic nerve, with intense fullness of the lymph tubes, as indicating defective elimination, and urged as important factors in the treatment a cold sponge bath in the morning and hygienic and dietetic regulations.

DR. CARLE LEE FELT referred to the case of a girl suffering from constipation who had been treated for a long time by drugs, electricity, etc., with absolutely no effect, when strychnia was pushed to tolerance, which quickly cured her. When she returned again, two or three years later, the same drug quickly gave relief.

DR. LUTHER C. PETER stated that a great many nervous conditions can be traced to constipation as a causative factor. He considers strychnia as one of the best drugs for combating the condition.

DR. ALBERT BERNHEIM believed that the constant use of purgatives was detrimental, and that many of the patients who report to the physician that they have a daily bowel movement in reality have feces impacted around the edge of the colon, while the center might be in a condition which would cause diarrhea. The mode of dress, particularly in women, has much to do with the production of the condition; horseback riding has been proved to be a causative factor. Enema may be given for a long time without any deleterious results, preferably by means of a soft rubber tube. Glycerin, eserine, massage, etc., are of value.

DR. LEWIS S. SOMERS recommended that the patient be instructed to spend a longer time at stool, during which his whole mind should be on this act, no books or papers, etc., being taken to the closet by the patient. He referred to the work of Dr. Stucky, of Kentucky, who has been treating cases of pharyngitis by washing out the bowel several times a week, followed by injections of half a pint of olive oil, and claims to be securing good results.

DR. BRAV stated that he believed the condition of the eye-grounds to be an important diagnostic factor in these cases, and that frequently headaches result from reabsorption of the liquid part of the feces. Constant use of drugs and purgatives



is harmful, as is also the constant employment of enemata, as this causes an overdistension of the bowel. He urged thorough digital examination in every case.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

### Earache.

Lake, in the *Clinical Journal*, in the treatment of this condition mentions among local measures a combination of the so-called oil of hyoseyamus with a little of the tincture of opium; he advises the application of opium salve over the mastoid and along the canal, and equal parts of olive oil and chloroform dropped in the ear. Carbolyzed glycerin, he states, is useful, as also douches containing opium, morphin or cocain. Of all these remedies, few equal and none excel the local application of chloroform vapor. Especially in the case of children these remedies must be carefully considered and it is often advisable to dispense with opium, which is badly borne by children, and to use hyoseyamus, belladonna or carbolic acid. Other therapeutic aids in this condition are hot compresses, hot irrigations and counterirritants.

Considering the treatment in the relation of the causes of earache, the author recommends a free incision of the drum. This gives the most speedy relief when the inflammation is confined to the middle ear. If the inflammation is extended beyond the middle ear the incision will only partly relieve the symptoms; at the same time leeches should be applied over the mastoid fairly close to the auricle, and hot irrigations and hot compresses should be applied, frequently repeated. The author believes that in the chronic suppurative otitis media the radical mastoid operation gives very satisfactory results. In case of furunculosis of the meatus he states that if pus has escaped from a furuncle before the physician sees the patient, and the pain is subsiding rapidly, all the treatment necessary is a thorough antiseptic cleansing of the meatus, preferably with an alkaline solution, and the use of peroxid of hydrogen, or a 10 per cent. solution carbolyzed glycerin. If, however, the physician sees the patient before relief from pain has been obtained, not only should he make an incision, passing completely through the center of the furuncle, but the incision should be carried down to the cone, the contents of the furuncle should be removed by a small scoop and the cavity packed.

### Infantile Convulsions.

Cautley, in the *Clinical Journal*, gives the following treatment for this condition:

When summoned to a child in a convulsion the physician should take with him chloroform, a chloral hydrate solution of known strength, amyl nitrite, solution of morphin, and a hypodermic syringe. [Morphin and chloral hydrate must be used with extreme caution in children.—Ed.] Probably the attack will be over by the time he arrives, or, if not, the child will have been undressed and given the usual hot bath, with or without mustard in it. As soon as the attack starts the child should be laid down, with the head a little raised, and the clothes loosened or removed. All unnecessary disturbance must be avoided and the child kept quiet. A bath of from 95 to 100 F. may be given, with a view to relieving the congestion of the brain, or a dry mustard pack may be employed as less disturbing. After the child has been in the bath for five minutes it must be wrapped up in hot blankets. The bath is most useful in cases due to colic and is contraindicated in convulsions due to syncope or collapse of the lung. It does not interfere with other measures of treatment. While in the bath and after, cold affusions should be applied to the head by cloths wrung out in cold water or by an ice cap. The lower bowel can be washed out by salt solution, one dram to half-pint of warm water, or sodium sulphate in the proportion of half an ounce to half a pint for an older child; or a glycerin

enema may be given. After the bowels have acted, a small rectal injection of chloral hydrate should be given, grains 3 to 10, according to the age of the child; potassium bromid may be combined with the chloral. The rectal injection should not be of more than two ounces bulk for a child aged 1 year, and the buttocks must be held together for a few minutes after injection. [The child must be carefully watched after the administration of chloral or the bromid, and these drugs should be used with great caution.—Ed.] Should there be evidence of the existence of unsuitable food in the stomach, vomiting may be induced by tickling the fauces with a feather or by ipecacuanha wine between the spasms. As a rule, irritant food has passed through the pylorus before the attack is induced. As soon as the child can swallow a dose of calomel should be given. It empties the intestinal tract and relieves cerebral congestion. Emetics should be avoided at this stage.

As soon as the secretion of urine is abundant it is evident that the kidneys are working efficiently and that active treatment can be discontinued. Abundant urination may be looked on as a critical phenomenon announcing the speedy termination of the convulsion. After the attack the child must be kept quiet for a few days on a light diet, and the bowels carefully regulated. During sleep the room must be kept well ventilated, the feet warm and the head raised. Borax, salts of zinc, belladonna and valerianate of zinc may be of use in the treatment.

When there is definite disease the treatment is naturally that appropriate to the disease. All sources of reflex irritation should be attended to, such as adenoids, enlarged tonsils, worms, genital irritation, and ear and eye troubles. The general health and diet should be most carefully watched and tended. The drugs most useful in prevention of infantile convulsions are cod liver oil, malt and iron. In treatment of epilepsy in older children bromids should be given for at least two years, and may be combined with salt starvation. The addition of opium is sometimes useful. Borax, belladonna, the salts of zinc and the valerianates are the next most useful drugs.

In all cases careful attention must be paid to the intestinal tract; constipation remedies and intestinal antiseptics are to be given if necessary. The diet should be plain and unseasoned and should contain little meat. As a rule the regularity of school life is beneficial, but it may be injurious from the effects of teasing by other children, excitement, and over mental pressure for examination. On the whole, it is advisable that a child with epileptic fits should, if possible, be brought up at home in the country, under the care of an intelligent tutor, and should live the life of a healthy animal and learn to earn a living at some outdoor occupation involving more or less physical labor.

Thompson, in *International Clinics*, discusses the treatment from a causative standpoint, first considering the treatment of the child while in the attack. The child should be placed in a warm bath, with or without mustard in it. If mustard is used, about two tablespoonfuls to the gallon is recommended. The child may be placed in a mustard pack and kept there from ten to fifteen minutes. If, however, the fit is prolonged for more than five minutes, or recurs at short intervals, it is best to administer chloroform to control the convulsive movements. Chloral hydrate is another effectual remedy, but as the infant is unable at the time to swallow, it must be administered either hypodermically or injected into the bowels through a rubber catheter.

In the new-born infant with convulsions resulting from injury received during birth sedatives are of little value. The child should be kept as quiet and warm as possible and attention given to its nourishment.

For convulsions in the dyspeptic infant sedatives are of small service. The bowels should be cleansed with a dose of calomel and castor oil and the diet should be modified. Attention should be given to the breast milk. When breast milk is not possible special care should be used in the preparation of a substitute.

In so-called idiopathic convulsions in young babies, expectant treatment, bromids and treatment of the alimentary canal are a waste of time. Chloral should be used (with great



caution), the dose varying with the age of the child. This to be continued until the attacks have entirely ceased for from six to eight hours or more, and if not speedily effectual, the dose can be increased until the child begins to get too drowsy to swallow his milk. When the convulsions have entirely ceased for some time the intervals between the doses is gradually lengthened. Usually within three or four days the medicine can be discontinued without any return of the convulsions.

In "teething fits" or "rickety fits" the diet must be regulated on antirachitic lines, and cod liver oil should be given, with or without phosphorus. It is important to see that the child has plenty of fresh air and cold douches given once or twice daily. For these the infant is placed in an inch or so of warm water in front of a fire, and a large jugful of cold water (from 60 to 70 F.), is promptly poured over the shoulders and back. The child is then taken out and rubbed until dry and warm. Under this regimen the child's health improves and all tendency to convulsions soon disappears.

In convulsions caused by serious cerebral defects the result of treatment is very discouraging. Bromids may sometimes be of use. Generally, however, when given in doses large enough to affect the attacks, they interfere considerably with the child's general health. Anything which produces a distinct improvement in the child's general condition, however, may diminish the number and severity of the attacks. Thus a change to the country or the timely administration of a tonic may diminish or stop them for many weeks. In some few cases thyroid substance has a good effect.

## Medicolegal

### Advertising Monthly Regulators Forbidden.

Chapter 167 of the Public Acts of Connecticut of 1905 amends Section 1157 of the General Statutes, which prescribes a penalty for encouraging the commission of abortion, by inserting "or who shall advertise any so-called monthly regulator for women," shall be fined not more than \$500.

### Wood Alcohol to be Labeled "Poison."

Chapter 75 of the Public Acts of Connecticut of 1905 amends Section 4734 of the General Statutes of that state by adding "wood or methylic alcohol under any name or in any mixture" to list of drugs which said section requires that the bottle, box, or wrapper containing same when sold shall be marked "poison," except when for use in manufactures or the arts, etc.

### May Establish a Bacteriologic Laboratory.

Chapter 162 of the Public Acts of Connecticut of 1905 provides that the state board of health may establish and control a bacteriologic laboratory where examination of supposed morbid tissues for the diagnosis of infectious diseases shall be made, free of expense, on the application of registered physicians or health officers, and may provide necessary buildings and apparatus, employ bacteriologists and assistants, and do all things necessary for the proper conduct of such a laboratory.

### "Heart Failure" Not Sufficient as Cause of Death.

Chapter 21 of the Public Acts of Connecticut of 1905 amends Section 1862 of the General Statutes by inserting therein the words, "a certificate of death giving heart failure, paralysis of heart, cardiac incompetence, cardiac exhaustion, heart weakness, collapse of heart, cardiac syncope, cardiac paralysis, or any like term having the same meaning as heart failure, shall not be deemed sufficient on which to issue a burial or removal permit, and such certificate must be returned to the physician who made it for the proper correction and definition."

### No Preservative or Coloring Matter for Meats.

No. 46 of the Laws of Pennsylvania of 1905 provides that if any person, firm or corporate body shall, by himself, herself or themselves, or by his, her or their or its agents or servants, sell, ship, consign, offer for sale, expose for sale, or have in possession with intent to sell, as fresh, any meat, poultry, game or shell fish which contains any substance, article or ingredient possessing a preservative character or action, or which contains any coal-tr dye, or any other substance or ingredient

possessing a coloring character or action, shall be deemed guilty of a misdemeanor, etc.; provided, that nothing in this section shall prohibit the use of ice as a preservative, or proper refrigeration.

### Regulation of Practice of Optometry.

Chapter 96 of the Laws of New Mexico of 1905 is entitled "An act to regulate the practice of optometry and for the appointment for the board of examiners in the matter of said regulation." It defines the practice of optometry as the employment of subjective and objective mechanical means to determine the accommodative and refractive states of the eye and the scope of its functions in general. It provides that every person, before beginning the practice of optometry in this territory, after the passage of this act, shall pass an examination before said board; examination shall be confined to such knowledge as is essential to the practice of optometry. But nothing in this act shall be construed to apply to physicians and surgeons authorized to practice under the laws of the territory of New Mexico.

### May Admit Holders of Certificates from Other States.

On page 212 of the Laws of Missouri of 1905 is an act which amends Section 3 of the act regulating the practice of medicine by adding thereto the words: "And it is further provided that the said state board of health may at their discretion admit without examination legally qualified practitioners of medicine who hold certificates to practice medicine in any state or territory in the United States, or the District of Columbia, with equal requirements to the state of Missouri (and that extend like privileges to legally qualified practitioners from this state), on the applicant paying a fee of \$25." The words here inclosed in parenthesis are, however, omitted from the statement of the proposed amendment in the first part of the amendatory act.

### Cocain to be Sold Only on Prescription.

On page 145 of the Laws of Missouri of 1905 is an act which provides, under penalty, that it shall not be lawful for any druggist or other person to retail, or sell, or to give away any cocain, hydrochlorate, or other salt of or any compound of cocain, or preparation containing cocain, or any salts of or compound thereof, except on the written prescription of a licensed physician or licensed dentist, licensed under the laws of the state, which prescription shall only be filled once; provided, that this shall not apply to sales in the usual quantities at wholesale by any manufacturer or wholesale dealer when such manufacturer or wholesale dealer shall have affixed to the box, bottle or package containing such cocain, hydrochlorate or other salt or compound of cocain or preparation containing cocain, a label specifically setting forth the proportion of cocain contained in any preparation.

### Restricts Sale of Cocain, Eucain and Their Salts.

Chapter 127 of the Public Acts of Connecticut of 1905 provides that it shall be unlawful for any person, firm, or corporation to sell, furnish, or give away any cocain, salts of cocain, eucain or its salts, or any preparation containing any cocain, or salts of cocain, or eucain or its salts, except on the original written order or prescription of a lawfully authorized practitioner of medicine or veterinary medicine, which order or prescription shall be dated, and shall contain the name of the person for whom prescribed, or, if ordered by a practitioner of veterinary medicine, shall state the kind of animal for which ordered, and shall be signed by the person giving the prescription or order; and such written order or prescription shall be permanently retained on file by the person, firm, or corporation who shall compound or dispense the articles ordered or prescribed, and it shall not be recomounded or dispensed a second time except on the written order of the original prescriber; provided, however, that the provisions of this act shall not apply to sales at wholesale by jobbers, wholesalers, and manufacturers to retail druggists, nor to sales at retail by retail druggists to regular practitioners of medicine, dentistry, or veterinary medicine, nor to sales to hospitals, colleges, or scientific or public institutions.

### Sanitarium for Treating Incipient Tuberculosis.

On pages 292-7 of the Laws of Missouri of 1905 is an act which provides for the establishment, as soon as practicable,



of an institution for the treatment of incipient pulmonary tuberculosis, to be located in some suitable portion of the state, and to be known as the Missouri State Sanitarium for the treatment of pulmonary tuberculosis in its earlier stages, or, as stated in another section, to be known as "state sanitarium for the treatment of incipient pulmonary tuberculosis." Fifty thousand dollars is appropriated for this purpose. There must be not less than 160 acres of good land, which shall have an elevation of at least 1,000 feet above sea level. After this, special regard shall be had, first of all, to salubrity of location. Another point to be considered is convenience to pure and wholesome water. Some of the buildings shall be for a hospital, and others for cottage sanitarium purposes. Said buildings shall be constructed of substantial materials, the walls being of brick or stone, the interior subdivisions to conform, as near as may be, to the most modern improvements, having reference to the comfort and convenience of the inmates therein; they shall be as near fireproof as practicable, with partitions and fire walls between the wards; also such facilities for egress as will insure safety in case of fire. There shall be a board of managers, to consist of five persons, two of whom at least shall be practicing physicians of good repute, and all to be appointed by the governor, subject to the confirmation of the senate.

#### Emergency Fund Provisions for Epidemics and Disasters.

No. 219 of the Laws of Pennsylvania of 1905 appropriates \$50,000 for the purpose of creating an emergency fund, to be used, as occasion may require, by the state board of health in the suppression of epidemics, prevention of disease, and protection of human life in times of epidemic disease or of disaster threatening disease, beyond the ability of the local authorities to check or relieve. This money shall be held in the treasury of the commonwealth, and whenever the secretary of the state board of health shall find that the public health is threatened, either by epidemic or as a result of great disaster, to such an extent that the local authorities are unable to meet the emergency, he shall prepare a statement to that effect, rehearsing all the facts in the case, and the reason for considering that state aid is needed, and to what amount, and transmit the same to the governor. If the statement and the reasons therein set forth shall meet with the approval of the governor, he shall certify and file the statement and certificate of approval in the office of the auditor general, who shall then draw his warrant on the state treasurer for the amount approved by the governor, and place the same in the hands of the treasurer of the state board of health, to be used for the purpose set forth in the statement approved as aforesaid, and for no other purpose. If, after the said epidemic shall have been suppressed, or the sickness or danger averted, there shall still be a balance of the amount drawn left in the hands of the treasurer of the state board of health, he shall, without delay, return the same to the state treasurer, and it shall become part of the said emergency fund. He shall also file with the auditor general a specifically itemized statement, made under oath, of the expenditures of said moneys, as soon as possible.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

November 4.

- 1 \*Examination of the Leucocytes as an Aid to the Diagnosis and Prognosis of Disease. T. R. Brown, Baltimore, Md.
- 2 \*Dilation and Curettement for Dysmenorrhea. G. R. Holden, Baltimore.
- 3 \*Method of Administering Mercury in Syphilis. O. Lerch, New Orleans, La.
- 4 \*Intranasal Drainage of the Frontal Sinus. E. F. Ingals, Chicago.
- 5 Value of Drugs in the Treatment of Insomnia. J. S. Christison, Chicago.
- 6 Deflection of the Nasal Septum in Children. A. A. Bliss, Philadelphia.

1. **Examination of Leucocytes as Diagnostic Aid.**—Brown reviews our knowledge of the variations in the white blood cells in health and in disease, and the aid that may be derived from their study. He says that a thorough appreciation of

the exact significance of leucocytosis will not be possible until we have definitely determined the mode of origin of the various forms of the white blood cells and their relationship to each other. Nevertheless, study of these cells in the various diseases and pathologic conditions has demonstrated beyond a doubt that their determination is of real practical help in the diagnosis and prognosis of disease. There are only a few diseases in which an absolute diagnosis can be made from the blood examination alone; in the vast majority of cases the condition of the leucocytes aids in making the diagnosis; in many cases, however, it is an important point without which the diagnosis would be even more incomplete than, of necessity, it is often forced to be. Thus, the study of the leucocytes has rendered possible the diagnosis of a certain number of diseases, as the leukemias and trichinosis, besides rendering marked assistance in the diagnosis of others, as tuberculosis, typhoid fever, pneumonia and various inflammatory and suppurative conditions. It tells much in regard to the prognosis of all forms of infection and inflammation. It has aided in discriminating diseases presenting clinical pictures markedly alike, such as central pneumonia and typhoid fever, appendicitis and conditions simulating it but of entirely different origin, peritonitis and gastrointestinal autointoxication, lymphatic leukemia and Hodgkins' disease, myelogenous leukemia and Banti's disease, measles and scarlet fever, etc. It has provided the surgeon and gynecologist with a ready means of determining, in the first place, whether or not he is dealing with inflammatory or suppurative processes; in the second place, whether the process is diminishing or increasing, while in the third place, it tells him much, if he can but read the figures aright, regarding the prognosis of his cases. Leucocyte counting, says Brown, has not and never will reach the point at which it and it alone will furnish us with an absolutely correct diagnosis and prognosis, but in the past it has been a great, and it will be in the future an even greater help to the physician and surgeon who value correctly its possibility and its limitations.

2. **Dilation and Curettement for Dysmenorrhea.**—Holden analyzes reports received from 95 patients at periods varying from one to twelve years after dilation and curettement for dysmenorrhea. He finds that 40 per cent. were entirely or very greatly relieved for at least one year with 7 per cent. out of this 40 per cent. having a recurrence of the dysmenorrhea after one year or more; 30 per cent. had no relief at all, while the remaining 30 per cent. had but slight relief or relief for a few months only. Marked maldevelopment of the pelvic organs was present in 20 cases and in only 25 per cent. of these were the patients relieved. From a study of the character of the pains Holden concludes that the prognosis for relief after dilation and curettement is better when the pains are sharp, begin the day of the flow or the day before, and last but a day or two. The prognosis is bad when pains are dull, begin several days before the flow, and last for several days or throughout the flow. Dysmenorrhea may be caused by lurking pelvic inflammatory disease which is not recognized at pelvic examination under ether. In these cases dilation and especially curettement may make the symptoms much worse. Neurasthenia, anemia or malnutrition are frequently present. In some cases such conditions are the cause of the dysmenorrhea. To get good results from the operation these conditions must also be cured. In 61 of the cases a microscopic examination of the curettings was made. Chronic endometritis in such relation as to be a possible cause of the dysmenorrhea was present in but 4 cases, hence Holden concludes that chronic endometritis is an infrequent cause of dysmenorrhea. As but 3 out of 20 sterile married women of this series, in the child-bearing period, conceived within a year after the operation, the value of dilation and curettement in relieving sterility does not seem great. In general the procedure should be limited to cases in which there are no gross pathologic lesions, such as retrodisplacements, inflammatory disease of adnexa, or myomas, to account for the dysmenorrhea.

3. **Mercury in Syphilis.**—Lerch explains why mercury is more effective when given by inunction. He urges that in tabes and paresis antiluetic treatment should be tried, as it is often impossible to make a positive diagnosis. A certain an-



alogy between syphilis and tuberculosis has led him to give inunctions of iodoform in tuberculosis. He has had good results.

**4. Intranasal Drainage of Frontal Sinus.**—Ingals describes a method which, he says, by reason of its simplicity, thoroughness, and freedom from complications, is an improvement on other methods now in use. In five illustrative cases he explains in detail the various steps of the new operation and the instruments employed. He claims that this operation for intranasal drainage of the frontal sinus can be easily, quickly and safely done in those cases in which it is possible to introduce a probe through the nasofrontal canal. It established free drainage and furnishes a means whereby the patient, without aid, may wash out and medicate the sinus as desired. A hemorrhage can not result from this operation that could not be checked by the packing, except in hemophilia. Perforation of the cerebral wall of the sinus is impossible. The patient's consent can be obtained for this operation much more easily than for an opening through the eyebrow, and thus many cases may be cured in their incipency that would otherwise prove very tedious and would ultimately demand a more serious operation. This operation would probably prove curative in nearly all cases of acute suppurative frontal sinusitis. It will prove curative in a large percentage of chronic cases. It will be a valuable preliminary to the radical operation in practically all cases. From the curative results in two out of three chronic cases and from the marked benefit in the third, it would appear that the advantages of this operation are so marked that it should be recommended in preference to the external operation in practically all cases, for even if a cure should not result, the conditions will be improved for a radical operation.

#### Medical News, New York.

November 4.

- 7 \*Treatment of General Peritonitis. A. J. McCosh, New York.
- 8 Phases in the Development of Therapy. A. Jacobi, New York.
- 9 \*Digestibility of Evaporated Cream. T. Mojonier, Greenville, Ill.
- 10 Duodenal Ulcer by One of Its Victims. F. K. Cooke, Durham, N. C.
- 11 Pneumothorax, with a Report of a Case Complicating a Lobar Pneumonia. W. R. Stone, New York.
- 12 \*Extravisceral Rubber Ligature in Gastroenterostomy. R. C. Coffey, Portland, Ore.

**7. Treatment of General Peritonitis.**—McCosh urges that the treatment of this condition should vary according to the etiology, duration and virulence of the disease, and also according to the resisting power of the patient. He questions the advisability of immediate operation in all cases, but he does not recommend non-operative treatment even in the majority of cases. The surgeon should always consider whether operation will give the patient the best chance for recovery. Ten years ago McCosh says he was in the habit of operating in 80 or 90 per cent. of all these cases. Now he operates in only about 50 per cent. The most important features of operation for general peritonitis are: 1, Rapidity; 2, gentleness; 3, removal of the cause; 4, postoperative elevation of the trunk and head, with corresponding depression of the pelvis. General anesthesia, as a rule, is preferable to any method of local anesthesia. Chloroform is frequently to be preferred to ether, though a mixture on an open mask is often the most advantageous. As a rule, when the cause is known, the incision should be made over the spot where lies the exciting lesion. In cases of doubt immediate incision is best. Wherever situated, a length of from 8 to 10 cm. is generally sufficient. If not, the incision can be extended during the progress of the operation. An incision of from 12 to 20 cm. does not seem to offer any advantages, and if recovery follows, is apt to result in discomfort to the patient. As a rule, an intermuscular incision is not advisable, though in lax abdomens either the McBurney or Kämmerer incision is sometimes sufficient. The incision along the outer edge of the right rectus muscle is generally the most convenient. The cause of the peritonitis is immediately sought and brought into view. At the same time it is determined whether or not the peritonitis is general. If general, irrigation through a tube is at once begun. Normal salt solution at a temperature of 110 F. is employed, through a hose of good size, and with considerable force. The rubber hose itself may be inserted, or there may

be attached a long glass irrigating tube or a double current glass tube, for ingress and egress of the fluid. The irrigation is begun in the flanks and systematically carried to different parts of the abdominal cavity, terminating with a thorough washing out of the pelvis. The hand of the operator, covered invariably by a rubber glove, by gentle manipulation, helps the washing process. If the intestines have emerged from the abdominal cavity, they are carefully protected by hot towels, and flooded with hot saline solution. Generally, into the upper part of the small intestine there is injected through a large hypodermic needle 30 gm. of a saturated solution of magnesium sulphate, the puncture being afterward closed by a Lembert suture. When the peritoneal contents have been replaced, nothing remains but the closure of the wound and drainage. This is effected by the employment of one or two drains of small diameter, the remainder of the wound being closed. One of these drains generally passes into the pelvis, and often another into the loin. This latter may emerge through a stab wound made posteriorly. The "cigarette drain" is McCosh's favorite. It consists of a thin strip of sterile gauze, around which is loosely wrapped a layer or two of thin rubber tissue. In place of the cigarette drain, especially if the pus be thick, a fenestrated rubber tube is sometimes employed. He never employs for purposes of drainage unprotected gauze strips or masses of packing. A strip of gauze, carried through a glass tube into the pelvis, however, is occasionally used. For the emergence of these drains comfortable spaces are left in the wound unsutured, or the sutures may be inserted for future use, but left untied. Often while the operation is in progress, an intravenous saline infusion is given by an assistant. The smallest possible amount of anesthetic is administered. To reduce tympanites McCosh administers .002 mg. physistigmin salicylate hypodermically. A small hypodermic injection of morphin is usually administered at the close of the operation. The postoperative treatment is of importance. The patient is placed in Fowler's position for a week, the thighs being flexed over one or two pillows. Starvation is absolute until abdominal distension is diminished and until vomiting ceases. Gastric lavage is frequently given before the patient leaves the operating table, and is often continued at intervals until vomiting ceases. Drainage remains as established for thirty-six to forty-eight hours, and then its removal is begun cautiously and gradually.

**9. Digestibility of Evaporated Cream.**—Mojonier's investigations lead to the following conclusions: 1. The protein in evaporated cream digests a little more rapidly when treated with artificial gastric juice than does that of raw, Pasteurized or boiled milk. 2. The protein in evaporated cream is almost entirely soluble in artificial gastric juice. Its total digestibility by this method compares very favorably with that of raw, Pasteurized and boiled milk. The small difference found was in favor of the evaporated cream. 3. By means of natural digestion experiments with a child and with a man, the child was found to digest evaporated cream a little more completely than did the man. It was found that in the case of the child that only 3.31 per cent. and in the case of the man only 6.81 per cent. of the entire solid matter of the food remained undigested. 4. The total digestibility of the protein in evaporated cream, after making correction for the metabolic products in the feces, in the case of the child was found to be 98.48 per cent., or very nearly what was found by means of artificial gastric juice, namely, 98.89 per cent. With the man it was found to be 93.10 per cent. 5. The butter fat and milk sugar were both very completely digested and assimilated by two subjects. The child digested 98.80 per cent. of the fat and 97.78 per cent. of the sugar. The man digested 95.84 per cent. of the fat and 96.85 per cent. of the sugar. 6. The child digested nearly 18 per cent. more of the mineral matter than did the man. This accords with the accepted theory that a child requires more mineral matter in proportion to its body weight than does an adult because its bones are growing and developing. 7. The total energy or fuel value of evaporated cream is almost entirely available to the body. The child used 97.25 per cent. and the man 94.59 per cent. of the total energy contained in the evaporated cream which they used. 8. The health of both subjects was



normal during the experiments. The child gained in weight, an average of about one pound a week and relished its diet. The man lost in body weight, but gained in protein to the amount of nearly one-third ounce of protein a day. 9. Evaporated cream, like other forms of pure milk, is an economical article of diet because its nutrients are practically all available to the needs of the body.

**12. Extravisceral Rubber Ligature in Gastroenterostomy.**—Some time ago Coffey described an operation (*THE JOURNAL*, Jan. 2, 1905, page 72), of entero-enterostomy in which an extravisceral silk ligature was used. This method was very similar to the one described by Coffey in this paper, except that no cut was made and the silk ligature included all the coats. Coffey found that the method first described could not be well applied with the wall of the stomach because of its great thickness. The operation is now performed as follows: First, the incision is made both in the abdominal wall and in the mesocolon in exactly the same manner as if the short loop operation were to be done with clamps or the McGraw ligature. The stomach is pushed down through the mesocolon from above, by the hand of the operator or assistant, and held there. Second, a circular button is cut with a sharp knife down to the submucous connective tissue, great care and caution being exercised not to cut the submucous plexus of vessels. As the mucous membrane is approached, the muscular fibers, both in the wall of the stomach and in the button, contract, leaving quite a wide circular cut. The same thing is done with the intestine, except that the button is made oblong, parallel with the axis of the intestine, in order not to encroach too much on the lumen of the intestine, and also to avoid the larger vessels. Third, the button and mucous membrane are picked up gently with a wide forceps like a sponge holder, or, if preferred, with the fingers; a silk or linen thread is then laid across one side of the wound, one end being held by an assistant, the other lying loose. A rubber band of the size of No. 14 braided silk is cut in two, making of it a thread instead of a band. The mucous membrane is pulled out as far as possible, without tearing or injuring it, so that as big a bite as possible may be cut out. One end of the rubber string is held with a pair of forceps by an assistant, while the operator takes the other end, with or without forceps, and proceeds to wrap the rubber around the mucous membrane, including the thread, which is to tie the rubber. If the rubber is as small as it should be, ten or twenty turns should be made. The string is tied around all the rubber to prevent slipping. The suture is continued all the way around, and the last end is tied with the end left loose for this purpose at the starting point. One of the main advantages of this operation, says Coffey, is the fact that no opening is made into the intestine or stomach at the time of the operation, hence the danger of infection is minimized.

#### Medical Record, New York.

November 4.

- 13 \*Antepartum Measurement of the Fetal Head. W. S. Stone, New York.
- 14 \*Carcinoma of the Intestinal Tract. J. P. Tuttle, New York.
- 15 \*Quick Curative Treatment of Gonorrhea. F. A. Lyons, New York.
- 16 Treatment of Joint Stiffness by Means of Gradual Rectification Combined with Massage. G. Norstrom, New York.
- 17 \*Four Cases of Essential Anemia and Their Diagnostic Differentiation. W. O. Bridges, Omaha, Neb.
- 18 Case of Primary Lupus Vulgaris of the Oropharynx and Nasopharynx. Treated by X-rays. H. S. Birkett, Montreal.
- 19 \*Acute Pancreatitis. J. G. Sheldon, Telluride, Colo.

**13. Antepartum Measurement of Fetal Head.**—Stone shows that the antepartum measurement of the fetal head is as feasible as is pelvimetry, and that these measurements afford a more precise method of estimating the course of labor in contracted pelvis than any other now available. They are of the greatest value in the selection of the cases suitable for premature induction of labor, and in the determination of the best time for performing it. Stone's method of measurement is described as follows: "The patient is placed in the ordinary dorsal position for an abdominal examination, and the examiner, standing by the side and placing the lower end of the patient's body, first carefully palpates and makes out the position of the head. If it is already engaged in the pelvis, it will not be practicable to measure it, but in such cases

it naturally is unnecessary. The occipital and frontal poles are then grasped between the two hands, and an assistant places from below the ends of the pelvimeter between the terminal phalanges of the middle and ring fingers of the examiner, pushing them firmly inward, as the examiner directs. It is essential that the ends of the pelvimeter go between these fingers, because in palpation one naturally places the middle or longest finger nearest the two poles from which the measurements are to be taken. If placed in front of the middle finger, the pelvimeter will slide forward and the measurement will be inaccurate. An assistant or nurse is necessary in order to obtain the best results, in order that the examiner's fingers may be entirely free accurately to locate the fetal parts." A table is given showing the results obtained before and after delivery in 41 patients measured in this way. In 28 instances the postpartum measurement of the occipitofrontal diameter agreed exactly with the measurements made through the abdominal walls before labor; in 11 there was an error of 0.25 cm.; in 2 of 0.50 cm. In another table the average amount to be deducted from each occipitofrontal diameter in order to obtain the biparietal diameter is given.

**14. Carcinoma of the Intestinal Tract.**—Tuttle discusses the symptoms and indications for treatment of cancer of the intestine, these varying according to the portion of the digestive tract occupied by the neoplasm. The various segments of the alimentary tract, in the order of frequency with which they are attacked by cancer are: stomach, rectum, sigmoid, cecum and ascending colon, transverse and descending colon, vermiform appendix, duodenum, ileum and jejunum. The prognosis of cancer of the intestinal tract without surgical interference is absolutely hopeless. The fact, however, that metastasis and glandular involvement are later in this area than in any other portion of the body renders surgical interference more hopeful here than elsewhere.

**15. Quick Curative Treatment of Gonorrhea.**—Lyons reports 400 cases treated by the method brought forward by him ten years ago. In 384 of these cases the disease was cured in six days, and in about 80 per cent. of this number in twenty-four hours. The method consists of injections into the urethra of a dram and a half of silver nitrate solution, at first in 4 per cent. strength, later in 2 per cent. and 1 per cent. strength. In most cases a single injection was sufficient. When a cure was not effected by three injections the treatment was discontinued. The method depends for its effect on the fact that early in the disease the gonococci lie entirely on the outer layer of epithelial cells, multiplying on them, destroying their vitality and causing them to exfoliate. At this stage the microscope shows many gonococci on the epithelial cells. There follows congestion, afflux of serum, exfoliation of all the epithelium until the subepithelial tissue is laid bare. There will now be in the discharge few epithelial cells and many pus cells. At this time the gonococci penetrate the connective tissue. As long as there appear under the microscope epithelial cells studded with gonococci, so long are the germs within reach of the germicide, and the case is amenable to quick treatment. The exfoliation of the epithelium caused by the silver nitrate only quickens the exfoliation produced by the disease and destroys the gonococci and does no harm.

**17. Diagnosis of Essential Anemias.**—Bridges discusses the differential points in the diagnosis of acute lymphatic leukemia, splenomyelogenous leukemia, splenic anemia with atrophic cirrhosis of the liver, and pernicious anemia, and reports one case of each disease.

**19. Acute Pancreatitis.**—Sheldon suggests the following points be made the subjects of discussion by writers on acute pancreatitis: 1. The presence of glycerin in the urine, which Cammidge and Robson claim is characteristic of pancreatic disease. 2. The infectious or mechanical nature of the process in the early stages of the disease. 3. The significance of the condition of the gall bladder. He has found it distended and very tense in three out of four patients with acute pancreatitis operated on or observed at autopsy, and did a cholecystotomy in a supposed instance of acute pancreatitis twelve hours after the onset of symptoms, the case terminating in recovery.



## Boston Medical and Surgical Journal.

November 2.

- 20 Relation of Animal Life to Human Diseases. T. Smith, Boston.
- 21 \*Case of Pyloric Stenosis in an Infant. J. L. Morse and F. T. Murphy, Boston.
- 22 Separation of the Criminal Class from Other Insane in Institutions. C. A. Drew, Bridgewater, Mass.
- 23 Active Treatment of Muscular Rheumatism. B. B. Cates, Knoxville, Tenn.

21. **Pyloric Stenosis.**—In the case reported by Morse and Murphy, the vomiting began when the infant was two weeks old. Just before entering the hospital the infant passed a closed bib-pin about one inch long, which had been missing for about two weeks. The onset of the vomiting coincided pretty closely, therefore, with the disappearance of the pin. A diagnosis of chronic gastric indigestion was made, with stenosis of the pylorus to be considered. Various sorts of food were tried, and various plans of feeding were instituted, but without success, the vomiting continuing. There was nothing characteristic about the vomiting at any time. One week after admission of the patient to the hospital the lower border of the stomach was palpable just below the umbilicus, and at times visible peristalsis was made out, although it was not distinctly in waves. Two days later a mass the size of a small marble was felt about 1 cm. below and to the right of the umbilicus. The consistency and form of the mass were variable. The mass was freely movable but not tender. Operation was advised but refused. The only distinctive feature about the bowel movements was their meconium-like character. The operation, which was performed later, disclosed at the pylorus a bluish-red smooth and rounded tumor about the size and shape of a good sized dollar. The stomach was distended. Below the pylorus the entire intestinal tract was collapsed and contracted. The child died ten hours after the operation. The authors emphasize the following facts: 1. The symptoms may vary much from those of absolute pyloric obstruction, and they do not necessarily begin at birth. 2. The peculiar meconium-like character of the dejections may be of great diagnostic importance. 3. In complete or nearly complete pyloric obstruction, operation seems to offer the only hope of recovery. 4. The operation must be done before the infant has become reduced to the last degree of starvation, therefore an early diagnosis is imperative. 5. Pathologically, the condition is an entity.

## New York Medical Journal.

November 4.

- 24 Morgagni to Virchow; An Epoch in the History of Medicine. J. L. Steven, Glasgow.
- 25 Spirochaeta Pallida in Syphilis. A. Fanoni, New York.
- 26 \*Methods of Exploring the Abdomen, and a New One. A. H. Ferguson, Chicago.
- 27 \*Further Contribution to the Pathogenesis of Exophthalmic Goiter. A. Gordon, Philadelphia.
- 28 \*Chronic Headache and Its Treatment by Massage. G. Norstrom, New York.
- 29 \*Three Vices of Blood Pressure. L. F. Bishop, New York.
- 30 Status of the Fetus in Utero. H. Hughes, Mankato, Minn.

26. **New Method of Exploring Abdomen.**—Ferguson points out the value of the various methods now in use of exploring the abdomen and calls attention to a new one devised by him. Through the incision for exposing the gall bladder and ducts it is his practice to see and feel all he can within a reasonable radius. It is not uncommon that appendicectomy can be performed through this incision without even extending it downward. In one instance he removed a stone in the right kidney through this incision. On the other hand, the bile ducts may be explored through the incision usually made to reach the kidney. This is done by making an incision through the peritoneum in front of the kidney, reaching inward to the gall bladder, discovering gallstones, and removing them through a button-hole incision made over the fundus of the gall bladder as it is held by the exploring hand against the anterior abdominal wall. He has also removed the appendix through the lumbar incision for kidney work. Through an enlarged gridiron incision for appendicitis he has often removed small fibroids, shortened ovarian ligaments, bisected ovaries, and he has performed anterior transplantation of the round ligaments, salpingostomy, and hysterosalpingostomy before or after removing the appendix. In cases presenting the clinical evidences of both appendicitis and gallstones, he makes a "com-

promise incision" through the right rectus muscle opposite the umbilicus, of sufficient length to admit the hand, which easily reaches the gall bladder and appendix respectively and if need be, the other organs within the abdomen. In certain cases, says Ferguson, an examination of the abdominal organs would be highly satisfactory, although often the operator does not feel justified in opening through the abdominal wall for that purpose. The problem is solved in passing the hand and entire forearm into the abdominal cavity through the vagina. In order to furnish enough space for this purpose, it is imperative to cut through the mucous membrane of the vagina its whole length on each side postero-laterally. The mucous membrane being severed, the other structures stretch at once. The bare arm being smeared over with sterile vaselin, glides in with ease. A number of instances are cited in which this method of examination proved exceedingly useful.

27. **Pathogenesis of Exophthalmic Goiter.**—Gordon cites a case which he considers a valuable addition to the subject of the nervous origin of exophthalmic goiter and especially to its probable origin in the medulla; interesting also, from the standpoint of evolution of the symptoms, the involvement of cranial nerves, preceding a rapid, if not immediate, development of exophthalmic goiter. A middle-aged woman while attending to her usual duties noticed suddenly that she could not raise her eyes in the normal manner; she had to throw her head backward in order to be able to look up. On the following day she noticed an inability to turn the left eye externally. A few days later a gradually coming on of prominence of both eye globes was observed. A week later the neck became enlarged in front and at the same time palpitation of the heart with tremor of the hands made their appearance. In addition to the inability to raise both eyes (more on one side than on the other) and to turn both eyes externally (more on one side than on the other), there was also difficulty to turn the eyes upward and inward or downward and inward; finally the left pupil reacted very sluggishly to light. It was, therefore, an involvement of the third, fourth and sixth nerves, unequally distributed on both sides. The syndrome of Graves' disease was present in its entirety: exophthalmos, von Graefe's sign, goiter, tachycardia (pulse 120), and tremor.

28. **Chronic Headache Treated by Massage.**—Norstrom makes a running comment of the treatment instituted by him for chronic headache of inflammatory and muscular origin. The treatment consists of massage of the muscular insertions to the cranium, of the fleshy part of the trapezius, the sternocleidomastoid, and other muscles of the neck, performed for a time sufficient to remove inflammatory deposits.

29. **Vices of Blood Pressure.**—According to Bishop, the vices of blood pressure are threefold: First, primary low arterial tension, which is met in all enfeebling disease, in great physical emergencies, and following either disease of the heart structure, or failure of the vital force and tissues of the body. Second, high arterial tension, which indicates that the circulation is laboring under stress, and due to nervous causes, such as overwork, excitement, and dissipation, or chemical causes, such as the over-ingestion of food, or the failure of kidney elimination; indeed, all the causes which can arise from a life of mental hardship combined with physical luxury. Third, secondary low arterial tension, which represents the final outcome of pre-existing high arterial tension.

## Lancet-Clinic, Cincinnati, Ohio.

November 4.

- 31 The County Society. J. C. Larkin, Hillsboro.
- 32 Thirteen Cases of Scopolamin-Morphia-Chloroform Narcosis. E. G. Zinke, Cincinnati.
- 33 Case of Self-Castration by an Insane Epileptic; A Pathologic Study. H. S. Allen, Hatwell.

## St. Louis Medical Review.

November 4.

- 34 Carbonic Acid in the Treatment of Tuberculosis. A. Rose, New York.

## Annals of Surgery, Philadelphia.

October.

- 35 \*Fracture of the Spine. H. L. Burrell, Boston.
- 36 Case of Suture of the Spinal Cord Following a Gunshot Injury Involving Complete Severance of the Structure. G. R. Fowler, Brooklyn.
- 37 \*Tubercular Conditions of the Spine Requiring Surgical and Mechanical Relief. De F. Willard, Philadelphia.



- 38 \*Surgical Treatment of Intraspinous Tumors. R. H. Harte, Philadelphia.  
 39 \*Surgical Anatomy of Small Intestine and Its Mesentery. G. H. Monks, Boston.  
 40 \*Infection of Knee joint. C. P. Flint, New York.  
 41 Fibrolipoma of Stomach. H. Fischer, New York.

35. **Fracture of the Spine.**—As the result of a study of 244 cases, Burrell draws the following conclusions: Fractures of the spine may well be divided into two classes: First, fractures of the spine, with injury to the cord, and, second, fractures of the spine, without injury to the cord. It is not best to decide what the treatment of an individual case of fracture of the spine should be from the statistics, because the lesion varies so widely. In many cases of fracture of the spine it is impossible primarily to state whether or not the cord is crushed or pressed on by bone, blood or exudate, except by an open operation. Only by the persistence of total loss of reflexes, complete insensibility to touch and pain, and motor paralysis below the level of the lesion, can total transverse destruction of the cord be diagnosed. If pressure on the cord is allowed to remain for many hours, irreparable damage may take place. Unless it is perfectly clear that the cord is irretrievably damaged, an open operation to establish the condition of the cord and to relieve pressure is imperative as soon as surgical shock has been recovered from. In certain cases of fracture of the spine, when the cord is not injured, but is liable to injury from displacement of the fragments of a vertebra, rectification of the deformity and fixation of the spine may be used. If the cord is crushed, no matter what treatment is adopted, there will, of necessity, be a high rate of mortality.

37. **Tubercular Conditions of Spine.**—According to Willard, complete methodical and long-continued fixation of the spine in the position of hyperextension, with healthy surroundings in the sunlight, are the prime factors in securing new ossific deposit necessary to replace the carious bone. Laminectomy for paraplegia is advisable only after long-continued and patient treatment along these lines from one to two years, since the prognosis, especially in children, under these conditions, is favorable, and good powers of locomotion may be confidently expected. The operation is justifiable in selected cases in which loss of motion and sensation are progressively worse and the symptoms threaten life. If the tuberculous masses within the spine can be removed, and if extradural pachymeningitic deposits or pus can be taken away, improvement may be expected, and in many cases relief occurs. The operation has a mortality of about 25 per cent. from immediate shock, 36 per cent. within a month; while one-half the patients die within the year, their lives probably being shortened by the operative procedure. Cases of non-improvement and death equal nearly 65 per cent. Forceful immediate straightening of the kyphosis is an unsurgical and dangerous proceeding; it is liable to reawaken the tubercular disease and to weaken the column. Forceful gradual straightening by supporting the kyphotic area on a pedestal is a valuable agent in relieving deformity. The weight of the shoulders and pelvis can thus be utilized as straightening forces and the weight of the column thrown on the posterior arches. In this position it is permanently fixed by plaster of paris. Complete erosion of the carious bodies of the vertebrae is an uncertain operation; in the dorsal region requiring section of ribs, with danger of wounding the pleura. Wiring of the spinous processes has never been sufficiently tried to demonstrate its helpfulness. Spinal abscesses which contain only liquefaction or caseation products should be aspirated. When true pus has formed, drainage is advisable.

38. **Surgical Treatment of Intraspinous Tumors.**—Harte's paper is based on the records of 92 operations for spinal tumors, among which number 43 patients died, a total mortality of nearly 47 per cent. The nature of the tumor is recorded in 88 of the reported cases. It was sarcomatous in two-fifths of the whole number (37 cases); adhesions, thickenings, etc., hold second place, with 11 cases; then comes *echinococcus*, 8 cases; fibroma, 6 cases; syringomyelia, 5 cases; endothelioma, 4; psammoma, 3; cyst, 3; fibromyxoma, 2; osteoma, 2, and one each of myeloma, lipoma, lymphangioma, dermoid cyst, primary and secondary carcinoma and one tumor of bone, the nature of which is not stated. In only three instances in

which the patient recovered from the operation did no improvement follow it. Two of these were cases of inoperable sarcoma, and the third was a case of syringomyelia. Of those patients, 49 in number, who survived the operation for some weeks or months, no less than 29, or 59 per cent., recovered their functions sufficiently to be classed as cured; 17, or 34 per cent., could be classed as improved by the operation; while in the condition of only three patients, or 6 per cent., as mentioned above, did the operation effect no change. Harte includes in his figures twelve cases in which symptoms of spinal tumor were produced by meningeal thickenings or adhesions. In at least five of these cases the patients had suffered from Pott's disease of the spine in previous years, and a kyphosis still remained; but no tuberculous process was found at the operation. There are 87 cases in which the situation of the tumor with regard to the dura is mentioned; in 50 of these it was extradural, and in 36 intradural—not such a very striking difference. The death rate, moreover, in the extradural cases was even higher than that of the intradural tumors, being 50 per cent. for the former and only 47.21 per cent. for the latter. It is interesting to note that among female patients the mortality of operation has been only 45 per cent., while among the male it is 57 per cent. In searching for an explanation of this marked difference, Harte noticed that sarcomata were found one-third oftener in males than in females, and supposes that this fact may have something to do with lessening the mortality among women. Most of the operations were on adults, nearly one-half being between 30 and 50 years of age. The extremes of life were 9 years, in a boy, and 65 years, in a woman. Those patients under 20 and over 50 gave the highest percentage of recoveries. The average duration of symptoms before the operation was two years and three months. In 12 patients symptoms had existed for less than six months, in 11 for one year, in 8 for one year and a half, in 12 for two years, in 11 for three years, in 7 for four years, and in 6 for periods varying from four to eighteen years. The duration of symptoms does not throw much light on the nature of the tumor. The average duration of symptoms in the patients with sarcoma was two and three-quarters years, in those with adhesions two and three-quarter years, in those with *echinococcus* two and one-half years, and in those with fibroma one and a half years; while in all other forms of growth the average was about two and one-eighth years. A history of injury is noted in only five cases—three sarcomata, a psammoma and an endothelioma. Of 82 cases in which the region of the spine affected is given, the upper dorsal region was involved in 33 cases, or over 40 per cent.; the tumor was found in the lower dorsal region in 24 cases, in the lumbosacral region in 14, and in the cervical region in 11 cases. As far as the results are concerned, it appears to be immaterial at what level the growth is found. The cause of death is given in 28 cases. One-half of these were due to shock and hemorrhage, or to infection and meningitis, there being 7 fatal cases under each of these categories. Eight patients died from exhaustion, three from recurrence of malignant growths, two from hypostatic pneumonia, and one from bedsores and sepsis. As regards the technic of the operation, it is essentially the same as when employed in traumatic cases. After the operation no rapid improvement in the patient's condition need be anticipated; indeed, the paralysis and the anesthesia are sometimes markedly aggravated by the interference with the spinal nerves. The pain, however, is nearly always remarkably relieved; and the patient is in a more hopeful frame of mind than before the operation. The after-treatment should be the same as in every serious operation.

39. **Surgical Anatomy of Small Intestine and Its Mesentery.**—The studies reported by Monks concern that part of the small intestine which extends from the end of the duodenum to the ileocecal valve, and which is known to anatomists as the jejunum-ileum. The nature of this paper is such that it does not admit of a satisfactory summary of all the points mentioned in it. There are certain features, however, which Monks emphasizes. He attempts to show: 1. That the relative shape of the mesentery and intestine *in situ* can be best understood by arranging the intestine in a series of alternating curves on a wire, thus putting all parts of the intestine and mesentery



gently on the stretch. 2. That the mesentery may be roughly divided into two portions: (1) a proximal or flat portion, which comprises about two-thirds or three-fourths of the mesentery, and (2) a distal or ruffled portion, the "ruffled border," which comprises the remaining one-third or one-fourth. 3. That the main sheets of the mesentery alternate from above downward, going first to the left, then to the right, and finally proceeding to the iliac regions and pelvis. 4. That the fold of mesentery which descends into the pelvis can usually be palpated from a wound in the lower abdomen, and that it forms a valuable guide for the finger in the attempt to reach the left abdominal fossa. Monks suggests that this fold be known as the pelvic fold of the mesentery. 5. That the part of the ileum which is about to enter the cecum can usually be picked up from a right iliac wound with the forefinger, which, after passing into the pelvis, is curved upward around "the pelvic fold of the mesentery." 6. That while the intestine, freed from its mesentery, is straight, or nearly so, the mesentery when attached to it obliges it to follow a curved and tortuous course. 7. That, when the gut is attached to the mesentery, the free border of the gut is several feet longer than its mesenteric border, and that the free border may, therefore, properly be called "the long side," and the mesenteric border "the short side" of the intestine. 8. That the influence of the mesentery is such that the intestine is thrown into a series of alternating loops of varying shapes, sizes and planes. 9. That kinks in the intestine are usually confined to the lateral aspect of the gut. 10. That a distended and paralyzed intestine, filled with gas or semiliquid contents, does not at once empty itself through an enterostomy wound, and that the cause of this is obstruction, not only from sharp curves and kinks, but also from outside pressure on the tube, and, still further, because the fluid portions are in the dependent loops, where they act as traps to obstruct the passage of gases along the tube. 11. That, unless the intestine be "gathered up" on the tube, it is impossible to pass any instrument, hard or soft, straight or curved, into the gut without probability of soon engaging the wall of the intestine, usually in its free border. And, finally (12), that, when the size of the wound and its situation will permit, the surest method, at least on the cadaver, of determining which is the proximal and which the distal end of a loop of intestine is by palpation of the mesenteric root between the thumb and fingers of one hand.

40. Infection of Knee Joint.—Flint analyzes 310 cases and summarizes his paper as follows: Non-penetrating injuries, penetrating injuries, traumatic or operative, and knees independent of any injury occurring in the course of some other infectious process, or not, may present signs and symptoms not to be distinguished in the absence of bacteriologic examination from the cardinal sign and symptoms of infection. Certain of these cases are undoubtedly infected, but the data at command do not allow these to be distinguished from such as may be due to trauma and those possibly due to toxins secondary to infection elsewhere. The knee joint has certain germicidal powers. One out of every 22 operations on clean knees becomes sufficiently infected to demand operation (4.6 per cent.). One out of every 9 operations for recent (5 days) traumatic non-penetrating injury becomes sufficiently infected to demand operation (11 per cent.). One out of every 35 operations for pathologic conditions other than traumatic injuries more than five days old becomes sufficiently infected to demand operation and drainage of the joint (2.9 per cent.). One out of every 22 operations for simple fracture of the patella becomes sufficiently infected to demand operation (4.6 per cent.). One out of every 71 operations for fracture of the patella done after the fifth day becomes sufficiently infected to make operation a necessity (1.2 per cent.). One out of every 9 or 10 operations for fracture of the patella done before the fifth day becomes sufficiently infected to demand operation (10.5 per cent.). Three out of every five cases of penetrating injury to the knee joint become sufficiently infected to require operation (60 per cent.). Of compound fractures of the patella, seven out of nine become sufficiently infected to demand operation (78 per cent.). Certain knees subjected to non-penetrating injury and not operated on become sufficiently infected to require operation (10 per cent. of the operative septic cases). Certain knees become sufficiently infected to re-

quire operation where no history of trauma or other evident septic focus in the body exists (13 per cent. of the operative septic cases). Certain knees become sufficiently infected to require opening and draining the joint in the course of some evident focus of infection elsewhere in the body (11 per cent. of the operative septic cases). One out of every nine patients with infected knees which have been opened and drained dies (11 per cent.; some after previous amputation). One out of every fifteen patients with infected knees which have been opened and drained comes to amputation before recovery (6.6 per cent.). One out of every thirty-one infected knees which have been opened and drained is resected (3.3 per cent.). Most knee joints which have been infected, opened, drained, and recovered show varying degrees of functional disability, from slight limitation of motion to complete ankylosis, with or without subluxation. The average stay in the hospital of a patient operated on for infected knee joint is between two and three months. When it is once determined to open and drain the joint, the operation should be as radical as possible at the start. The position of the leg should be that giving the best mechanical drainage, i. e., the patient should be face down. The risk of infection is greatest in penetrating wounds of the knee (60 per cent.). The risk of infection is least in operations on clean knees and where there has been no recent trauma (3 to 4 per cent.).

#### International Clinics, Philadelphia. Vol. III.

- 42 Therapeutic Uses of the Roentgen Rays or Radiotherapy. G. C. Johnston, Pittsburg.
- 43 Action of Metallic Ferments on Metabolism, and Their Effects in Pneumonia. A. Robin, Paris, France.
- 44 Musculo-Tonic and Diuretic Action of Formic Acid and the Formates. H. Huchard, Paris, France.
- 45 Symptomatic Treatment of Tuberculosis. N. P. Barnes, Washington, D. C.
- 46 Opothropic Treatment of Renal Insufficiency. Teissier, Paris, France.
- 46½ Serumtherapy. J. W. Wainwright, New York.
- 47 Mucous Colic or Membranous Colitis. A. McPhedran, Toronto, Canada.
- 48 Injuries and Lesions Following the Toxic Use of Alcohol. T. D. Crothers, Hartford, Conn.
- 49 Ulcer of the Stomach, with Contractions in a Boy Aged Fourteen Years; Cerebral Hemorrhage and Lumbar Puncture; Curable Albuminuria. J. A. Robinson, Chicago.
- 50 Addison's Disease. E. F. Wells, Chicago.
- 51 Case of Chronic Jaundice and Great Enlargement of the Liver, Due to Primary Carcinoma of the Extrahepatic Bile Ducts, Commencing at the Junction of the Hepatic Ducts. F. P. Weber and E. Michels, London.
- 52 Fractures of the Patella. J. S. Wight, New York.
- 53 Paraffin Injections by the "Cold" Process. M. Broeckaert, Ghent, France.
- 54 Ethyl Chlorid: Its Value as a General Anesthetic. T. D. Luke, Edinburgh, Scotland.
- 55 Differential Diagnosis of Tumors of the Right Hypochondrium. Th. Tuffier, Paris, France.
- 56 Acute Anterior Poliomyelitis with Special Reference to the Stage of Invasion. S. Brown, Chicago.
- 57 Paralysis Agitans; Hemiplegia; Combined Sclerosis and Ataxic Paraplegia; Locomotor Ataxia; Acute Confusional Insanity. D. E. Brower, Chicago.
- 58 Syphilitic Necrosis of the Frontal Bone. A. H. Ohmann-Dumesnil, St. Louis, Mo.
- 59 Treatment of Hay Fever and Asthma. C. H. Knight, New York.
- 60 Carbonic Acid Gas Application in Rhinitis. A. Rose, New York.
- 61 Major Trauma of the Eye in General Practice. W. T. Shoemaker, Philadelphia.
- 62 Gonorrhea and Conjunctivitis. W. G. Sym, Edinburgh, Scotland.
- 63 Cirrhosis of the Liver. R. Kretz, Vienna, Austria.

#### American Journal of Orthopedic Surgery, Philadelphia.

October.

- 64 Conclusions Drawn from a Comparative Study of the Feet of Barefooted and Shoe-Wearing Peoples. P. Hoffmann, St. Louis.
- 65 Patterns of the Spinal Cord Curve of Patients with Pott's Disease Wearing Plaster Jackets. A. Thorndike, Boston.
- 66 Two Cases of Spondylolisthesis. C. D. Napier, Boston.
- 67 Desirability of Replacing Congenital Hip Dislocation in Infancy. B. Bartow, Buffalo.
- 68 Study of the Anatomy of Congenital Dislocation of the Hip After Manipulation Reduction. N. Allison, St. Louis.
- 69 Congenital Dislocation of the Hip. Stitching the Capsule Around the Reduced Head. E. H. Bradford, Boston.
- 70 Achillotomy and Fasciotomy in a Patient Seventy-Two Years Old. A. R. Shands, Washington, D. C.
- 71 Report of the Adult Ward of the Hospital for the Ruptured and Crimped for the First Two Years Ending March 1, 1905. V. P. Gibney, New York.

#### Iowa Medical Journal, Des Moines.

October.

- 72 Two Eye Diseases of Children of Interest to the General Practitioner. H. C. Moffett, Clinton, Iowa.
- 73 Gastric Ulcer. F. E. Walter, Worthington, Minn.
- 74 Pneumonia: Its Rational Successful Treatment. W. C. Abbott, Chicago.



## Virginia Medical Semi-monthly, Richmond.

October 7.

- 75 Appendiceal Abscess, Pathology and Treatment. S. M. Masou, Clarksburg, W. Va.
- 76 Appendicitis, when to Operate. J. B. Catlett, Staunton, Va.
- 77 Mastoiditis. J. G. Parsons, Brookings, S. D.
- 78 Diagnosis of Pregnancy at Term. G. Baughman, Richmond.
- 79 Important Changes in the New Pharmacopeia. F. M. Reade, Richmond.
- 80 Principles of Surgery. S. McGuire, Richmond.
- 81 Epilepsy. J. W. Selman, Greenfield, Ind.

## Texas State Journal of Medicine, Fort Worth.

October.

- 82 Cure of Leprosy. I. Dyer, New Orleans.
- 83 Pathogeny of Fever. J. W. McLaughlin, Austin, Texas.
- 84 X-Ray Treatment of Skin Cancer, Lupus and Keratoses. J. M. Martiu, Hillsboro, Texas.
- 85 Importance and Advantage of Immediate Repair of Lacerations Occurring During Childbirth. J. M. Frazier, Belton, Texas.
- 86 Repair of Injuries to Birth Canal. M. L. Moody, Greenville, Texas.
- 87 Observation on the Treatment of Trachoma. T. F. Roberts, Paris, Texas.
- 88 Treatment of Ectopic Pregnancy. H. K. Leake, Dallas, Texas.
- 89 Treatment of Exophthalmic Goiter. R. W. Nobles, Temple, Texas.

## Northwestern Lancet, Minneapolis.

October 15.

- 90 Forms and Etiology of Suppurative Processes in the Abdominal Cavity. A. C. Behle, Salt Lake City.
- 91 Pathology of Suppurative Processes in the Abdomen. J. F. Critchlow, Salt Lake City.
- 92 Diagnosis of Suppurative Processes in the Abdominal Cavity. E. F. Root, Salt Lake City.
- 93 Treatment of Suppurative Processes in the Abdominal Cavity. H. D. Niles, Salt Lake City.

## Denver Medical Times.

October.

- 94 Prostatitis. M. H. Sears, Denver.
- 95 Lead Poisoning by Lead Acetate in Therapeutic Doses. J. R. Arneill, Denver.
- 96 Normal Obstetrics: Management of the Puerperium. T. M. Burns, Denver.

## Journal of South Carolina Medical Association, Charleston.

October 21.

- 97 Should the Radical Cure of Hernia be Attempted by Median Abdominal Section? R. S. Cathcart, Charleston.
- 98 Imperative Surgery. A. B. Knowlton, Columbia.
- 99 Remarks on Appendicitis. T. P. Whaley, Charleston.
- 100 Remittent Fever. H. L. Shaw, Fountain Inn.
- 101 Diphtheria. W. J. Chapman, Spartanburg.
- 102 Diseases of the Accessory Sinuses of the Nose. W. P. Porcher, Charleston.

## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

October 21.

- 1 An Address on Sir Thomas Browne. W. Osler.
- 2 Scientific Research in Medicine. C. F. H. Nuttall.
- 3 \*New Operation for Moderate Short Sight. E. E. Maddox.
- 4 Treatment of Sleeplessness and Pain. L. Brunton, A. R. Cushny, W. Broadbent, W. H. White, A. Foxwell, and B. Dawson.
- 5 \*Diagnosis of the Varieties of Pleural Effusion. W. Hadley.
- 6 \*Influence of Posture on Adventitious Breath Sounds, with Especial Relation to the Early Diagnosis of Phthisis. W. B. Ransom.
- 7 Pathology, Diagnosis and Treatment of Various Forms of Meningitis. T. Tooth, T. Horder, W. Osler, and others.
- 8 \*Human and Bovine Tuberculosis. N. Raw.
- 9 \*Employment of Citrate of Soda in the Feeding of the Infant. F. J. Poynton.
- 10 Diagnosis and Treatment of Degeneration of the Heart Apart from Valvular Disease. J. Dreschfeld.
- 11 Diagnosis of Gastric Ulcer. B. Dawson.
- 12 Pathology of Bradycardia. J. Hay.

3. New Operation for Moderate Myopia.—Maddox' operation consists in flattening the cornea, first in one meridian and then at right angles. The operation was tried successfully on a young man who was barred from entering the army medical service because of a very slight myopia in one eye. Without anesthesia Maddox first dissected up a conjunctival flap and threw it over the cornea, then introduced a triangular iridectomy knife between the reflected conjunctiva and the sclera, and entered the anterior chamber. The iris prolapsed again and again, especially after enlarging the incision above and below with the probe-pointed knife, which forms the next stage of the operation, for only a very large incision is capable of producing a regular flattening of the cornea. At last the iris was comfortably reposed and the conjunctival sutures inserted so as to exert considerable traction on the flap. Healing was painless and uninterrupted. The second incision was made about three months afterward, the incision being made

with an ordinary cataract knife, this time downward, with the same good result as before. The patient succeeded in passing his physical examination, showing that the operation was a success.

5. Diagnosis of Varieties of Pleural Effusion.—Hadley calls attention to the means at our disposal for diagnosing the nature of any particular pleural effusion. These are clinical cultural, by inoculation, by tuberculin, Jousset's microscopic method, cytodiagnosis and serum diagnosis. In conclusion he submits the following suggestions: 1. It is most important to appreciate the frequently tuberculous nature of pleural effusions. 2. Clinically, if an effusion takes place without any apparent cause, either in the shape of trauma, of inflammation from without, or of some definite trouble in the lung, mediastinum, or pericardium, or if there is not heart or kidney disease to account for it, and if there is no strong rheumatic taint, then it is almost surely tuberculous. 3. Pathologically we have several very reliable ways of definitely determining its true nature, the two most reliable as well as convenient, being (a) the estimation of the cell content of the fluid, (b) Jousset's method of demonstrating the presence of tubercle bacilli.

6. Posture and Adventitious Breath Sounds.—The point brought out by Ransom is that not only in cases of bronchitis and emphysema, but in a few cases of limited pulmonary tuberculosis, adventitious sounds may be heard in the supine while absent in the erect position.

8. Human and Bovine Tuberculosis.—As the result of an observation of 3,500 cases of tuberculosis, with, in addition, a study of 650 autopsies on such cases, Raw expresses the opinion that human and bovine tuberculosis are separate and distinct varieties of disease, but that the human body is susceptible to both, and especially to bovine tuberculosis in the early periods of life. The two diseases are so rarely seen together in the human that there seems to be some ground for presuming that they are antagonistic to each other, and that bovine tuberculosis may possibly confer an immunity against human tuberculosis. Raw believes that primary intestinal tuberculosis, *tabes mesenterica*, and other tuberculous affections of the serous membrane in children are probably bovine tuberculosis conveyed by milk and are not true human tuberculosis, although the bacillus of Koch is found in them all. He believes also that the bovine bacillus is more virulent for children than the bacillus of human tuberculosis.

9.—See THE JOURNAL, Aug. 13, 1904, page 701.

## The Lancet, London.

October 21.

- 13 \*Pathology and Prevention of Secondary Parotitis. R. T. H. Bucknall.
- 14 \*Discrimination of Physiologic Albuminuria from that Caused by Renal Disease. A. E. Wright and G. W. Ross.
- 15 \*Case of Volkmann's Contracture Treated by Shortening the Radius and Ulna. R. P. Rowlands.
- 16 Popliteal Aneurism in a Boy Cured by Hunter's Operation. E. Owen.
- 17 \*Case of Impaction of a Gallstone in the Large Intestine. S. M. Smith.
- 18 Case of Leprosy in a European. J. H. P. Graham.
- 19 One Hundred Administrations Each of Ethyl Chlorid and of Somnoform Aloue and in Mixture with Nitrous Oxid. G. W. B. Daniell.
- 20 Pregnancy Complicated by Chorea Gravidarum and Eclampsia; Recovery. H. U. Gould.

13. Secondary Parotitis.—On studying the evidence presented by 6 cases Bucknall concludes that it is highly probable that secondary parotitis is invariably due to an infection of Stenson's duct, dependent on a septic condition of the mouth, and that its onset may be prevented by attention to the following details: 1. The patient's mouth should be carefully cleansed and rendered aseptic before operations and at the commencement of long febrile illnesses. If necessary, causes of nasal obstruction leading to mouth breathing, such as adenoids, should be removed. 2. The anesthetic apparatus should be sterile. 3. The mouth should be periodically cleansed afterward, especially after every attack of vomiting. 4. The bowels should be opened early, and food by the mouth, and especially solid food, should be given as soon as possible. 5. Opium should not be given unless absolutely necessary. 6. The head should not be placed too low nor the binder fixed



too tightly and the dorsal decubitus should be given up as soon as possible. There is also evidence to show that the process of duct infection responsible for ascending parotitis is due to one or other of the following causes: 1. The presence of specific micro-organisms in the buccal cavity, such as the special organisms of mumps, typhoid fever, and probably typhus fever and pneumonia also. 2. An increase in the number or virulence of the normal buccal organisms and especially of the staphylococci. 3. Anything interfering with the quantity or quality of the saliva protectively draining down the duct. Either an actual obstruction, such as a calculus, or an alteration in the saliva secreted, resulting from general ill-health or the administration of drugs may produce this effect.

14. **Physiologic Albuminuria.**—Wright and Ross claim that when it is found that a patient possesses a normal excretory quotient, and that his albuminuria can be abolished by diminishing the hydrostatic pressure on the renal capillaries and by increasing the coagulability of the blood, there is every reason to conclude that the kidney is free from organic disease and that life is no more endangered than it would be if the patient were the subject of urticaria.

15. **Operation for Volkmann's Contracture.**—Rolland describes an operation which he performed on a girl 6 years old for Volkmann's contracture following a fracture of the radius and ulna. The whole left upper limb having been very thoroughly cleaned and compressed on the previous day, an operation was performed a little more than four months after the accident. Anesthesia was produced by ethyl chlorid followed by ether. A tourniquet was applied round the lower third of the arm and an incision was made along the middle third of the radial border of the forearm; the wound was placed slightly in front of the interval between the radial extensors of the wrist and the special extensors of the thumb. The posterior border of the radius can be easily felt in this interval before an incision is made, but a wound over the extensor carpi radialis longior gives a better access to the radius. This tendon and the radial nerve protected by it were drawn forward and the extensor carpi radialis brevis was retracted in the opposite direction. The radius, having been well cleared of soft parts, was drilled at two points, one and a quarter inches apart, and then a portion of it three-quarters of an inch long was removed by the aid of a small saw. The piece of bone removed extended from the pronator teres insertion to the pronator quadratus; some of the fibers of the former had to be detached from the bone to allow the removal of enough bone. The wound was now covered by a temporary dressing, during the removal of a similar portion of the ulna through a longitudinal incision along its subcutaneous border. Care was taken to divide the ulna an inch higher than the radius so as to prevent cross union by callus. The bone ends were brought together and fixed in apposition by means of fine silver wires, one for each bone. The bones were soft and the wire cut its way out by fissuring the upper ulnar fragment and another hole had to be drilled farther away from the section; this was difficult and it demonstrated the wisdom of drilling the bones before sawing them. The drill holes in the radius had been so directed that when the wire was tightened the lower fragment of the radius rotated into a position of semi-supination. Thus the troublesome fixation of the hand in full pronation was corrected. During the operation it was noticed that the deeper flexors in front of the radius and ulna were firm and fibroid. On removing the tourniquet there was but little bleeding, so the wounds were at once sutured and the limb was enveloped with aseptic dressings and lightly secured in good position on an internal angular splint in order to preserve the semi-prone attitude of the hand. When the operation had been completed, the wrist and fingers could be extended almost, but not quite, into a straight line with the forearm. The splint was long enough to maintain this correction. The operation lasted for forty minutes. After the fourth day passive movements of the fingers were carried out several times daily and the child was encouraged to move the fingers from the first day. When the bones had united, pronation and supination were also practiced diligently and massage also was carefully performed after the ninth day. The child can now use the hand for most things, has a good range of movement in the fingers,

a powerful grip, and supination and pronation are very well performed.

17. **Impacted Gallstone in Colon.**—The symptoms in the case reported by Smith did not, at any time, point to gallstone disease. There was some pain across the abdomen in the region of the umbilicus, occasional attacks of hiccup and frequent vomiting. An operation having been decided on, the abdomen was opened in the middle line below the umbilicus. Examination revealed the presence of a mass of adhesions in the region of the gall bladder. A second incision was made through the upper part of the right rectus, and it was found that many bands of adhesions were binding down the transverse colon to the neighborhood of the gall bladder. That part of the colon beyond this point was empty and collapsed. Separation of the adhesions was successful in relieving obstruction. Gauze drains were inserted and the wounds were closed. The patient's condition becoming worse, the colon was again exposed and opened under local anesthesia and a Paul's tube tied in. The patient died shortly afterward. At the autopsy the large intestine was found to be distended as far down as the brim of the pelvis, at which point a gallstone of the size and shape of a hen's egg was found impacted. The transverse colon and the gall bladder were found imbedded in a mass of adhesions and a communication was found between their cavities. The common bile duct was obliterated. Other calculi were found in the gall bladder.

#### Journal of Tropical Medicine, London.

October 16.

- 21 Treatment of Sprue. D. J. Galloway.
- 22 Cerebrospinal Fever—Spotted Fever. K. McGahey.
- 23 Epidemic Infectious Pneumonia, Plague and Influenza in India. G. H. Fink.

#### Bulletin de l'Académie de Médecine, Paris.

- 24 (Year LXIX, No. 32.) \*Le paludisme en Algérie pendant l'année, 1904. Laveran.

24. **Malaria in Algiers During 1904.**—The French have been masters of Algeria for seventy-four years, but the ravages of malaria recur, in certain seasons, almost as severely as during the first years of their occupancy. About 98,774 cases of malaria were known in 1904, with 7,432 deaths from this cause. The total mortality during the corresponding three months in 1903 was 2,280, while it rose to 9,927 in 1904, mainly due to the recrudescence of malaria. In the French army of 44,065 men, stationed in Algeria, 10,065 cases of malaria were reported, with 47 deaths from this cause. The season was an unusually wet one. The physicians, teachers and public officials in Algeria now have undertaken a campaign of education to teach the people how to avoid malarial infection. It is proposed to introduce the "malaria catechism" used in Corsica. The children there are obliged to learn the answers to a set of questions in regard to malaria, its causes, mode of dissemination and its prophylaxis. Drs. Soulié and Moreau have been instrumental in founding an antimalaria league in Algeria, which is now introducing prophylactic measures on a large scale.

#### Presse Médicale, Paris.

- 25 (No. 83, Oct. 14.) Localisation et extraction des projectiles par un procédé basé sur la simple radioscopie. T. Tuffier.
- 26 Report of IX Congress of Urology, Paris, October 5-7.
- 27 (No. 84.) \*L'hémophilie, Pathogénie et sérothérapie. P. E. Weil.
- 28 \*La langue auxiliaire. L'Esperanto (artificial, auxiliary language). G. Vitoux.

27. **Effectual Serum Treatment of Hemophilia.**—Weil presents some views in regard to hemophilia which explain its nature and suggest effectual treatment. His experience has demonstrated to his satisfaction that the lack of coagulation in the blood of hemophiliacs is not due to the presence of an anti-coagulating body. It is the result of the absence or modification of certain substances normally in the blood, such as the coagulating ferment, the fibrin ferment or the thrombasc. If traces of these ferments from normal serum are added to a specimen of hemophilic blood, coagulation proceeds as under normal conditions. Hemophilic serum added to normal blood does not affect its coagulation. On the other hand, normal serum added to hemophilic blood causes normal coagulation in the latter. Animal serums have the same action in this respect as human serum, but less intense. In a typical case of



hemophilia with excessive, protracted hemorrhages after slight traumatism, never spontaneous, intravenous injection of beef serum had a remarkable effect in inducing coagulation in the blood drawn from the finger or elbow. Before the injections blood from a vein in the elbow showed no signs of coagulation until after 25 to 75 minutes, but after intravenous injection of 15 c.c. of beef serum blood from the finger coagulated in 3 minutes, and that from the elbow in from 5 to 10. A week later 10 c.c. of human blood were injected, and by the fifth day coagulation was almost immediate. The interval before coagulation gradually lengthened until in two weeks it was from 20 to 55 minutes. Another intravenous injection of 15 c.c. of beef serum reduced the interval again to less than 8 minutes. This serum treatment or vaccination of the hemophilic blood is only passive. The curative action of the injected serum becomes evident in 48 hours and continues marked for about a week, when it gradually subsides. This passive vaccination is similar to that observed by Widal in his preventive serum treatment of paroxysmal hemoglobinuria. Too large doses produce the opposite effect. Weil concludes by recommending this method of serum treatment, or rather opotherapy, as a preventive measure in case an operation is contemplated on a hemophilic. In the case described the patient had a tooth pulled after an intravenous injection of the foreign serum, and, for the first time in his life, the traumatism of the operation was not followed by excessive and prolonged hemorrhage. His gums did not bleed any more than is usually observed in normal individuals.

**28. International Language: Esperanto.**—THE JOURNAL recently referred to an international congress where all spoke the same language, although 1,500 members had gathered from all parts of the civilized world. This artificial, auxiliary language was invented by a Polish physician, Dr. Zamenhof of Warsaw, in 1887, and Vitoux claims that it is a masterpiece of simplicity and clearness. The dictionary contains only the root words, the thirty affixes that modify them being applied with mathematical exactness to define the sense. The plan of the language is readily understood and three or four months of practice are sufficient to master it. Hachette of Paris publishes, in Esperanto, the *Internacia Scienca Rivuo*, and it is announced that a medical journal, published exclusively in Esperanto, will soon be founded.

#### Centralblatt f. Chirurgie.

Last indexed page 1452.

- 39 (XXXII, No. 37.) Improved Technic for Roentgen Control of Corrected Hip-Joint Luxations.—Die Ermöglichung einer genauen Kontrolle reponierter kongenitaler Hüftgelenksluxationen. R. Klapp.

#### Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1283.

- 40 (XXIX, No. 37.) \*Pyonephrose, Pyelitis und Harnleiter-Kompression während der Gravidität. A. Sippel.  
42 Zur Technik der Sterilisierung der Frau (of women). M. Kirchhoff.  
43 Ein neues Instrument zur Ventrifixation des Uterus. J. Rudolph.

**40. Pyonephritis, Pyelitis and Compression of Ureter.**—A woman of 33, in the sixth month of her first pregnancy, was attacked suddenly with violent pains in the left side of the back, and fever. The urine showed no marked changes, but other signs indicated a tumor in the kidney region, and the operation revealed pyonephrosis. The cause was assumed to have been compression of the left ureter by the gravid uterus, and the patient was ordered to lie exclusively on the right side. Recovery was prompt and the pregnancy continued undisturbed to term. Sippel ascribes greater importance to compression of the ureter than is generally accepted nowadays. Abrupt compression might induce troubles leading even to eclampsia, without permanent enlargement of the ureter sufficient to attract attention at the autopsy. Systematic reclining on the sound side, supplemented with the usual measures, will frequently avert or banish disturbance from this compression pyelitis. If all fails, then the uterus should be emptied. Compression of the ureter should be suspected when fever and sudden pain develop during a pregnancy. In some cases, appendicitis has been diagnosed, but the appendix region was found sound at the operation and the disturbances persisted until expulsion of the fetus, when they subsided. The compression may interfere with the circulation into and out of the kidney,

and relief may be obtained by decapsulation, as Edebohls has reported in a case of eclampsia.

#### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 44 (XXXI, No. 38, September, 21.) \*Die praktische Durchführung des Ueber-Druckverfahrens (technic of over-pressure anesthesia). L. Brauer.  
45 \*Kleine Hilfsmittel bei der Untersuchung von Gehirnkranke (examination of patients with brain affections). H. Liepmann.  
46 Ueber einen Fall von Poliomyelitis anterior acuta mit oculo-pupillären Symptomen. A. Cloppatt.  
47 \*Ueber Colitis mucosa (Enteritis membranacea) und Colica mucosa. H. Elsner.  
48 \*Ueber den Zickzackschnitt bei der Appendicitis operation (zigzag incision). Riedel.  
49 \*Ueber Hodengangrän bei Gonorrhoe (gangrene of testicle). A. Buschke.  
50 \*Ueber Bolusverbandstoffe (dressings of fuller's earth). Aufrecht.

**44. Improved Technic for Over-pressure Anesthesia.**—The head of the patient is enclosed in an air-tight glass box, to which compressed air is supplied. The arms of the anesthetist are inserted into the box through openings, with an air-tight rubber cuff fitting around the wrist. There are also additional openings for the arms of an assistant. The illustration gives a view of the combination of the compressed-air apparatus, with the chloroform-oxygen apparatus which supplies mixed chloroform and oxygen for the anesthesia. Both apparatus have been simplified and improved. The introduction of a bellows tank provides a reservoir for the compressed air. A manometer shows the varying pressure, while the register of a second manometer shows the constant pressure in the box in which the patient breathes. There is also a glass bell, in which hangs a rubber bag, in direct communication with the breathing box; this bag is subjected inside and outside to the same pressure as the patient's lungs.

**45. Minor Aids to Examination of Patients Presenting Brain Troubles.**—Among the minor points to which Liepmann calls attention is the danger of incorrectly diagnosing apraxia in cases of paralysis from a focus in the cortex. This is especially liable to occur when there is simultaneous aphasia. In examining such a patient, one is liable to accept mental impairment from the lack of the proper response. This error can be avoided by systematically seeking for some group of muscles which is not affected. The patient may be able to respond correctly with the muscles of the leg or face when the failure to respond correctly with the hand might be interpreted as due to inability to understand the orders given. Another means is by asking a nonsensical question, such as "Has an eagle wings? Has a horse wings?" the expression of the patient's face answering the question as plainly as words.\* To determine hemianopia, he strews some beans on the table, without the patient noticing it, and then asks him to pick them up. If he picks them all up, not much is learned, but if he overlooks all on his left side a defect on that side is more than probable. Another point is that persons unable to read words are yet sometimes capable of reading figures. Another good test for mind blindness is to have the patient pick up grains of different sizes strewn on a table. The smallest size perceived is an indication of the visual capacity. Congenital may be differentiated from acquired color blindness by the lack of hesitation in sorting out articles of different colors. In testing cases of perseveration, only the first response in each series of tests can be regarded as demonstrative. He gives a number of means to test apraxia, and lays special stress on the natural actions of the patient, how he combs and brushes his hair, takes up a glass of water to drink when he is thirsty or greets a friend—the information thus derived is more important than that obtained when the patient performs the same actions on command.

**47. Membranous Enteritis.**—Elsner's article issues from Boas' clinic. He believes that colitis mucosa and colica mucosa are neuroses affecting the secretion of mucus. They are generally accompanied by other nervous symptoms, and the patients usually notice that the pains and evacuation of mucus follow psychic excitement. The secretion of mucus may be subject to nervous influences in other organs, as we witness in membranous dysmenorrhea and in croupous bronchitis. This nervous hypersecretion generally develops on the basis of some catarrhal intestinal affection. He describes the postmortem findings in 2 cases and reviews what has been published on the



subject, affirming, in conclusion, that there are no grounds for the assumption that membranous enteritis is a special affection *sui generis*.

43. **Zigzag Incision in Appendicitis.**—Riedel's motto now is: "Operate on a patient with appendicitis as soon as you see him." He protests against the term "early operation" and claims that it should be called the "proper operation." The tumor should not be directly cut into, and for this reason he prefers what he calls the zigzag incision. He has had a mortality of 7 per cent. in 357 cases, and states that 19 out of the 21 deaths might have been prevented if the patient had applied to a physician earlier.

49. **Gangrene of Testicle After Gonorrhea.**—Buschke knows of only 17 cases of gangrene of the testicle after gonorrhea. In the case personally observed, the gonorrhea was mild, but the inflammation in the testicle progressed to gangrene. The patient was a robust man of 27. A bacillus resembling the colon bacillus was cultivated from the secretions, and Buschke believes that the gangrene was a secondary process. Gonococci have not been found in the gangrene to date. Trauma seems to afford a predisposition.

50. **Dressings of Fuller's Earth.**—Aufrecht is enthusiastic in regard to the advantages of fuller's earth as a dressing for wounds. It is slightly astringent, sucks up the secretions and prevents putrefaction, all qualities of the ideal dressing. The best way in which to use it is with gauze impregnated with it: the gauze is first treated with an ammoniacal soap, with or without a small proportion of salicylic acid or aluminum acetate. The absorbing power of gauze thus impregnated with fuller's earth is three times that of ordinary gauze, while its antiseptic properties, he claims, are superior to those of iodoform.

#### Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 1528.

- 51 (LXXVII, Nos. 4-6.) Zur Frage der Choledochotomie. A. Brünig.
- 52 Zur Kenntnis der congenitalen Sacral-Tumoren. K. Frank.
- 53 Ueber eine besondere Form der Infractio: die Faltung der Knochen-Corticalis. H. Kohl.
- 54 Zur Lehre von osteoplastischem Carcinom. M. Matsuoka.
- 55 \*Ueber Nerven-Regeneration nach Extraction von Nerven wegen Trigemini-Neuralgie. G. Perthes.
- 56 Die operative Behandlung der Perityphlitis. R. Michaelis (Trendelenburg's clinic, Leipsic).
- 57 \*Fractures of Pelvis.—Die Beckenbrüche mit Bemerkungen über Harnröhren- und Harnblasen-Zerreissungen. P. Stolper.
- 58 "Zwei Dünndarmschlingen" in eingeklemmten Bruch (2 loops in incarcerated hernia). C. Lauenstein.
- 59 Pressure Stasis and Hemorrhages.—Ueber Stauungsblutungen durch Rumpf-Compression (traumatische Stauungsblutungen). P. Sick.
- 60 Suture of Left Ventricle for Bullet Wound.—Schuss durch die linke Herzkammer. Herznaht. Tod durch Peritonitis. R. Rothfuchs.
- 61 Successful Resection of 118 Inches of Ileum.—Resektion von 3 m. Ileum wegen Volvulus und innerer Einklemmung. R. Göbbel (Kiel).

55. **Regeneration of Nerves.**—Perthes describes the particulars of a case of recurring trigeminal neuralgia in which five different operations for its relief had been done. The patient finally succumbed to the progress of a valvular defect, and the autopsy revealed regeneration of the nerves where the Gasserian ganglion had been extirpated, and also after the various resections and other operations on the nerves involved. In a second case the neuralgia recurred after a Thiersch operation on the nerve, but was abolished again by removal of the regenerated nerve. Experiments on dogs are reported which show that regeneration of a nerve was almost certain to occur after a few months, when it was merely resected, while the mere severing of the nerve, with the interposition of a gold filling between the ends of the stumps in the infraorbital canal, prevented regeneration. The experimental results observed promise good results in man from the use of a dentist's filling to plug the canal in the bone after severing or extracting the inferior infraorbital or alveolar nerve.

57. **Fractures of Pelvis.**—Stolper's collection of fractured pelves now numbers 33, while the clinical cases observed bring the total to 64. He is convinced that many fractures of the pelvis are not recognized, and describes the points useful in diagnosis. It is difficult and sometimes impossible to diagnose a concomitant rupture of the bladder; consequently all dubious cases should be sent at once to a surgical hospital. Exploratory laparotomy is more than justified, and fine results were

attained in the 50 cases on record in which a ruptured bladder received operative treatment. Stolper's article fills nearly 100 pages, and presents the subject from every point of view, with special reference to injuries of the urethra and bladder.

#### Mitteilungen a. d. Grenzgebieten, Jena.

Last indexed page 1285.

- 62 (XV, Nos. 1-2.) \*Ueber einen grossen, intraduralen Tumor des Cervikal-Markes, der mit Erfolg exstirpiert wurde (successful removal of large tumor of spinal cord). S. Auerbach and Brodnitz.
- 63 \*Ueber Gefrierpunktsbestimmungen des Blutes und seröser Körperflüssigkeiten (cryoscopy). T. Cohn.
- 64 \*Welche Aussichten bestehen für eine Früh-Diagnose der Intestinal-Carcinome (prospects of early diagnosis)? I. Boas.
- 65 Artificial Hyperleucocytosis to Enhance Resisting Powers, and Study of Action of Subcutaneous Injections of Yeast Nucleic Acid in this Respect.—Künstliche Hyperleukocytose als Mittel zur Erhöhung der Widerstandskraft des Körpers gegen operative Infektionen. Renner.
- 66 Peptisches Geschwür nach Gastroenterostomie mit Bildung von Magen-Colon- und Colon-Jejunum-Fisteln: vollständiger Verschluss der Gastroenteroanastomose (peptic ulcer with fistulas and closure of gastroenteroanastomosis). J. Kaufmann (New York).
- 67 \*Zur Kenntnis der Osteogenesis imperfecta congenita und tarda (sogen. Idiopathische Osteopsathyrosis). E. Looser.
- 68 \*Guajacol zur Behandlung der Nieren-Tuberkulose (of kidneys). Max Schüller.

62. **Successful Removal of Spinal Tumor.**—The patient was a robust young woman, previously healthy, who suddenly experienced violent pains in the back of the neck and in the right arm. Symptoms of right radial paralysis developed with other indications of compression of the cervical spinal cord. Tentative antisyphilitic treatment produced no effect and the affection continued a gradually progressive course. In pachymeningitis, the radial domain is generally spared, while the trouble is usually bilateral and several roots are involved. The absence of vasomotor or trophic symptoms in this case spoke against syringomyelia. Differentiation from caries was more difficult, as some of the symptoms suggested it, also the predominance of motor over sensory disturbances, the comparatively rapid involvement of the other side (after six months), and the rigid way in which the head was held. Arguments against caries were found in the lack of any indications of tuberculosis or of a tendency to a hump or to protrusion of the rear wall of the throat, and also the normal temperature during the eight weeks of observation. Roentgen findings were negative. Abrupt pressure of the head in the direction of the spine did not cause the violent pain common to spondylitis, and extension gave no relief. As the highest muscles unmistakably affected with atrophy were the supraspinal, the upper edge of the tumor was supposed to reach the fourth cervical segment at least, possibly also the third and second. This was suggested by the zones of hyperesthesia which reached to the edge of the hair at the back and in front almost to the margin of the lower jaw. In this region the patient also located her most violent pains, although they sometimes extended into the back of the head and to the temples and brow. She also complained of pains in the left middle intercostal spaces, but these were disregarded in the diagnosis. It was assumed that the tumor probably extended downward to the eighth cervical segment, on account of the participation of the smaller muscles of the hand and the eye symptoms. Engravings of the tumor are given in natural size and colors. It was 6.5 cm. long by 1.5 to 2.25 cm. wide and 1 cm. thick, of rather solid consistency. It surrounded the spinal cord like a mantle, and its upper portion lay for 2.5 cm. beneath the atlas and axis. It was only lightly adherent to the arachnoid, and it slipped out from beneath the unopened atlas on gentle traction. Its removal was followed by a gush of blood-stained fluid, but this was soon arrested by lowering the head of the table and tamponing. The tampon was removed in a few minutes, and it was seen that the flattened spinal cord had resumed its cylindrical shape. Seven catgut stitches were taken in the dural sac, and a strip of gauze brought out through the wound which was sutured with catgut in tiers. No symptoms on the part of pulse or respiration were observed during the ablation of the tumor. The patient rapidly recovered, the paralysis and atrophy promptly subsiding; the muscles first affected regained function first. The eye symptoms, however, persisted unmodified. The incision extended from the atlas to the first dorsal vertebra, and the spine was carefully dissected free from the soft parts. When this had



been done, the patient suddenly stopped breathing and the pulse became imperceptible, but both were restored by two minutes of artificial respiration. On account of the necessary manipulations for this, the asepsis of the field was dubious, and consequently the soft parts were held back with a roll of gauze on each side and the skin was sutured over them. Three days later the operation was continued and the removal of the tumor then proved an easy task. Among the conclusions drawn from this experience is the refutation of the assumption that intradural tumors are necessarily small. Also that the injury from the tumor is liable to be felt more seriously in the part of the spinal cord opposite to the tumor than in the part directly contiguous to it. The patient in the present case recovered so completely that her right arm is now stronger than the left, notwithstanding its long paralysis. The operation was undertaken about eleven months after the first symptoms of trouble had been noted. Operating in two sittings was possibly one of the main factors in the success obtained.

**63. Cryoscopy of Blood and Serous Fluids.**—This article by Cohn contains the bibliography of the subject, in addition to extensive personal research. He found the freezing point of normal blood between  $-0.517$  and  $-0.562^{\circ}\text{C}$ . He noted that it was frequently abnormally low in chronic nephritis and generally so in uremia and leukemia. In febrile affections it was abnormally high. Contrary to what is observed in animals, inflammatory fluids in the pleura, peritoneum, spinal cord or brain are not isotonic with the blood serum in man. He was unable to find any particular molecular concentration of the blood characteristic for any special kind of nephritis.

**64. Prospects for Early Diagnosis of Intestinal Cancer.**—Boas analyzes his experience and comes to the conclusion that the prospects for early diagnosis of cancer in the intestines and its successful removal are not very promising. The really incipient stage of intestinal cancer is beyond our powers to detect. Early application to a physician and early diagnosis do not guarantee the possibility of its radical removal in all cases, and not even in the majority of gastrointestinal cancers. He cites a number of instances to show further that good results are possible even when the symptoms have long existed. The kind and the malignancy of the tumor are the deciding factors, not the promptness with which the affection is diagnosed after the first symptoms appear. Our very earliest diagnosis, as a rule, is too late. Metastases or ascites are found even in the apparently very earliest stages in a large proportion of cases. He does not believe that gastroscopy will ever acquire much importance, as the very first subjective symptoms are generally found accompanied by advanced objective changes in the majority of cases of intestinal or stomach cancer, even in case of cancers of the rectum which are more accessible than others. Much might be accomplished by better training of physicians in the diagnosis of cancer, and Boas here reiterates his plea for the establishment of cancer-examining stations for suspicious cases. This would reduce the number of investigated but incorrectly diagnosed cases of rectal cancer, and also of cancer of the colon. The latter have a better prognosis than cancer elsewhere in the gastrointestinal tract. The malignancy of cancer, he thinks, lies not only in the neoplasm itself, but in the insidious latency of its development.

**67. Idiopathic Osteopsathyrosis.**—Looser reports the results of examination of the amputated leg of a patient with typical congenital imperfect and tardy bone formation. It has convinced him that the condition is a clinically and anatomically well-defined affection, as he relates in detail.

**68. Guaiacol in Treatment of Tuberculosis of the Kidneys.**—Schüller describes two cases of tuberculosis of the kidneys in which he realized a complete cure by internal and local application of guaiacol for months. His first patient was a man of 40, with evidences of apical tuberculosis, bacilli in sputa, bilateral tuberculous processes in the testicles and tubercle bacilli and kidney epithelial cells and red corpuscles in the urine. The process in the testicles healed completely after seven injections of a guaiacol-iodoform-glycerin preparation, combined with internal administration of guaiacol for several months. The drug was then suspended for a few months, and then resumed for a few weeks, by which time no further evi-

dences of tuberculosis in any organ could be detected. The patient has been definitely cured, now for more than thirteen years. Schüller's second patient was a little girl with a tuberculous process in the hip joint and evidences of a tuberculous affection of the kidneys. Guaiacol topically and internally was followed by the cure of the hip process and the subsidence of all symptoms on the part of the urinary apparatus, without recurrence during the nine years since. He consequently suggests the advisability of guaiacol treatment in the incipient stages of tuberculosis of the kidneys and bladder, also after removal of one kidney to protect its mate, and, further, in the cases in which a partial operation has been done on the kidney, in order to hasten and to promote the permanent recovery of the organ. Some of his patients have taken guaiacol for more than four years without inconveniences. He gave it in 200 cases of tuberculosis between 1891 and 1899, and 37 of the patients were materially improved or quite cured by it. The kidneys are especially adapted for this mode of treatment, as part of the guaiacol is eliminated through these organs. His practice is to give it in small fractional doses continually. His dose for adults is from 12 to 15 or even 20 drops of pure guaiacol in from 130 to 150 or 200 gm. of water, shaken until dissolved, and fractioned into five or six portions. Children take from 3 to 23 drops, according to age. No preparation of guaiacol has proved so effectual in his experience as the pure article.

#### Münchener med. Wochenschrift, Munich.

- 69 (LII, No. 38.) \*Ueber periarteritis nodosa. M. Verse.
- 70 \*Zum Kapitel der Nasendiphtherie (Nasendiphtheroid bei Scharlach). A. Uffenheimer.
- 71 \*Ueber Pathologie und Therapie der Kieferhöhlenerkrankungen maxillary sinusitis). A. Strubell.
- 72 Ueber "Ichthyosis circumscripta der Areola mammae." II. Friolet.
- 73 \*Ueber Cytorrhyses imis Siegel. R. Freund.
- 74 Neue Operations-Methode bei Lid-Defekten und -Ektropium durch freie Plastik aus der Ohrmuschel (from ear muscle). Elter and Haass.
- 75 Ueber einen einfachen Ersatz des elektrischen Vierzellenbades (simple substitute for electric "4-cell bath"). II. Winternitz.
- 76 Zur Kenntnis der tiefliegenden para-artikulären Lipome. II. Mohr.
- 77 Kalium-Permanganat als billiges lokales Hamostaticum. II. Vörner.
- 78 Typhusbacillus und bacillus faecalis alcaligenes. II. Conradi.
- 79 Medical Training, etc., in Japan.—Aerztliches vom japanischen Kriegsschauplatz. v. Pezold.
- 80 Das Kugelpessar (ball pessary). Scheumann.
- 81 \*Zur Behandlung gynäkologischer Erkrankungen durch Thio-sinamin. Offergeld.

**69. Periarteritis Nodosa.**—Versé has been able to find only 20 cases of this affection in the literature. Men between 20 and 35 were principally affected, but the disease has been observed in an infant under 3 months and in one man of 52. The course is always more or less acute, terminating fatally in three or four months. He describes the history and findings in a typical case personally observed. Signs of old nephritis were found and a peculiar affection of the smaller arteries in the liver, mesentery, intestine, stomach and spermatic cord, characterized by the formation of small spindle-shaped or round aneurisms, with thrombosis of the vessels affected. In 5 of the published cases syphilitic antecedents were certain, and Schmorl has reported one in which the multiple lesions entirely retrogressed under antisyphilitic treatment. At the autopsy years later, the vessels were found normal, but in the liver, kidneys and heart traces of the old affection could be detected in the form of minute fibrous foci closely related to the vessels. Periarteritis nodosa may thus be regarded as a special form of syphilis of the blood vessels.

**70. Nasal Diphtheria with Scarlet Fever.**—Uffenheimer describes a fatal case of what appeared to be diphtheria affecting the nose during the last stages of scarlet fever. He argues that it was not true diphtheria and that the membrane formation was exclusively the work of the scarlet fever infection. He calls the condition nose diphtheroid, with scarlet fever. A very few non-virulent diphtheria bacilli were found in the midst of countless numbers of streptococci.

**71. Treatment of Suppuration in Maxillary Sinus.**—Strubell takes two maxims as his guide: To rinse only so long as the patient tolerates it without objecting, and to reject all radical measures which leave a permanent communication between the mouth and the sinus. He describes his methods and technic in detail.



73. *Cytorrhycles* Luis.—Freund regards it as very remarkable that the announcement of the discovery of spirochetes in syphilis has attracted such widespread attention, while Siegel's announcement in regard to the finding of the *Cytorrhycles* *luis*, at about the same time, has passed almost unnoticed. Freund has confirmed Siegel's findings in nearly a dozen cases of syphilis, and has succeeded in inoculating animals with the *cytorrhycles*. He found them in enormous numbers in his cases, corresponding to from 3,000 to 5,000 in a single drop of blood or 60,000,000 in a liter of blood. The extreme contagiousness of syphilis can be explained only by assuming that the causal germs are present in every drop of blood. Siegel's bodies are flagellates, and the blood corpuscles near them sometimes rock a little as if set in motion by the action of the flagella. The stains that show the spirochetes are the best ones for the *cytorrhycles* also, but they can be seen equally well without staining. Siegel's illustrated description appeared in the *Münch. med. Wochft.* for July 11, No. 28, 1905.

81. Treatment of Gynecologic Affections with Thiosinamin.—Offergeld gave thiosinamin a thorough trial in 55 cases of various gynecologic affections, but found that it failed to display any power to reduce infiltrations or to soften adhesions or contractures. No benefit whatever was realized in any instance that was not amply explained by the concomitant measures.

#### Hospitalstidende, Copenhagen.

*Last indexed page 1370.*

- 82 (XLVIII, Nos. 28-29.) \*Den hyperacide Mavesaft og dens Bestemmelse ved det Sahlske Provemaaltid (hyperacidity and Sahli test meal). V. Rubow.  
83 Tilfælde af kongenit Syfilis med Paavisning af Spirochæte pallida i Lever og Milt (in liver and spleen). A. Brønnum.  
84 (Nos. 30-31.) Om Neuro fibril-farvning og Neuro-fibrillernes Forhold i Cortex cerebri ved patologiske Tilstande (staining and behavior of neurofibrils). A. Wimmer.  
85 \*Om Administrering af Eter-Narkosen. C. Struckmann.  
86 (No. 32.) \*Om Behandling af tuberkulos Peritonitis. C. A. Dethlefsen.

82. Hyperacidity and Sahli Test Meal.—Rubow reviews the experiences during the last five years with 704 patients presenting dyspeptic disturbances treated in Faber's service at Copenhagen. Hyperacidity, after an Ewald-Boas test meal, was found in 213. The details of these cases with acidity of 75 or over are given in tabulated form. None showed a total acidity above 125. He thinks that this shows the rarity of actual hyperacidity, as all the cases are explainable by simple hypersecretion. The proportion of hydrochloric acid averaged .44 per cent. Only in three instances did it reach .45 and .46 per cent. Trials of the Sahli test meal gave conflicting findings, even in healthy subjects. He thinks that one source of error is in the rising of the butter to the top of the "flour soup" used for the test. It does not form a homogeneous emulsion.

85. Ether Anesthesia.—Struckmann argues that a combination of morphin and ether insures an almost ideal anesthesia without by-effects. He uses the Sudeek mask and a dropper for the ether, and emphasizes the remarkable absence of salivation and secretion when from 1 to 1.5 eg. of morphin was injected one hour before the ether. All his surgical patients during the last six months were anesthetized in this way, and the results far surpassed those observed with any other mode of anesthesia. There was no stage of excitement, and the pulse, respiration and color of the face remained normal throughout. He is convinced that this form of anesthesia avoids all the dangers of other technique, and is far more convenient for both the surgeon and the patient.

86. Tuberculous Peritonitis.—Dethlefsen relates the history of a girl of 7 with typical tuberculosis of the peritoneum cured by a median laparotomy. Another case was that of a married woman of 40, with other indications of tuberculosis, accompanying those of typical tuberculous peritonitis. The peritoneal process was arrested by a median laparotomy, and the ascites never returned, but the patient succumbed a year or two later to the progress of her lung affection.

#### Hygiea, Stockholm.

*Last indexed page 666.*

- 87 (LXVII, No. 7, July.) \*Till fragen om antidifteriserums dosering. H. Suber.  
88 \*Post-operative X-Ray Treatment of Cancer.—Om efterbehandling af opererede maligna svulster med Röntgenbestrahlung. T. Sjögren.

- 89 Bidrag till den operativa behandlingen af den Dupuytren'ska finger-kontrakturen. G. Bjärnhielm.  
90 "Den Laenneeska" cirrhosen. A. Stromstedt.  
91 (No. 8.) Determination of Human Blood in Suspicious Spots.—Om påvisandet af menneskeblod i misstænkte fläckar.—E. Aspelin.  
92 \*Oxidizing Ferment in Infants' Stools.—Nagra ord om et oxiderande Ferment sasom en anledning till uppträdandet af grönfärgade öppningar inom dibarnsaldern. W. Wernstedt.

87. Dosage of Antidiphtheria Serum.—Suber tabulates statistics from various countries to sustain his assumption that antidiphtheritic serum should be given in large doses (5,000 to 15,000 units) in the severer cases of diphtheria, irrespective of age. The moderately severe cases can be treated with moderate doses (3,000 to 4,000 units). Intravenous injection in the extremely severe cases has a prompt and certain curative action, without serious by-effects, even when colossal doses are used. He claims that the published statistics show that insufficient doses have been given in many instances. Injection of large doses of the serum also proves effective even against diphtheritic paralysis. He rejoices that the price of the serum has recently been reduced in Sweden, and urges that all the local boards of health and hospitals should be provided with the serum for preventive injections at need, free of cost.

88. Postoperative Treatment of Cancer with X-Rays.—Sjögren is now making a practice of x-ray exposure after ablation of a cancer in all cases. He has thus treated 10 patients with mammary cancer and 2 with sarcoma, allowing an interval of from one to three months after the extirpation before he commenced the Roentgen exposures. More than six months have elapsed since the sarcoma operations, and there has been no trace of recurrence in any instance. The first case was a sarcoma in the kidney of a girl of 5, and the other a sarcoma originating in the soft parts of the hip in a woman of 21. He thinks that systematic postoperative x-ray treatment, to forestall recurrence, is a most promising field.

92. Oxidizing Ferment as Cause of Green Stools of Infants.—Wernstedt calls attention to the fact that green stools are distinguished not only by their color, but by the presence of considerable mucus. He thinks it is due to the action of a substance which he has isolated from such stools, and regards as a ferment. It oxidizes guaiacol in presence of hydrogen dioxide, but the reaction does not occur if the stool is first heated to boiling point. The oxidation causes a brownish discoloration which is most marked in the flakes of mucus and is not diffuse. The substance is contained in the mucus and apparently has an oxidizing action on bilirubin. Green stools do not necessarily imply dyspepsia, he says, but may be observed in nursing infants and occasionally in those apparently otherwise healthy.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

OFFICIAL LIST of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service of the United States, also List of U. S. Marine Hospitals, Quarantine Stations, and Quarantine Vessels, July, 1905. Paper. Pp. 30. Washington: Government Printing Office, 1905.

MANUAL OF PATHOLOGY, Including Bacteriology, the Technic of Postmortems, and Methods of Pathologic Research. By W. M. L. Coplin, M.D. Fourth Edition. 495 Illustrations, some in colors. Cloth. Pp. 994. Price, \$4.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

MEDICAL REGISTER OF PRINCE EDWARD ISLAND. Printed and Published under the direction of the Medical Council in conjunction with the Prince Edward Island Medical Act. Paper. Pp. 19. Charlottetown: Registration Office.

TECHNIQUE DU TRAITEMENT DE LA LUXATION CONGÉNITALE DE LA HANCHE, by Dr. F. Calot. Avec 206 figures dans le Texte, et 5 Planches. Paper. Pp. 293. Paris: Libraires De L'Académie de Médecine, 1905.

OPERATIVE SURGERY. For Students and Practitioners. By J. J. McGrath, M.D. Second Edition. 265 Illustrations, some in colors. Cloth. Pp. 628. Price, \$4.50. Philadelphia: F. A. Davis & Co., 1906.

MEMORANDA ON POISONS. By T. H. Tanner, M.D., F.L.S. Tenth Revised Edition. By H. Leffmann, A.M., M.D. Cloth. Pp. 177. Price, 75c. Philadelphia: P. Blakiston's Son & Co., 1905.

ORIGIN AND TREATMENT OF STAMMERING. By G. A. Lewis. Seventh Edition, Enlarged and Revised. Cloth. Pp. 202. Detroit, Michigan: George Andrew Lewis.



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## Original Articles

### THE INFLUENCE OF CHRONIC PASSIVE CONGESTION AND CIRRHOSIS OF THE LIVER ON THE CONNECTIVE TISSUES OF THE SPLEEN.\*

HENRY A. CHRISTIAN, M.D.

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BOSTON.

It is well known that in cases of cardiac disease which have caused chronic passive congestion of the abdom-

The following questions arise in regard to the spleen under these conditions: With this increase in consistence is there an increase in the framework of the spleen? Is the change in the white fibrous and reticular tissue or in the elastic tissue? Is there any difference in the character and distribution of the connective tissues of the spleen in cases with chronic passive congestion or cirrhosis of the liver?

It was thought that these questions might be answered by the study of a series of such cases selected from the autopsy material at the Boston City Hospital since 1901. To be regarded as suitable for this purpose cases had to fulfill the following conditions: The patients must be adults; the autopsies must be made soon enough after death to furnish tissue in good

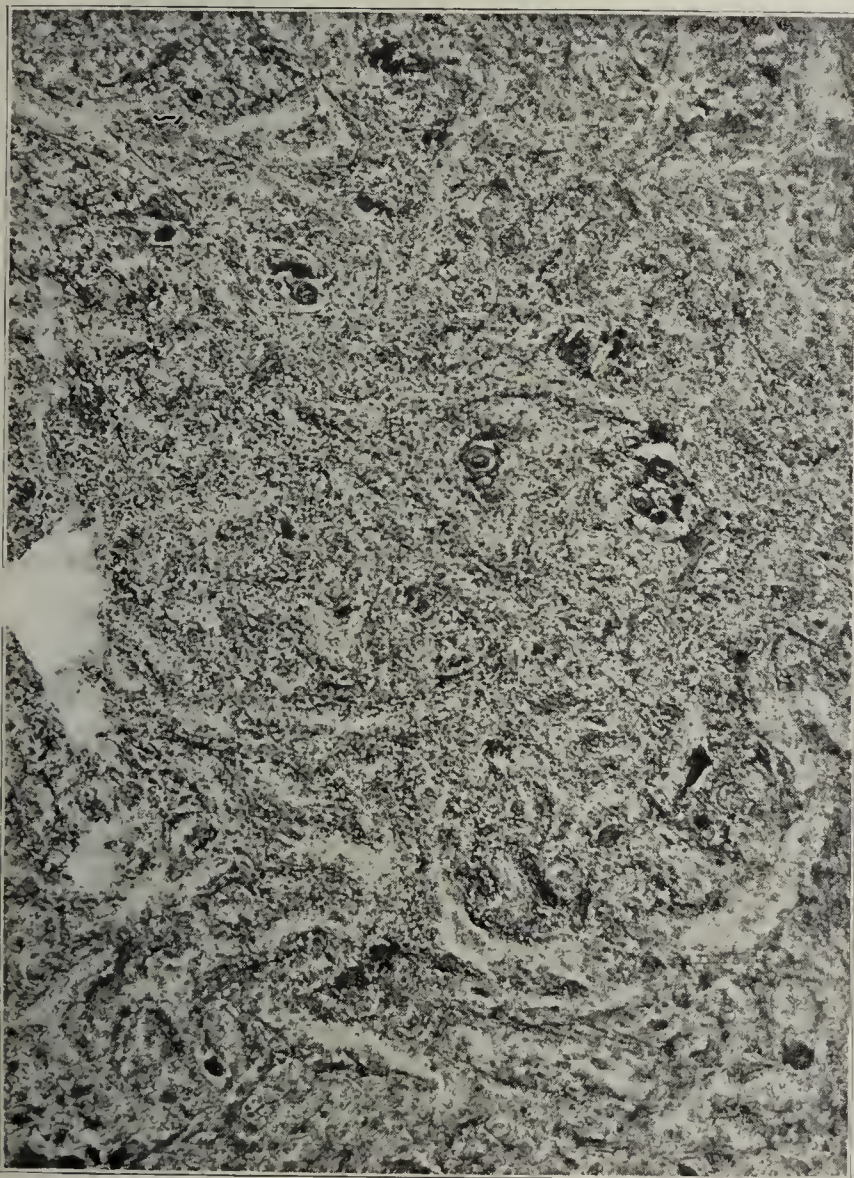


Fig. 1.—Chronic passive congestion. Spleen showing connective tissue increase (x 120 dia.).



Fig. 2.—Chronic passive congestion. Spleen showing connective tissue increase in pulp (x 250 dia.).

inal viscera the spleen is usually firmer than normal, unless some complicating acute infectious process has produced an acute splenic tumor. Similarly with cirrhosis of the liver there is generally a firm spleen. In either case the spleen may or may not be larger than normal.

condition for the staining methods used; the cases must be free from infectious processes leading to the production of an acute splenic tumor; and, finally, histologic examination of the liver must show well-marked lesions of chronic passive congestion or cirrhosis. Among 891 cases examined, 38 fulfilled these conditions. From them Zenker-fixed material was imbedded in paraffin, sec-

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session,



tioned, and stained with eosin and methylene blue, Mallory's anilin blue connective tissue stain, and Weigert's resorcin-fuchsin elastic tissue stain.\*

In the 38 cases selected the livers show either well-marked cirrhosis of the multilobular or monolobular type (atrophic or Laennec's cirrhosis), or chronic passive congestion of an advanced degree. In the latter the central one-third to one-half of the liver lobule is congested with marked atrophy or total disappearance of liver cells. Fibrin thrombi occur frequently in the sinusoids, but do not dominate the picture in any case. In five cases the connective tissue about the central vein is increased in amount (moderate central cirrhosis. Of the cases of cirrhosis none shows a diffuse intralobular distribution of connective tissue (hypertrophic or Hanot's cirrhosis).

In the spleens no lesions of the Malpighian corpuscles

ically distinguish the two. In the spleen the trabeculae and walls of larger blood vessels contain white fibrous tissue appearing as bundles of straight or slightly wavy fibrils. Outside of this the supporting framework consists mainly of reticulum, a meshwork of blue-staining fibrils, slight in amount in the Malpighian corpuscles, more abundant in the pulp between the blood sinuses. About the blood sinuses are circular fibrils staining blue, which surround them at very regular intervals.

In the group of 38 cases studied, the white fibrous tissue of trabeculae and blood vessels presents little or no change. In 10 cases the reticulum is not increased; in 28 it is present in increased amount. As seen in the table, the latter are divided into three groups; nine with considerable, eleven with moderate and eight with slight increase. Both the size and the number of the fibrils is increased.



Fig. 3.—Chronic passive congestion. Spleen showing absence of connective tissue increase in Malpighian corpuscle.

occur, though there is some variation in their size. The pulp of the spleen in all cases is relatively poor in cells. The blood sinuses are generally dilated, distinctly demarcated, and usually are lined by a definite layer of low cuboidal endothelial cells. Between the blood sinuses lies a tissue made up of cells of the connective tissue and endothelial types, with a varying number of, rarely many, lymphoid and plasma cells and an occasional leucocyte. Sections with little or no connective tissue increase, as a rule, do not show the sharp distinction between blood sinuses and intervening cellular tissue, and here cells of the connective tissue type are not so prominent.

The anilin blue connective tissue method stains white fibrous and reticular tissue blue, but does not tinctor-

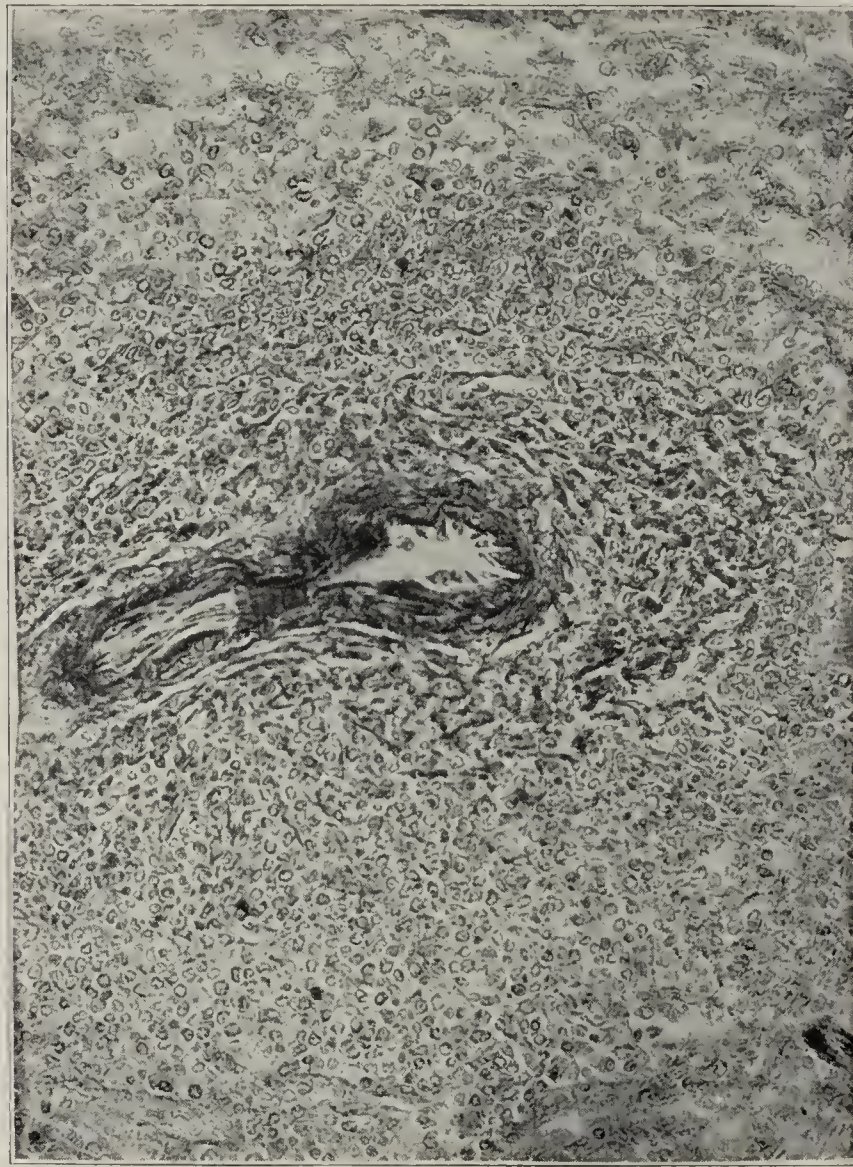


Fig. 4.—Cirrhosis of Liver. Spleen showing connective tissue increase about artery within Malpighian corpuscle.

In the cases of chronic passive congestion, the reticulum of the pulp is increased (Figs. 1 and 2), and there is little change within the Malpighian corpuscles (Fig. 3). In the cirrhosis cases there is a similar increase in pulp reticulum, to which is added an increase about the smaller splenic arteries and within the Malpighian corpuscles (Fig. 4), in cases in which there is a more marked connective tissue increase.

The increase in reticulum is sufficient to explain in part the increased firmness of the spleen under these conditions. The slight difference in its distribution in chronic passive congestion and cirrhosis may add some weight to the view that the changes in the spleen accompanying cirrhosis of the liver are only in part due to simple mechanical hindrance to its circulation.

The elastic tissue in the 38 cases, as demonstrated by the Weigert resorcin-fuchsin method, shows very little

\* The technical methods employed here may be found described in Wright and Mallory's *Pathological Technique*, 3d edition, 1904.



change. Elastic tissue is present in the spleen in the capsule and trabeculae in large amount, and also occurs in the walls of larger blood vessels, and to a slight degree extends from them out into the surrounding splenic tissue. Outside of these places practically none is found, though with overstaining, certain fibers about the sinuses are deeply tinted. However, careful differentiation with absolute alcohol separates these from the typically staining elastic tissue fibers. In a few cases there is a slight increase in the elastic tissue radiating from the blood vessels, but there is no difference in this respect between chronic passive congestion and cirrhosis cases.

## A. CONNECTIVE TISSUES OF SPLEEN NOT INCREASED.

No.	Wt. of Spleen.	Consistence.	Wt. of Liver.	Condition in Liver.
1	275	Firm .....	1,800	Chr. passive congestion.
2	90	Normal .....	1,420	Cirrhosis.
3	675	Firm .....	1,850	Chr. passive congestion.
4	150	Firm .....	2,490	Chr. passive congestion.
5	285	Firm .....	2,360	Chr. passive congestion.
6	140	Normal .....	1,080	Chr. passive congestion and central cirrhosis.
7	245	Firm .....	1,730	Chr. passive congestion.
8	130	Firm .....	2,150	Cirrhosis with fatty infiltration.
9	180	Soft .....	1,850	Cirrhosis with fatty infiltration.
10	180	Normal .....	2,580	Cirrhosis.

## B. CONNECTIVE TISSUES OF SPLEEN SLIGHTLY INCREASED.

(From this point cases are arranged in order of degree of connective tissue increase.)

11	425	Firm .....	1,860	Cirrhosis.
12	430	Soft .....	1,750	Cirrhosis.
13	130	Normal .....	1,625	Chr. passive congestion.
14	170	Firm .....	1,850	Chr. passive congestion.
15	215	Fairly firm.	2,320	Chr. passive congestion.
16	315	Fairly firm.	1,385	Cirrhosis.
17	140	Firm .....	1,350	Cirrhosis.
18	200	Firm .....	1,630	Chr. passive congestion.

## C. CONNECTIVE TISSUES OF SPLEEN MODERATELY INCREASED.

19	620	Firm .....	720	Cirrhosis.
20	185	Firm .....	1,660	Chr. passive congestion.
21	605	Firm .....	985	Cirrhosis.
22	180	Firm .....	1,540	Chr. passive congestion.
23	190	Firm .....	1,650	Chr. passive congestion.
24	200	Firm .....	1,600	Chr. passive congestion and central cirrhosis.
25	175	Firm .....	2,420	Cirrhosis.
26	260	Firm .....	1,900	Chr. passive congestion.
27	175	Fairly soft.	3,440	Cirrhosis.
28	225	Firm .....	2,270	Chr. passive congestion and central cirrhosis.
29	150	Firm .....	1,860	Chr. passive congestion.

## D. CONNECTIVE TISSUES OF SPLEEN CONSIDERABLY INCREASED.

30	390	Firm .....	1,760	Cirrhosis.
31	235	Firm .....	1,430	Chr. passive congestion.
32	400	Firm .....	1,800	Cirrhosis.
33	155	Firm .....	1,080	Chr. passive congestion and central cirrhosis.
34	415	Firm .....	2,000	Chr. passive congestion and central cirrhosis.
35	45	Firm .....	910	Chr. passive congestion and central cirrhosis.
36	130	Firm .....	1,750	Cirrhosis.
37	105	Firm .....	1,400	Chr. passive congestion.
38	75	Firm .....	1,510	Chr. passive congestion.

## SUMMARY.

1. In 38 cases of chronic passive congestion and cirrhosis of the liver, the spleen of 28 (73.6 per cent.) shows an increase in connective tissue framework. Some of the 10 cases with no increase in connective tissue are equally as firm; consequently the firm consistence in these is due to vascular distention rather than to connective tissue increase, and in all cases vascular distention probably plays an important part in producing the firm consistence.

2. The connective tissue increase is mainly a proliferation of the reticular tissue of the pulp with little or no change in the white fibrous and elastic tissue of the organ.

3. Some cases of cirrhosis show in addition to the proliferation in pulp reticulum, an increase in connective tissue about the smaller splenic arteries and within the Malpighian corpuscles.

## ETIOLOGY OF PIGMENTOUS SARCOMA OF THE CHOROID.\*

PROF. J. HIRSCHBERG.

BERLIN.

The cause of malignant tumors generally, and of the pigmentous sarcoma of the choroid especially, is a mystery to us. It is impossible to find one general cause for all of them. The reason, in my opinion, is that there are different causes in existence for different forms of the disease.

In 1882, I observed and published reports of two cases in which the monolateral congenital pigmentation formed the predisposition to the development of a melanotic sarcoma of the choroid.

The color of the iris in the healthy eye was grayish green; in the other dark brown, and the sclerotica of the dark eye contained around the cornea some large dark violent spots which were congenital according to the decided assertions of the patient.

In the one case, the eyeball was enucleated at once and showed a pigmentous sarcoma of the choroid. The melanoid spots of the sclerotica extended over the equator to the entrance of the optic nerve. They were composed of stretched but normal pigment cells.

In the other case, the affected eyeball had yet a tolerably good vision. Excision was performed two years later, as the vision had gone; seven years later the patient was in good health; nine years after excision death occurred, probably by metastasis.

In another group of cases, a congenital pigment spot in the iris was the cause of a pigmentous sarcoma of the same coat. I had two cases—one in the year 1868, in which excision of the eyeball was performed by my teacher, Albrecht von Graefe. I published a report<sup>1</sup> of the case in the *Archiv. f. Ophth.*, xiv, 3, 1868; it was the first case of melanotic sarcoma of the iris.

I observed the other patient in the year 1894, and operated by iridectomy. The microscope showed sarcoma. After nine years the patient was observed in perfect health, the eyeball blind, but quiet. The report of the case was published by my assistant, Dr. Fehr, last year, in the jubilee volume presented to me.

The third fact is a circumscribed pigment spot in the iris, causing a melanotic sarcoma in the same region of the ciliary body of the affected eyeball. This case is a new one, which I will now describe with some details:

*Patient.*—A woman, aged 33, presented herself May 2, 1905, with a letter stating that she was suffering from detachment of the retina of the right eye. Seven months previously she had observed that the eye was almost blind.

*Examination.*—I found the left eye entirely normal. The right one had only a very small eccentric visual field below the fixation point, and could only distinguish the finger at a distance of 35 cm. This eye was free of irritation and hypertension, but showed in the lateral octant of the greenish iris a large yellow-brown spot of trapezoid form, occupying the whole extent of the iris breadth. This spot was congenital, or at least noticed from the first childhood of the patient. Immediately behind the iris, in the same part of the eyeball, to the temporal side, a tumor was visible even by the naked eye of the observer. With focal illumination and the loop I detected a reddish-yellow sarcoma of that region with fine vessels on the surface and some pigment spots. Below the lens there was a dark neoplastic nodule. With the

\*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Before my report only a single case of that had been mentioned, but not discussed by Hulke, 1861, vol. III, p. 280, *Ophth. Reports Fr.*, "Sarcom der Uveal Tractus," 1882, p. 234, has a short remark about that subject, but the cases of Warren, Tay and Klipp, which he mentions, do not belong to this class.



ophthalmoscope the optic nerve entrance was visible, and very near to it a detachment of the retina.

*Treatment.*—As the diagnosis was self-evident, I proposed excision and performed it six days later, the home physicians of the patient having approved of my diagnosis and of the proposed treatment. A fortnight later the patient was discharged.

*Pathologic Examination of Eyeball.*—Now I come to the anatomic examination of the excised eyeball. The eyeball is



Figure 1.

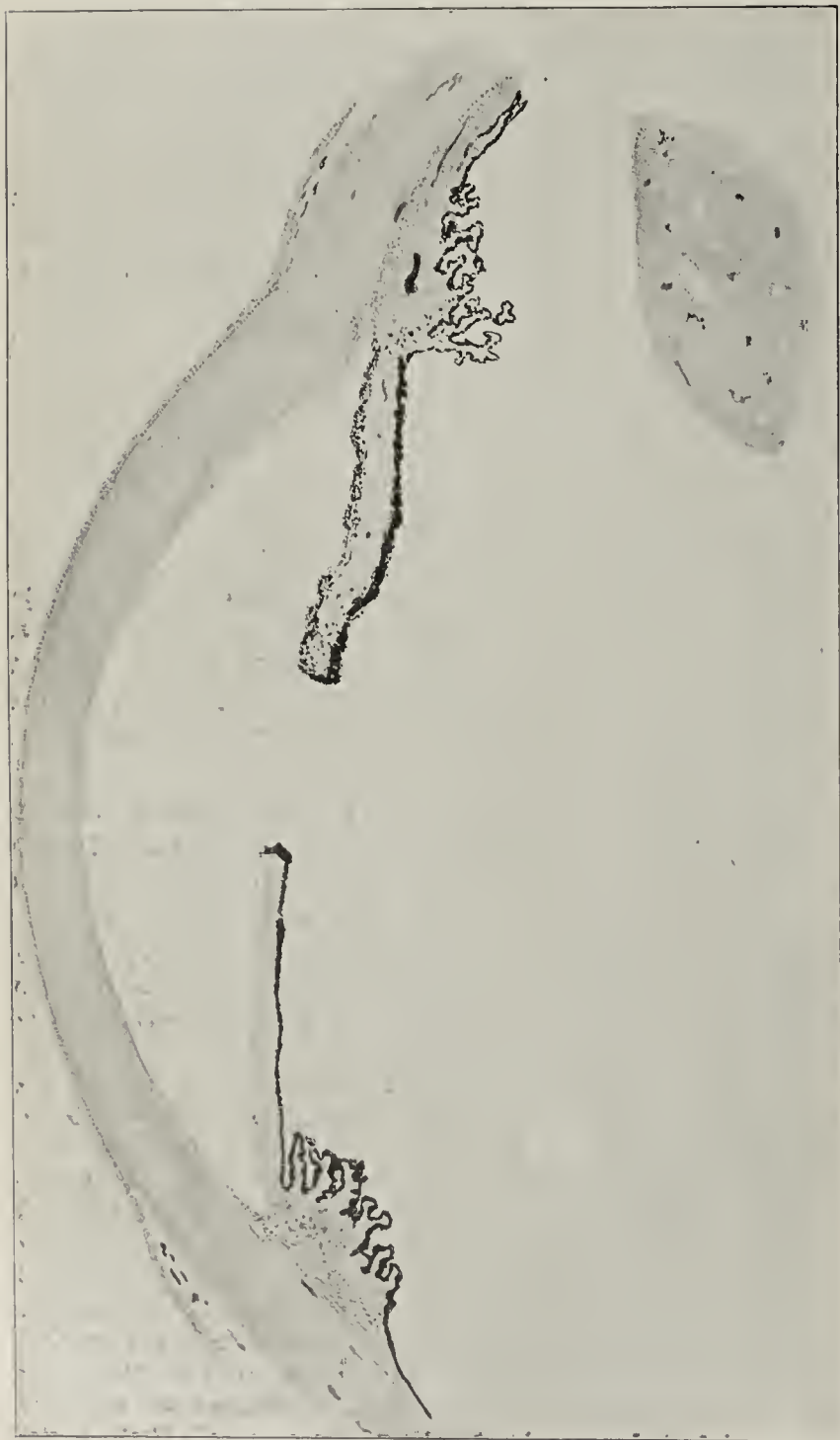


Figure 2.

divided by a horizontal section into an upper and a lower half. Figure 1 shows the lower half. Cornea, anterior chamber and lens seem normal. The iris stroma is bright in the nasal side, broader and brown in temporal side. The retina is completely detached. In the subretinal space a tumor of the size of a cherry appears, three-quarters of it being located

in the lower half of the globe, one-quarter in the upper half. The cut surface is rather bright and shows several sections of blood vessels or spaces. The lower part of the tumor is not visible in this section, but it appears in a second horizontal division of the lower half of the globe. The tumor starts from the outer lower part of the ciliary body which here is thickened and converted into neoplasm. The middle part of the tumor is firmly adherent to the detached retina; between its posterior part and the retina there is an exudation coagulated by formol. The tumor is a sarcoma made up of small, round and spindle cells, the round cells prevailing; it is poor in pigment and rich in large vascular spaces with only capillary coats. Interstitial tissue is scanty. A fine connective coat surrounds the tumor and adheres to the retina, which also is converted into connective tissue.

In sections which correspond to the width of the pupil, as seen in Figure 2, the neoplasm is separated from its base or foot, but the ciliary body is thickened and interspersed with sarcomatous cells. Such cells are also visible in the wall and in the lumen of the canal of Schlemm.

The iris of the lateral half corresponding to the tumor is intensely pigmented. The yellow-brown pigment is situated in the superficial layer of the stroma, partially extracellular, partially in ramified chromatophore cells. The iris of the



Figure 3.

opposite side is free of pigment in the whole stroma and contains only the posterior pigment layer.

In the sections which approach to the lower pupillary margin the tumor gradually becomes in touch with the ciliary body (Fig. 3).

In the lower part of the lower half of the globe the whole ciliary body is converted into neoplasm to the root of the iris. This tumor of the ciliary body is spindle-shaped and its upper border perforates the boundary coat and grows freely and fungiform into the subretinal space.

For the microscopic preparations and the able drawings, I am indebted to my first assistant, Dr. Fehr.

We must agree that the tumor started from this part of the ciliary body which corresponds to the congenital nevus of the iris.

These facts are very striking; they are not mentioned in the very large and new book of F. Lagrange on tumors of the eye, but they agree with some other facts of the pathology, for instance, that congenital pigment nevi of the cutis, as life advances, are converted into melanotic tumors, and with the theory of Cohnheim that congenital peculiarities of cell groups or persistencies of embryonal germs constitute the real predisposition to later development of malignant tumors.



## A CASE OF MELANOSARCOMA OF THE CHOROID.\*

LEWIS H. TAYLOR, M.D.,  
WILKESBARRE, PA.

I wish to report briefly a case of melanosa sarcoma of the choroid occurring in my practice, because of some of the interesting features connected therewith and the later metastasis to the liver and the death of the patient:

*Patient.*—Mrs. B, aged about 65, was first seen by me in consultation with her family physician Dec. 22, 1900. The patient was in bed suffering great pain with the left eye, which was much swollen and congested.

*History.*—Four days previously, in the early hours of the morning, her left eye became suddenly affected with very severe pressing pain. Her physician saw her at the time and during the following forenoon the severe pain passed away, but the eye remained uncomfortable and the sight was gone. The eye was not swollen but looked much the same as the other. When first seen by me it was greatly swollen, tension increased, the iris pushed forward, and the cornea steamy. Her physician had used atropia three times. This was discontinued as the eye was in complete condition of absolute glaucoma, from, as I supposed, intraocular hemorrhage. I changed to eserine. There was also some chemosis of the conjunctiva. Lead water and laudanum lotion was applied. On the following day the eye was more comfortable but very rigid, almost suggestive of panophthalmitis.

December 24 the condition was about the same but she had passed a comfortable night; three leeches had been applied. I went away for Christmas and returned late on December 26. On the 27th the condition had not improved, and I informed her husband and the family physician that, in my judgment, the eye should be enucleated at once, or within a very few days and suggested consultation.

The patient had had trouble with this eye three months before, in September, and came to my office during the meeting of the Pennsylvania State Medical Society and as I was not in she went to another oculist, who treated her a while with improvement and fitted her with glasses. Later she went to Philadelphia on a visit and while there was treated by Dr. J. T. Carpenter, who in reply to a letter of inquiry wrote me December 26 as follows:

"I saw Mrs. B. November 15, 1900, and her condition at that time was as follows: O. S. V. = fingers in limited area of temporal field. External appearance normal; tension normal. History of sudden blindness preceded by intensely brilliant phosphenes. Eye shows extensive retinal detachment, balloon-shaped, occupying almost the entire fundus with a narrow area in central upper nasal quadrant where retina is still attached and fundus appears normal. No tremulousness of retinal detached area on ocular movement. The normal portion of the retina shows refraction to be about Em. or low H. I could not make out the exact nature of the case but in absence of myopia considered the possibility of its being retinal separation of intraocular growth in the quiet stage. The possibility of an enormous retinal hemorrhage was also considered."

*Operation.*—At my request Dr. Carpenter came for consultation December 28, as did also Dr. Gloniger of Lebanon, Pa., a relative of the family. Both agreed with my expressed opinion that the eye should be enucleated. This I did at once, suturing the conjunctiva in the usual manner. On the following day there was no discharge but considerable swelling. I had probably closed the wound a little tighter than necessary. Under daily dressing this soon subsided and the wound healed kindly without any trouble.

*Examination of Eye.*—Dr. Carpenter took the eye to Philadelphia for examination and made a preliminary report January 5 as follows: "There is a heavily pigmented mass in the choroid which is very decidedly like sarcoma." Later he wrote: "The microscopic examination makes the diagnosis of the choroid only too evident. I have submitted the sections to Dr. Edward Shumway, who reports as follows:

"*Macroscopically.*—A densely pigmented mass found springing from the choroid, 12 mm. in height and 10 mm. in diameter at base. The retina is completely detached, the lens pushed forward, the subretinal space filled with albuminous exudate.

"*Microscopically.*—A densely pigmented mass found springing from the larger vessels of the choroid. Pigmented cells make up the main bulk of the tumor, they are round and spindle-shaped, the surface layers are infiltrated with blood, and the blood vessels of the growth are widely distended. The choroidal vessels, in common with the central retinal vessels and the posterior ciliary vessels show great thickening of walls, involving both adventitia and intima, the endothelial cells of the latter much proliferated. No structure is discernible in the retina which shows no connection with the choroid at the ora serrata. It is probable that the detachment is not of recent date. The optic nerve was found infiltrated with sarcoma cells which stain better than in the tumor itself. A large recent hemorrhage with corpuscles staining well is found beneath the retina and in the tumor itself.

"*Summary of Findings.*—Large densely pigmented sarcoma of the choroid showing extensive degenerative changes; detachment and degeneration of the retina; sarcomatous infiltration; and destruction of the optic nerve; intraocular hemorrhages; secondary glaucoma; cataract and pressure necrosis of iris, ciliary bodies and cornea."

*Subsequent History.*—This report naturally made us fear an early return of the trouble and gave a very unpromising outlook for the patient, as the experience of others would lead one to expect a return either *in situ* or in some other organ within a year. In spite of the infiltration of the optic nerve, there was no return of any growth in the orbit. The patient seemed to recover fully her general health, and during the rest of the winter and spring was very well.

I saw her a number of times and fitted the right eye with distance and near glasses, and she could read comfortably. She was somewhat nervous about the right eye, fearing it might also become affected, but it gave her no trouble. She went away during the summer and was fairly well, returned in the fall, and soon after noticed trouble in her right side. This progressed rapidly and she died of sarcoma of the liver Nov. 15, 1901. The orbit remained entirely free from any return of the sarcoma.

It is rather rare to have occasion to see and to diagnose a case of pigmented sarcoma of the choroid and afterward to confirm the diagnosis by microscopic examination. And yet a number of such have been reported. Frequently, as in the case above reported, the diagnosis is not made until the eye has been enucleated on account of hemorrhagic glaucoma. As to the return, the time varies greatly, but as stated above, it is likely to return either in the orbit or by metastasis to some other organ within a year or two.

Dr. Buller of Montreal reported a case to the American Ophthalmological Society some years ago of a return *in situ* after ten years. A very interesting summary of the subject of sarcoma of the choroid may be found in the Ophthalmic Year Book for 1905, by Drs. Jackson and de Schweinitz, who close by reference to Professor Hirschberg's work thus:

The most important contribution of the year to the question of recurrence *in loco* and metastasis after enucleation for choroidal sarcoma is by Professor Hirschberg. He records the statistics of 68 cases of sarcoma of the uveal tract seen between the year 1872 and 1903; of these 63 were in the choroid. Sixty-six enucleations were performed. There were no deaths from the primary operation. Local recurrence was observed only once, in which perforation had occurred before enucleation. In two out of six cases in which puncture of the eyeball for diagnosis was made previous to operation, there was a recurrence in the position of the conjunctival puncture, so that he advises against this procedure. Death occurred from metastasis in 16 cases, in 12 of these within two years. Of 41 cases that could be properly followed, one died from local recurrence, 2.5 per cent; 17 from metastasis, 41.5 per

\* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



cent.; and 23 remained healthy, 56 per cent. This is the best record of success thus far published. Of 47 cases in which anatomic examination was recorded, 35 were melanotic, 9 slightly pigmented, and 2 leucosarcomatous. He reports, finally, a case of metastasis to the liver nine years after enucleation of the eye ball, but considers this very exceptional, and believes that patients who remain healthy after four years should be considered permanently cured.

#### DISCUSSION

ON PAPERS OF DRS. TAYLOR AND HIRSCHBERG.

DR. DUDLEY S. REYNOLDS, Louisville, said that the chief point of interest, to his mind, is the time which may elapse after operation and recurrence of the disease. He recalled reporting a case of tumor of the iris to the International Medical Congress of 1876, at Philadelphia. In that case the neoplasm, being small, was removed by iridectomy. The patient had gone fourteen years after operation without any trouble whatever, until 1890, when he suffered from overwork, and then the eye became sensitive to light. In 1904 Dr. Reynolds saw this patient again, with the eye presenting an enormous mass, as large as the doubled fist, and the whole orbit and its contents, the lid, brow and part of the cheek, were all incorporated in the mass. He declined to do anything and the patient fell into the hands of a general surgeon, who scraped out the cavity of the orbit, and for five or six months the patient was going about, when suddenly he was seized with pneumonia and died. Postmortem showed that the liver, stomach and lungs had all fused together in one mass. This is an instance in which twenty-eight years elapsed before the fatal issue came. There are other similar cases in Dr. Reynolds' experience, and some in which but a few months elapsed. In the case of a child, ophthalmoscopic examination showed detachment of the retina, of circumscribed form, and the eye becoming painful, it was enucleated. Four months later the child came back with a malignant sarcoma, beginning above the brow and extending to the angle of the jaw. The case terminated fatally in a few weeks.

DR. JOHN E. WEEKS, New York, for facilitating the diagnosis of these intraorbital tumors, commended the lamp devised by Sachs of Vienna. All ophthalmologists have experienced the difficulty of determining the presence of a growth in the interior of the eye. With this lamp of Sachs the eye which does not contain a neoplasm or large foreign body can be transilluminated. The lamp may also be used for direct illumination and a retina that is so opaque that one can not see through it with the ophthalmoscope will be rendered transparent by this means. Dr. Weeks has recently experienced this difficulty in seeing an intraorbital tumor which came out clearly on use of the lamp. He thinks that the origin of the malignant sarcomata from pigmented nevi of the iris has been recognized for some time. It is very probable that sarcoma of the choroid, like sarcoma of the iris, develops in many cases from similar congenital pigmented spots in the choroid.

DR. KASPAR PISCHEL, San Francisco, showed specimens of sarcoma of the choroid. One patient he had under observation for four years refused operation until acute glaucoma with intense pain compelled him to have something done.

DR. L. H. TAYLOR said that he had no opportunity of examining his patient with the ophthalmoscope. He confirmed what Dr. Weeks said about the value of the Sachs lamp. He has one and uses it all the time.

PROF. J. HIRSCHBERG said that he has had good results with the Roentgen light in showing a tumor of the choroid in a particularly non-transparent eyeball.

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Thoroughness should be vindicated in the work to which we have been called and by which we have to be judged. If we play a game, let us strive to play it well, and not be a "footy"; if we undertake a piece of work, let us finish it to the last jot and tittle. If we profess a subject of knowledge, let us have it at our finger ends. . . . There is honor for the man who can be trusted to the end and whose work does not need to be done over again, who can always be found in his own place, and will always do what is expected of him. There is continual dishonor for the person who is slipshod and unreliable, and fickle and lazy, for he is like the reed which pierces the hand that leans on it.—Ian Maclaren in "Homely Virtues."

## SOME OBSERVATIONS ON TREATMENT OF YELLOW FEVER.

L. SEXTON, M.D.

NEW ORLEANS.

While prophylaxis is the step most important to any community threatened with yellow fever, we must do something for the patient who already has the disease, and, to those inexperienced in the management of cases, this is really the most interesting viewpoint of the subject. All that we can do in some cases often comes to naught, as in patients who seem to be overwhelmed by the virulence of the poison from the very start, with marked congestion in the algid condition, which may soon be followed by anuria, feeble, rapid pulse and death. There is also another class of cases in which, either from the small amount of poison injected by the mosquito into the patient, or the splendid eliminating powers of the organs, the toxin seems to be thrown off with such rapidity that it is hardly necessary to aid Nature in the fight. These two opposite conditions in patients have produced a school of therapeutic nihilists in the treatment of yellow fever, which is very much to be regretted, because, for the patient occupying the middle ground between the two extremes just mentioned, there is a great deal to be done to conduct him to a comfortable and safe recovery.

In treating yellow-fever subjects, the constitution of the patient has a great deal to do with the plan pursued. For instance, the plethoric, strong-bodied young person with high fever may take with benefit one 5-grain dose of acetanilid or phenacetin and may use ice caps to back and front of head; whereas for a delicate or weak subject, or one in the algid stage, we who treat yellow fever in New Orleans would not allow even one dose of any of the coal-tar derivatives or any ice application whatsoever. The majority of physicians advise against the use of any of the coal-tar derivatives in the treatment of yellow fever. We agree with this treatment for patients with weak hearts, but in the robust, plethoric cases mentioned above, with a temperature of 106 F. maintained for some time, it is more damaging to the patient than would be a single dose of acetanilid or phenacetin, which not only reduces the fever, but quiets the backache and headache, which is characteristic of this fever.

#### THE HOT BATH.

As a rule, we prefer the hot foot bath treatment, of one hour duration following the initial chill. During the bath the patient is to be snugly covered with light blankets to retain the steam arising from the hot water; and, to encourage the elimination by the skin, hot towel-ing, with hot drinks and alcohol rubs, should follow the bath to keep the pores of the skin open. If the majority of the physicians who have had experience were asked to state their preference, between the hot and the cold treatment of yellow fever, a great many would say that they prefer the hot method. The hot foot bath has become so universally recognized in tropical climates that we usually find this part of the treatment under way on our first visit to a yellow-fever case. Perspiration may be often augmented by hot lemonade, orange leaf or other tea, which, in addition to increasing perspiration, exerts a stimulating action on the kidneys, which is so much to be desired in treating yellow-fever subjects. In a hot climate, in the midst of summer with a temperature of 105 F., a hot mustard foot bath with warm blankets and still warmer drinks, is not a



position to covet, but in its final results or benefit to the patient, it has been found to be more efficacious than the experience with Kibbie and his ice cot. In fact, the only three ways in which ice is to be used in the treatment of yellow fever are in crushed ice to allay vomiting and to quench the thirst; ice bags under and on the head in hot fever and on the stomach to allay vomiting where hemorrhage is suspected. When used on the stomach several folds of flannel intervening prevent the chilling and absorb the moisture from the ice bag.

#### TREATMENT OF BOWELS.

Elimination by the bowels is just as important as that by the skin, so it is in order to begin the treatment by an agreeable saline cathartic, such as citrate of magnesia, Seidlitz or any effervescing agreeable salts to suit the patient's taste, as we do not wish to disturb or unsettle the stomach at this time. Many physicians prefer an initial dose of calomel and soda,  $2\frac{1}{2}$  grains each, followed by some purgative mineral water; this calomel treatment is best suited to subjects who are naturally bilious. Quick flushing of the bowels is what is required, so an enema, or glycerin suppository is ordered if there is any tardy action of the bowels. This flushing must be kept up by enemas, or suppositories daily, as there is a great tendency to the formation of gas in the bowels in all yellow-fever patients. The proper initial purge to be used depends largely on the patient; equally good results seem to have been obtained from calomel in one or broken doses, and from the different saline purgatives rendered agreeable, as no nauseating drug or pills should ever be given to add fuel to the smoldering inflammation already in the stomach, hence citrate of magnesia, the effervescent salts of phosphate of sodium, the charged saline mineral waters to which the patient's taste is accustomed should follow up the initial dose of calomel in about four hours, until from two to four good movements of the bowels have been accomplished.

#### TREATMENT OF STOMACH.

The stomach is the next organ on which the ravages of the poison seem to exert special virulence. On postmortem, the mucous lining of the stomach is found to be softened and very congested, showing the impossibility of its functioning. It is harmful in severe cases to put either food to be digested or medicines to be absorbed into a stomach whose gastric and mucous follicles, peptic glands, nerve loops and capillary blood vessels are all undergoing changes incident to violent inflammation; hence the necessity of keeping the stomach absolutely empty from three to five days at the beginning of the fever. If an attack comes on after a hearty meal and there are indigestible substances in the stomach, they should be washed out or emptied by a mild emetic, such as hot salt water, or simple hot water until the stomach is distended; then the fauces should be titillated until the stomach is emptied; this aids in producing perspiration and starts the case out with a clean stomach, which is one of the principal organs attacked later on in the disease, and is, consequently, no little advantage.

The best plan to pursue in all cases is absolute starvation from three to five days, just as if the mouth were sewed up, with the exception of drinking water. The best treatment for nausea and vomiting (which is a very persistent symptom) is to use small particles of crushed ice with one-eighth of a grain of cocain occasionally, iced champagne for those accustomed to drink, mustard plasters and ice bag applied over the stomach, provided there is a tendency to hemorrhage. The cocain may be repeated as suppository two or three hours apart

until nausea and vomiting are stopped. In some cases tablespoonful doses of milk of magnesia and cream of bismuth with peppermint water in equal parts, assist in allaying the acidity and removing the gases in the stomach. Pressure on the heart from these gases through the diaphragm produces the most disagreeable symptoms, which are sometimes met in treating yellow fever. Bicarbonate of soda is occasionally added to the above prescription when this acidity is continuous. All the resources of the expert are needed to allay an irritable stomach.

#### TREATMENT OF SUPPRESSION OF URINE.

The way to prevent anuria, from which most subjects die, is to keep the kidneys functioning by water diuresis. What goes in must come out, so water given regularly every hour or two, while the patient is awake and has high fever, is not only very grateful to the patient, but keeps the kidney acting. The water may be charged, alkaline or plain, iced or hot, just to suit the patient, but it must be given with the regularity of medicine to have the desired results. Watermelon seed or orange leaf tea are common remedies among the Creole population of New Orleans. Lithia tablets may be added to the water or mineral springs water of proven diuretic value may be used, but, after all, it is more in the quantity than in the chemistry of the water. This water should be repeated often, but not in large quantities, if nausea be present. High hot water enemas, or a literal warm bath for the kidneys through the rectum, or hot turpentine applications to the spine or abdomen are all recommended by experienced practitioners.

Others have suggested one-grain doses of calomel one hour apart until the kidneys and bowels act, while some have recommended half-pint doses of champagne. Any one who has examined a yellow-fever kidney postmortem with its epithelial and inflammatory degeneration, its blocked, uriniferous tubules filled with debris and toxin products, will know the necessity of washing them out with the vis-a-tergo or abundant water treatment. The condition is a desperate one, hence the multiplicity of remedies and suggestions, all of which frequently have failed.

#### TREATMENT OF THE HEART.

Yellow fever is a germ or toxin poisoning circulating in the blood, which profoundly depresses the heart's action. The pulse may drop to 50 or 60 beats per minute. After the first two or three days remember the recumbent position is imperative during the existence of this depression. The patient should not exert himself, even to turning in bed. Water and liquid nourishment should be taken out of ideal glass, sick cup, or through a bent tube, so that not even the head is raised in the effort of drinking. The patient should be given  $1/60$  grain of strychnin hypodermically with caffein to stimulate the heart during this weakened period, when necessary.

As said before, the poison of yellow fever is a powerful toxin circulating in the blood whose main ravages are exerted on the liver, resulting in jaundice, on the stomach, producing pain, nausea and hemorrhage in severe cases; on the kidneys, causing nephritis, hence the albuminuria, uremia; and on the heart, slowing and weakening its action, so that the ratio between the pulse rate and temperature is lost, giving 106 F. temperature with a 70 or 80 pulse beat per minute. Any toxin that is capable of working any or all of these ravages is a powerful factor with which to deal, and any one who views it lightly is either reckless or not experienced in its management.



## COMPLICATIONS WITH MALARIA AND DENGUE.

Yellow fever is certainly intimately connected with malaria in many cases, in that it occurs in the patient at the same time and in tropical climates; has the same intermediate host (the mosquito); begins with a chill, head and lumbar pains, so that the first twenty-four hours of the two diseases run in parallel lines in many cases. On this account, whenever the malarial plasmodium is found in the blood examination, 20 grains of quinin has been given with advantage by enema during the first twenty-four hours of the fever. It is not considered safe to give it by the stomach in capsule form, but its action in eliminating the malarial element is just as positive as in uncomplicated malaria. It has been observed by clinicians that nearly every outbreak of yellow fever has been preceded or intermixed with dengue fever. Whether the so-called dengue is another name for mild yellow fever, I will not attempt to discuss here, but will state that the last three epidemics of yellow fever in New Orleans and contiguous territory have been so mild in some patients that many families, thinking it dengue, risked treating themselves, rather than to call in a physician and to undergo the temporary inconvenience of screening and fumigation incident to yellow-fever cases. Many of these mild untreated yellow-fever patients spread the disease and reproduced the severer forms of fever in localities where its origin could not be otherwise traced.

## DIET.

During convalescence the liquid nourishment, such as alimentary elixir, milk and lime water, strained soups, barley water, egg albumin, may be administered prudently, but only in tablespoonful doses at the time, and an hour or two apart, until convalescence is well established. All of these articles of diet are to be stopped if disagreeable symptoms supervene.

With Dr. Sternberger's bichlorid of mercury treatment, we have had no personal experience.

This article is intended to deal only with some of the more prominent symptoms and treatment of yellow fever. There are many little details of nursing and nourishing in the convalescent stage that the tact of the nurse and the physician will discover in the progress of the case. What is here recommended is a sort of résumé (consensus) of general methods and treatment usually in vogue by the active practitioners during the last three outbreaks in New Orleans.

## POSTOPERATIVE PELVIC EXUDATES.\*

W. FRANCIS B. WAKEFIELD, M.D.

SAN FRANCISCO.

Anyone who takes the trouble to investigate this subject carefully will be surprised at the frequency of a postoperative exudate as a sequel to surgical procedures for the relief of the various pathologic conditions which may be found within the female pelvis, due to past or present inflammation.

Let these conditions be what they may—pyosalpinx, hydrosalpinx, or hematosalpinx, ovarian cystomata, hematomata or abscesses, neoplasms of the uterus or periuterine structures associated with degenerative or inflammatory changes—if they produce an exudation which results in the formation of abnormal adhesions, if they bring about hyperplastic changes in the pelvic

connective tissue structures, or if they are responsible for an embarrassed pelvic circulation with passive hyperemia, edema or venous varicosity, they may easily lay the foundation for future postoperative exudates.

Although theoretically recognizing the possibility of postoperative pelvic exudates, the question had not assumed practical importance to me until three years ago, when a patient, a few months after having been operated on for bilateral pyosalpinx, returned to me complaining of pelvic discomfort and on examination I was surprised to find a firm, slightly fluctuating mass, the size of an orange, on the left side. Under appropriate general and local treatment the mass entirely disappeared in a few weeks and has not returned since. During the time it was present in the pelvis it produced symptoms almost as severe as the original condition.

Since that time I have made a systematic study of the postoperative local conditions of the patients on whom I have operated for the results of pelvic inflammatory disease. The outcome of this methodical research leads me to the conclusion that postoperative exudates or indurations may be found, to greater or less extent, in about 60 per cent. of the patients on whom we operate for the purpose of relieving the various pathologic conditions produced by severe inflammatory disturbance.

While our patient lies in bed after the operation, and, in fact, up to the time she leaves the hospital, these postoperative tumefactions are rarely observed. It is after the patient begins to lead a more active existence and gradually takes up her general duties, with the increased physical exercise which such duties demand, that these exudates begin to give evidence of their existence. The patient will feel a sense of weight and ill-defined discomfort amounting sometimes almost to pain, on one side or the other, or on both, reflected up around the brim of the pelvis on the affected side, and on examination a more or less pronounced thickening or tumefaction will be found. In general character these tumefactions vary greatly. Sometimes one observes simply an edematous thickening of the broad ligament structures; at other times hard indurations of variable size, from that of an egg to that of a large lemon; again, semi-fluctuating tumors which often are as large as a cocoanut, almost filling the pelvis and pushing the uterus toward the opposite pelvic wall.

In this paper I exclude from the discussion those septic exudates of streptococcic or other pyogenic origin which may occur shortly after an operation and which are accompanied by elevation of temperature, increase in the pulse rhythm, and the other symptoms of a septic state.

In view of the frequency and importance of these non-septic exudates, one would naturally expect a rich literature on the subject. In this expectation, however, one meets with disappointment. Our literature is almost silent on the question. I have been able to find only two or three allusions to the subject in our American literature of recent years.

In the discussion of a paper read before the Chicago Gynecological Society, March 17, 1899, by G. A. Klettsch on "Remote Postoperative Pelvic Conditions and Their Symptoms, with Report of Cases," Thomas J. Watkins calls attention to postoperative exudates, and attributes the symptoms of one or two of Klettsch's reported cases to this cause, in which opinion I concur.

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



The possibility of postoperative exudates is also vaguely suggested by J. Riddle Goffe in a paper read before the American Gynecological Society last year under the title of "The Value of Postoperative Local Treatment in Gynecology," and a direct allusion is made to this subject by George Tucker Harrison in an article entitled, "Conservative Treatment of Affections of the Uterine Adnexa, Its Indications and Limitations," which was read before the Virginia State Medical Society at its thirty-fifth annual meeting. In this article Harrison speaks of "intrapelvic pains due to exudation about the stump."

One wonders whether these exudates have not been generally observed, or whether, having been observed, they were regarded as being relatively unimportant. I regard them as being of extreme importance, and can positively assert, from personal experience, that failure on the part of the gynecologist to recognize early and to treat appropriately these mechanical exudates until they have disappeared, will often result in a state of invalidism quite as pronounced as that which existed prior to operation. This being so, a responsibility rests on us, and I think Goffe's plea for postoperative local treatment in gynecology is well timed.

The pathology of these exudations and indurations seems to me to be simple. I have never subjected any of these patients to any secondary operative procedures, so have, therefore, had no opportunity to make a histologic study of the composition of these pelvic tumefactions. A thoughtful review, however, of the conditions existent in the pelvis after an operation enables one to arrive at a very clear conception of the method of formation of these mechanical entities. Let us suppose we have operated on a patient whose pelvis is the seat of a bilateral pyosalpinx with adhesions. We have performed a bilateral salpingo-oöphorectomy, after having broken up the surrounding adhesions. We have covered up the raw surfaces with peritoneum as best we could, and closed up the abdominal wound. In the pelvis thus operated on there will exist the following local conditions:

1. A break in the arterio-venous circle, caused by the ligation of the ovarian artery and vein, which demands the establishment of a collateral circulation.

2. A deposit of embryologic connective tissue in and around the sites of surgical trauma.

3. An edematous, hyperplastic condition of the pelvic connective tissue as a result of long-continued association with chronically inflamed viscera.

4. Adhesions may tie the pelvic viscera together or to contiguous abdominal viscera.

A careful review of these statements gives us ground for a logical hypothesis concerning the pathology of the postoperative mechanical tumefactions under consideration—the so-called exudates. The first two factors supply the cause; the last two simply intensify the first. It is easy to appreciate how hyperplasia of the pelvic connective tissue, by irritating pressure, and adhesions, by more or less profound immobilization, should both act directly in intensifying an already disturbed venous circulation. Given, then, an inefficient circulation, with the venous stasis, edema, etc., that follows, and the presence of a greater or less quantity of embryonic connective tissue, and we have all the requisites for the production of future pelvic indurations. At about the time that, under ordinary conditions of wound healing, the embryonic tissue would be undergoing absorption, the patient on whom we have oper-

ated, who has been in the prone position for about three weeks, the position most favorable to venous outflow, suddenly assumes the upright position and increases her muscular activity, which excites arterial inflow and impedes venous outflow. The venous stasis thus produced is very unfavorable to the absorption of the embryonic connective tissue found in and about the pelvic wound surfaces. So much so is this the case that often not only is the absorption of the embryonic tissue hindered by this local irritation, but an actual increase of new tissue is produced. It is my opinion that it is the accumulation of an excessive amount of embryonic connective tissue substance that forms our postoperative pelvic tumefactions and constitutes our so-called pelvic exudates. If this embryonic tissue is rich in fibers our tumefactions appear as firm indurations; if, on the other hand, there is a scarcity of fibrous elements and an abundance of soft, young cells, we then get our less resistant, semi-fluctuating masses. As the pelvic circulation improves and gradual absorption of this embryonic tissue takes place, our tumor disappears. If, on the other hand, no improvement in the circulatory condition is brought about, and no effort is made to encourage the absorption of this new tissue, it becomes a more or less permanent structure in the pelvis, and, in time, will gradually change from the embryonic type to the adult connective tissue type, until, eventually, as has been demonstrated to me more than once, a hard, fibrous mass, formed, at least in part, of adult fibrous tissue, will occupy the site of the original pelvic induration, and may, perchance, give rise to a complex symptomatology quite as distressing, if not as serious, as the original condition for which we operated.

Careful observation leads me to believe that these products of a disturbed circulation can often be prevented by a prolonged convalescence, the assumption of activity very gradually, aided, when possible, with general hygienic and local depleting measures. The general prophylactic measures to be adopted are, of course, those which tend to improve the general circulation, such as light massage, alcohol and salt friction rubs, tepid sponge baths, etc. Local depletion, at this stage, consists in copious hot douches once or twice daily.

Such postoperative care as just outlined is, of course, impracticable in our hospital service, and can only be applied to a small percentage of our private patients, but it is a wise practice when it is carried out, and when it can not be carried out we must follow our patients up and give each one whatever postoperative treatment, both local and general, the exigencies of her case demand and her circumstances and environment render possible.

When, some time after operation, examination reveals the presence of a pelvic induration or tumefaction, we must at once institute appropriate treatment and continue this treatment until the so-called exudate undergoes absorption. Physical exercise must be kept within very reasonable bounds, and all the excretory organs kept active, especially the skin. Local treatment will consist in stimulating and depleting measures. The two most useful are the copious hot douche and the depleting tampon. The douche may be used once, twice, or three times daily, depending on the urgency of the case, and should always be taken in the recumbent position, preferably with the hips elevated. The amount of water to be used in the douche should not be less than two gallons, and the temperature should be as high as the patient will permit—from 110 F. to 120



F. The tampon must consist of some light, fluffy and non-absorbable material—something that will not ball up into a hard, irritating mass. Fine Australian lamb's wool makes the ideal material for tampons. The depleting medicament to be used on the tampon will differ with individual preference. The menstruum must be one which encourages free exosmosis, to which may be added astringents, antiphlogistics, or antiseptics. The local application of electricity might, in some cases, be beneficial. Local pelvic massage, as suggested by Brandt, is very serviceable in the hands of some men and very harmful in the hands of others. The difference is purely a matter of individual proficiency in its use.

Incision and drainage of these pelvic masses through the vault of the vagina naturally suggests itself. I have never found it necessary so far, although, in one case, I was tempted to do it. I was glad afterward that I refrained from surgical interference, as continuance of depleting local treatments soon brought about complete resolution of the exceptionally large, semi-fluctuating tumor present in this particular case.

In conclusion, I simply wish to say that I am thoroughly convinced that, as we study more intelligently and carefully the local postoperative conditions existing in patients whose pelves have been the seat of acute or chronic inflammatory disease, the more necessity we will find for intelligent postoperative treatment, and the more gratifying will be our remote operative results to both the patient and ourselves.

#### DISCUSSION.

DR. H. O. PANTZER, Indianapolis, challenged the paper for being at variance with the ordinary principles of pathology. The term used—pelvic exudates—implies an infection giving rise to pyosalpinx. This disease, he said, is practically always accompanied by temperature. These cases can be ascribed more properly to postoperative hemorrhage. All the phenomena present can be explained on such hypothesis. Dr. Pantzer believes that had Dr. Wakefield done a posterior colpotomy he would have found, in addition to pus, the evidences of blood. These cases may become suppurative and develop temperature at any time after operation, even without infection. They are to be grouped under the head of incomplete hemostasis or postoperative hemorrhage.

DR. C. O. THIENHAUS, Milwaukee, Wis., said that there are two reasons why we do no longer hear so much of postoperative exudates. The first reason is that surgeons have given up the use of silk ligatures within the abdomen. Five years ago Dr. Thienhaus called attention to the fact that when silk is used within the abdomen and the operative field is infected during the operation or becomes infected after operation, the silk ligatures also become infected and often form a nucleus for later exudates, from which fecal and other fistulas and other conditions may originate, the correction of which proves a troublesome and dangerous task even to the expert surgeon. The other reason is that surgeons now do more complete operations. If, during an operation for pus tubes, a part of the tube is not excised and thereby a small area of infection is left, postoperative exudates may form.

DR. D. H. CRAIG, Boston, reported a case which interested him greatly. About eighteen months before coming under his observation, at the Free Hospital, a woman had both tubes and ovaries removed. She did not make a satisfactory recovery. Dr. Craig found a mass about the size of a lemon in the region of the broad ligament; it was easily palpable through the vagina. The patient also had an adherent retroversion and badly irritated, lacerated cervix. The cervix was repaired, and the mass was still palpable in the broad ligament. The abdomen was then opened and the adherent uterus loosened and suspended. The most diligent search failed to reveal any tumor in the broad ligament. The patient was discharged from the hospital at the end of four weeks. Two

weeks afterward she reported at Dr. Craig's clinic with the mass as plainly palpable as ever. He called in several other men, and they all felt the tumor. She returned a week later, and not one of five men could find the mass. At the end of another week she reported again with the mass as manifest as at her first visit. The question is, what was the mass? Dr. Craig believes that it was a broad ligament varix, and that the lithotomy position maintained during the first operation, superseded by the Trendelenburg posture had drained the varix so that it disappeared. If this was a postoperative exudate, Dr. Craig would like to know what to do.

DR. J. RIDDLE GOFFE, New York, stated that his attention has been directed to this line of treatment in his work for the relief of sterility. In these cases a very slight cobweb adhesion may be the cause of the most persistent sterility. In operating in cases in which he did not find it necessary to remove any tissue, and contented himself with breaking up adhesions and setting the organs free to perform their functions, it occurred to him that it might be wise to promptly begin postoperative treatment, and by doing so he has been able to attain some excellent results. He referred to the depleting effect of tampon treatment and hot-water douches, and advised against waiting until the exudate can be felt before beginning that treatment. If the douches and tampon are used too early, however, the normal healing process is prevented; therefore, he waits until the twelfth day, or even the fifteenth, before instituting this treatment. The etiology of these postoperative adhesions is more or less obscure. In most cases there is infection, although not of a virulent character, and Nature as a matter of protection throws out a certain amount of plastic exudate. This, as a rule, does not develop into an abscess. Postoperative treatment will assist materially, not only in preventing the exudation from forming, but also in hastening its absorption after it has occurred. It is important to follow up patients and to examine them carefully after operative procedures in the pelvis. In the last few years it has become a growing ambition to get patients up too early. Recently, before the New York Obstetric Society, a physician said that he allowed his laparotomy patients to get up as soon as they wanted to, some being on their feet the day following the operation. This is going to an unfortunate extreme. In order to get the best results, it is necessary to keep patients quiet longer, and when there has been extensive inflammatory exudate preceding operation, one may expect more or less recurrence of it after operation. Hence it is well to give postoperative treatment before discharging the patient.

DR. C. S. BACON, Chicago, thinks that there are several causes for this condition. It is sometimes due to hemorrhage; sometimes to sepsis; sometimes, possibly, to varix, and it may be the result of a non-virulent infection. Even a gonorrheal infection, at a late stage, does not necessarily produce much temperature, and thus it might be overlooked entirely. Infection from the intestinal tract might account for some of these cases. Dr. Bacon feels quite certain that some of these exudates are of infectious origin. The same condition of affairs is seen in a mild breast infection, with a beginning abscess, but it almost always disappears if treated properly by absolute rest, with support of the breast and the application of cold or heat. This is the reason for the good effects of the treatment in the cases reported, and it also emphasizes the point made by Dr. Goffe that there is great danger in getting patients up too early after operations, and in not getting them up in the proper way. The postoperative treatment should be like the management of the puerperium. It is not necessary to have the patient in bed for a week or two and then have her get up for a whole day. When she begins to get up, let her do so carefully and gradually. When the postoperative management of a case is carried out like the management of the puerperium, fewer of these conditions will occur.

DR. J. H. CARSTENS, Detroit, thinks the percentage of these cases depends on the surgeon. If he is a broad, all-around man, he will have only about 4 or 5 per cent. The trouble is that surgeons are all specialists; they are not broad enough to see everything. Some surgeons have too poor a technic.



They make mistakes, too. Dr. Carstens has seen men tie off a tube containing pus, and the patient has a postoperative exudate. The way to do is to cut the tube in a V-shaped way and then bring the ends of the V together and cover it all over with peritoneum. Then, as a rule, there will not be any adhesions. To dig through the intestines and try to break up adhesions is bad. If it is in a pus case, Dr. Carstens advised taking a little rubber tube with a cross piece, putting it in the cul-de-sac and draining through the vagina. In the place of peritoneum one can use Cargile membrane. Dr. Carstens has most trouble in cases in which he does conservative operations; those in which he leaves half a tube or an ovary, or in which he does an abdominal or vaginal hysterectomy and leaves one ovary. Another thing at fault is the after-treatment of these patients. They do not get enough to drink. One can not get absorption and elimination from solid tissues. These patients need liquids, and must be flushed out. The eliminating organs must be opened up. Every patient should receive two or three quarts of saline solution by rectum or under the breast immediately after the operation. They must have plenty of water, at least three quarts a day, one-half pint or a pint at a time, if the stomach is all right. Then, if there is a little exudate, Dr. Carstens uses a mercurial. He commences with protoiodid of mercury, one-eighth of a grain every three hours, until he has given about thirty doses. That acts as an alterative and absorbent and opens up the lymph channels, and the patients get along better. They have comparatively few complications.

DR. FRANK T. ANDREWS, Chicago, agreed with Dr. Carstens that infection often comes from the cut extremity of the tube, but his method of prevention has been more radical than Dr. Carstens'. He removes the whole tube, even into the horn of the uterus, and then closes the wound with a web stitch, often not ligating the uterine and ovarian arteries, simply running a stitch along the top of the broad ligaments. That, however, depends entirely on the individual case.

DR. H. C. CROWELL, Kansas City, said that the worst sequelæ and the most important are those that follow these operations. If it were not for the kindness of Nature in absorbing adhesions, surgeons could not enter the abdominal cavity. However careful the procedure, the endometrium is more or less disturbed and sequelæ result. Dr. Crowell believes that the age of the silk suture has passed, but stated that catgut is a source of trouble if not carefully prepared. The knot in the suture gives rise to an exudate which may end in an abscess. He believes that a shorter-lived catgut may be used safely, because the ligation of vessels requires a very short time for perfect occlusion. The technic is the most important point. Dr. Crowell thinks that patients ought to get up early, as fluids gravitate toward the pelvis if the patient is in the erect position. He advised getting the patient up on the second or third day and encouraging circulation by putting her on her feet and allowing her to walk. Exudates are then absorbed. He has allowed hysterectomy patients to get up on the second day and always inside of a week. He is satisfied that these patients do better than they would if kept in the recumbent position for a long time.

DR. W. F. WAKEFIELD said that the class of cases Dr. Pantzer spoke about are ruled out of the discussion. The paper expressly excludes them. These are mechanical conditions that are practically never found while the patient is in bed, and Dr. Wakefield has examined these patients carefully for the last two or three years. It is after the patients get up that these conditions are found, and even then they depend on how slow convalescence has been. If very slow, exudates are rarely found at all; if rapid, in from two to eight weeks after the patient begins to walk, one finds these tumefactions. Dr. Craig's case illustrates exactly the class of cases referred to. Dr. Wakefield said that he could have mentioned from fifteen to twenty similar cases. Gynecologists have not been looking for these indurations and, therefore, they have not found them as often as they have been present. These tumors are pure mechanical entities. Just what the mechanism is he is not prepared to say. Sepsis has nothing to do with it. He has never found sepsis in any case. An embarrassed circulation is probably the largest factor, and this circulatory irritation

acting on the new tissue accounts for the condition in all likelihood. He has never cut into one of these tumors, and he believes that if he had he would not have found anything. Nevertheless, unless the absorption of this mechanical mass is brought about, the patients will suffer from ill-defined pelvic irritation, almost as troublesome as the original condition for which they were operated on. Dr. Wakefield explained that he used the term exudate because it is the term used in the literature. It refers to any tumefaction about the field of operation. He thinks it is a misnomer. Throughout his paper he speaks chiefly of the so-called exudates and calls them mechanical tumefactions. He does not believe that they are real exudates. The percentage of their occurrence depends not so much on the technic of the operator as on other things. He removes tubes just as Dr. Carstens does. When he mentioned 60 per cent. he did not mean that there was a definite tumor in that percentage of cases, but that on examining these women in from six to eight weeks after operation he has found in 60 per cent. either a thickening of the broad ligament or a distinct tumefaction. He does not believe in letting patients get up early. In carrying on a series of experiments on patients he found that these tumefactions are almost invariably produced in patients who get up early. The longer the patient can be kept in bed and the more protracted the convalescence the less likelihood there is for the formation of these tumefactions.

## HERNIA OF THE TUBE WITHOUT THE OVARY.\*

FRANK T. ANDREWS, M.D.  
CHICAGO.

I wish to report four cases of hernia of the tube without the ovary, one furnished by Dr. James H. Haberman, Pawtucket, R. I., and another by Dr. H. H. Judd, Chicago, the third and fourth being from my own practice.

I have made an exhaustive search for recorded cases of hernia of the female pelvic organs and find 362 cases sufficiently well reported to be of value. These cases, with my own, may be tabulated thus:

	Cases.
Hernia of tube without ovary.....	46
Hernia of ovary and tube.....	80
Hernia of ovary without tube (or tube not mentioned).....	167
Hernia of non-gravid uterus.....	43
Hernia of pregnant uterus.....	30
Total.....	366

Early in the second century, Soranus of Ephesus described the first case of hernia of the ovary. No further observation was made until 1716, when Louis Leger de Gouey of Rouen wrote an article citing a case of intra-hernial tubal pregnancy.

The literature of tubal hernia is practically the same as that of ovarian hernia, but in 1893 Lejars<sup>1</sup> published an article on hernia of the Fallopian tube without the ovary; and in 1901 Dr. Paul F. Morf<sup>2</sup> published a very complete work on the same subject, reporting 24 cases, including his own.

### REPORTS OF FOUR CASES.

I wish to record here the following cases:

CASE 1 (Reported to me by Dr. H. H. Judd).—Patient, a Swedish widow, 56 years of age, and admitted to Cook County Hospital May 12, 1905. First noticed small tumor in left groin fourteen years ago after doing some heavy lifting while eight months pregnant. Tumor was easily reduced, and gave no trouble until one and one-half years ago, when it again appeared and reduction was impossible. Physician was called

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. *Revue de Chirurgie*, January and February, 1893.

2. *Annals of Surgery*, 1901.



who obtained reduction. This attack was accompanied by considerable pain at site of tumor, restlessness, irritability and vomiting. Had similar attacks one year ago, also three months ago. Present attack is accompanied by more pain than before, and patient had vomited several times on day of admittance.

Examination showed small irreducible tumor in left inguinal region, firm in consistency, except at distal extremity, where it was tympanitic. Tumor gave slight impulse on hard coughing and was somewhat tender.

Operation performed by Dr. Kahlke. Incision over tumor, sac opened and dissected loose. Sac contained portion of ileum, which was very dark colored, a portion of broad ligament and a loop of Fallopian tube while ovary was situated within abdominal cavity, but firmly pressed against femoral ring and neck of sac. Tube and ovary replaced, sac excised and wound closed with catgut. Chart of temperature, etc., was as follows:

	Pulse.	Temp.	Resp.
On admittance .....	100	98	30
After operation .....	108	101	30
Third day .....	84	98.8	24

Patient made uneventful recovery and was discharged June 13, 1905.

CASE 2 (Reported to me by Dr. J. H. Haberlin).—Mrs. B. N., 45, white, United States.

*Family History.*—Father died at 58 years of pulmonary tuberculosis after four years' illness. Brother, third born, died at 23 of pulmonary tuberculosis, two years' illness. Brother, second born, died at 35 years of Landry's paralysis. Brother, fifth born, died at 39 years of chronic nephritis and hepatitis (alcoholic etiology). Mother living and well at 76 years, excepting slight edema of legs and periodic subacute rheumatic attacks. Yields readily to treatment. Brother, 50 years, in good health. No one beside the patient ever had a hernia.

*Previous History.*—Patient was a full term child, born in normal labor. Never sick in infancy. Breast fed until late in infancy. Had measles and pneumonia in early childhood. Otherwise well. Jumped from a high wall at 7 years of age and received hernia in the left groin. Twelve years ago, while lifting heavy weight, received hernia in right groin. Was treated by Dr. O. Edwards, Boston. He injected a solution that caused intense inflammation, with consequent great suffering. After a week, the symptoms of inflammation subsided and patient was discharged cured. The left hernia never recurred, but the patient thought she felt the right hernia recurring and dropping lower down. The doctor, when again consulted, however, insisted that the hernia was cured and refused further procedures. Every since this time, patient has had a hernia in the right groin.

*Personal History.*—Patient uses alcohol moderately. Has worked in a department store as clerk since husband's death (fifteen years ago) until about two years ago. Appetite good. Bowels slightly constipated. Sleeps well. Disposition cheerful. Menses appeared at 16 years; were then regular, flowed six to seven days without pain until 19 years of age. Then patient suffered pain during the flow. Married at 20 years. Had child at 21 years and at 25 years. Labor normal. Never miscarried. Has had leucorrhea ever since marriage almost constantly, but amount and character has varied. Sometimes discharge was thick, white and tenacious, sometimes it was thin and white or yellow. Widow for fifteen years.

*Present Illness.*—I was called to see the patient May 14, 1905, at 8:30 p. m. Found her seated in a rocking chair, tearful and evidently suffering great pain. (Patient usually a stoic.) Hernia has been down four days and patient is unable to reduce it. Usually she can reduce it at its worst stage by lying on the floor and putting feet on the bed and then gently manipulating the tumor. Patient has not menstruated for six weeks. Never before has this latter occurred except in pregnancy.

*Examination.*—Firm rounded tumor as large as grape fruit. Patient placed in dorsal decubitus with feet raised, and I manipulated the hernia to obtain reduction. Manipulation caused great pain if done at all but gently. Tumor gradually reduced to size of small lemon, when further reduction was absolutely impossible.

*Diagnosis.*—Ruled out tuberculous femoral glands, hernia

of tube and ovary and enterocele in favor of incarcerated epiplocele (inguinal).

*Operation.*—This was advised as only resort. Patient consented. Patient was removed to St. Joseph's Hospital, Providence, R. I. Dr. William L. Harris of the surgical staff agreed that it was epiplocele, but thought it femoral and strangulated. In discussion, he did not insist on the latter condition, however. Operation was by Dr. Harris. Incision parallel to Poupart's ligament. Sac exposed and seen to contain a light yellow-colored serum. Tumor as large as small lemon, as before mentioned. Tumor punctured and serum allowed to escape. Sac (peritoneal) incised and the cyst wall seen to be connected to one of the fimbriae of the tube, all of which were in the wound. Fimbriated end of the tube amputated. Hernia was femoral.

*Postoperative History.*—Ideal patient; ideal result. Left the hospital fifteen days after operation. Was obliged to use napkins every day in the hospital for slight sanious discharge. Pain in wound week after operation disappeared in three days. Menses appeared two weeks after return home; lasted scarcely five days, with decidedly less pain and discomfort than usual.

CASE 3 (author's).—March 24, 1904, I operated for Dr. Childs of Roseland, Ill., on Mrs. K. (multipara, aged 32, married eleven years), for diseased appendages. There was a history of gonorrheal infection three years previous, followed by salpingitis. A right inguinal hernia, caused by carrying pails of water, had existed for sixteen years. Operation disclosed the usual condition of adhesion on both sides, except that the right tube led in a straight line to the hernia. About one-half the tube was adherent, together with omentum in the hernial sac. The internal inguinal ring was patulous, a loop of bowel evidently slipping in and out of the sac readily. I removed the appendages and repaired the hernia. The patient made a normal recovery.

CASE 4 (author's).—Mrs. W., aged 23; admitted to Mercy Hospital April 30, 1905. Married one and one-half years. Had a child born March 2, 1905.

*Previous History.*—No tuberculosis in family. Had as diseases of childhood measles, whooping cough and scarlet fever. Suffered occasionally from pain in abdomen and diarrhea. Periods began at age 13, and were regular every four weeks. Flow profuse and not very painful. Never had any weakness or pain in the right groin nor knew of any tumor or hernia. After birth of a child, March 2, 1905, she evidently suffered from infection, giving a history of irregular chills, alternating with high fever. At first there was considerable vomiting. Since then there has been great pain and tenderness in the right inguinal region, with the gradual development of great swelling.

*Examination.*—Temperature 101 to 103; pulse 100 to 140. The abdominal wall on the right side was swollen and edematous, the swelling extending upward to the ribs and downward on to the anterior surface of the thigh. Digital examination revealed a mass involving the right appendages, but nearly filling the pelvis. The outlines of ovary, tube or uterus could not be distinguished.

*Diagnosis.*—Pelvic abscess due to rupture of right pyosalpinx with adhesions to anterior abdominal wall.

*Operation.*—I was assisted in the operation by Drs. Barnes and Norris. Ether was given by Dr. Mitchell. Usual preparation. Trendelenburg position. Incision 4 inches long in median line. Pelvic organs on right side were matted together and covered by adherent omentum and intestine. After separating the omentum and bowel from the mass, the uterus could be seen drawn to the right. Laparotomy sponges were inserted to wall of the field of operation. On separating some uterine adhesions with the finger and drawing the uterus to the left, it was discovered that the right tube and round ligament had been severed at the uterine horn. On introducing a retractor to lift the abdominal wall, pus could be seen escaping from the internal inguinal ring into the peritoneal cavity. The parts were cleansed of pus, and the finger inserted through the ring into the cavity of the abscess. An incision was made through the skin into the hernial abscess and a gauze drain inserted. A gauze drain was also used in



the median incision and the remainder of the wound closed by silk-worm gut, interrupted sutures. The patient made an uninterrupted recovery and left the hospital May 30.

The following cases I have gleaned from the world's literature:

AUBRY:<sup>3</sup> Age 70, postmortem examination revealed hernia of the Fallopian tube. Tube had passed through femoral ring and lay in front of the pectineus muscle, between the adductors and the femoral vessels.

BERARD:<sup>4</sup> Age 45, acquired crural hernia of the right tube; irreducible. Exploratory puncture evacuated clear fluid; patient showed symptoms of a phlegmon and death occurred seven days after evacuation. At autopsy, a seropurulent peritonitis was found. The neck of the sac passed through the crural ring, and within it the Fallopian tube, somewhat enlarged. No other viscera were found in hernial sac.

BOUDIN:<sup>5</sup> Age 50, acquired crural hernia; irreducible. Operation, sac was found to contain the Fallopian tube alone, strangulated by neck of sac. Recovery.

BRUNNER: Case 1.—Age 68, irreducible; acquired crural hernia. Operation; the sac being opened, clear fluid escaped, disclosing swollen and edematous extremity of right Fallopian tube; the tube was reduced; a lipoma situated in upper portion of sac was isolated and extirpated. Recovery.

Case 2<sup>a</sup>.—Age 38, acquired inguinal hernia; irreducible. Operation; clear fluid tinged with red escaped from sac after incision. Right Fallopian tube was contained in sac. By making traction on tube, the ovary was dragged forward, but was found to be perfectly healthy. Tube was reduced and the sac ligated and resected. Recovery.

CHIENE:<sup>7</sup> While dissecting the body of a woman, aged 73, found an obturator hernia; the sac contained two-thirds of the Fallopian tube and two inches of the ileum. The bowel was gangrenous and had given away. On the opposite side were two obturator herniae, an anterior sac formed of parietal peritoneum and the posterior sac containing the outer half of the Fallopian tube. A year previous she had been successfully operated on for strangulated femoral hernia.

DEMOULIN:<sup>8</sup> Operated in a case of hernia of the tube, where there was adherence to the sac; traction brought the ovary to view.

DEAYER, J. B.:<sup>9</sup> Strangulation of the fimbriated extremity of a Fallopian tube of the right side, which was thought to be a femoral hernia.

DOLBEAU:<sup>10</sup> Tumor in inguinal region presenting signs of an abscess of inguinal canal. Incision pus escaped. Peritonitis and death. Autopsy showed pus collection surrounded by hernia sac, which contained likewise a serous cyst. Incision of cyst revealed Fallopian tube.

DUPONT:<sup>11</sup> Age 38, in fifth month of pregnancy, acquired inguinal hernia. Exploratory puncture caused escape of yellowish fluid. Operation revealed herniated Fallopian tube, organ was reduced. Recovery.

ERICHSEN:<sup>12</sup> Age 37, acquired left strangulated hernia. Operation sac contained clear fluid and the swollen fimbriated extremity of the Fallopian tube which was tightly nipped at the neck of the sac. Tube was returned into abdomen. Recovery.

FERE:<sup>13</sup> Child, age 3 weeks; at autopsy a hernial sac containing exclusively the fimbriated extremity of the Fallopian tube was discovered external to the round ligament. It was easily reduced, but returned immediately after pressure was removed.

DEFRANCISCO:<sup>14</sup> Age 32, acquired inguinal hernia of the left tube, irreducible. Operation; sac exposed and opened. Contained adherent tube; the latter was separated as much as possible; sac was separated from surrounding parts and closed with sutures and stumps replaced. Recovery.

FRANK:<sup>15</sup> Age 21, left tubal hernia, acquired. Operation; removal of tube and sac; recovery. Had been operated on when a child for hernia on same side. No trace of ovary could be found in last operation.

GOEPEL:<sup>16</sup> Age 62, acquired right crural hernia, irreducible. Celiotomy; sac contained serous fluid and dilated Fallopian tube; it was removed, as was likewise the corresponding ovary, which was sclerotic. Recovery.

DE GOUVEY:<sup>17</sup> (of Rouen, in 1706): Young woman, hernial sac of right groin; when sac was opened, clear fluid escaped. (On reading original, this is seen to be evidently hernia of tube.) Inside another bag a live fetus, 6 inches long, was found; latter was removed, tying the cord. Placenta likewise came away; it was fastened to circumference of musculus obliquus externus.

LEJARS:<sup>18</sup> Age 39, acquired inguinal hernia of the right tube; strangulation. Operation; sac contained blood-stained fluid and Fallopian tube; tube was excised with sac; it was gangrenous in places. A portion of the wall of the urinary bladder also became herniated through the internal ring in company with the hernial sac. Recovery.

LENTZ:<sup>19</sup> Age 52, acquired crural hernia of the left Fallopian tube; dropsy of the hernial sac. On dissection, bloody fluid was evacuated. The Fallopian tube was ligated and excised with the sac. Recovery.

JALAGUIER:<sup>20</sup> Age 19 months; since the age of 6 months right inguinal hernia. Operation; sac, formed by the canal of Nuck contained a knuckle of the right Fallopian tube. Excision, followed by recovery.

KOUSMINE:<sup>21</sup> Age 36; left acquired inguinal hernia; irreducible. Operation; after opening sac, large quantity of seropurulent fluid escaped. This disclosed a cystic Fallopian tube, the external half of the tube only occupying the sac. Recovery.

MAYDL:<sup>22</sup> Age 47; acquired femoral hernia; irreducible. Operation; after incision, escape of hemorrhagic fluid, which disclosed knuckle of Fallopian tube in the femoral canal; the uterine half of the tube was converted into a cyst; the strangulated portion of the tube consisted of a loop, which had passed back into the abdominal cavity after having passed out through crural ring. He extirpated the sac containing the tube; also removed the corresponding ovary. Recovery.

MOLLER:<sup>23</sup> Age 46; right inguinal hernia, acquired. Herniotomy; sac was found to contain a pyosalpinx. On account of collapse operation was hastily ended. Recovery with a formation of a fistula.

MORF:<sup>24</sup> Age 24; left congenital inguinal hernia of the Fallopian tube; irreducible. Operation; sac was removed with its contents, together with left ovary; sac contained omentum, into which mass the tube was traced, its fimbriated extremity being completely surrounded by omental tissue; from it the infundibulo-pelvic ligament could be traced; passing out of sac. Recovery.

MORTON AND BUTLER: Case 1.—Age 46; acquired right inguinal hernia; irreducible. Operation; sac was found to contain right Fallopian tube and its fimbriated extremity. Reduced sac ligatured and cut away. Recovery.

Case 2.<sup>25</sup>—Age not known; strangulated right femoral hernia. Herniotomy; sac contained gangrenous omentum and gangrenous ruptured bowel and end of right Fallopian tube, which was gangrenous to the extent of half an inch. The patient died from shock twelve hours later. Autopsy.

NELATON:<sup>26</sup> Child died twenty-four hours after birth; right inguinal hernia containing Fallopian tube.

PICQUE AND POIRIER:<sup>27</sup> Age 78; acquired obturator hernia; strangulation; death. Autopsy, sac formed by peritoneum contained a knuckle of intestine, an epiplocele and left tube with a part of its ligament.

POLLARD (Bilton):<sup>28</sup> Age 37; acquired strangulated femoral hernia. Operation; sac contained clear fluid and the swollen fimbriated extremity of the left Fallopian tube, which was tightly nipped at the neck of the sac. The constriction was divided and the tube returned into the abdomen. Recovery.

SALNELLE:<sup>29</sup> Age 19 days; congenital hernia on the right side; strangulated. Operation. Sac was opened and was found to contain the right Fallopian tube, red and swollen. Death.

SCHOLLER:<sup>30</sup> Age 20 days; congenital inguinal hernia; convulsions and death. Autopsy showed hernia of the right tube. It was red and swollen; the round ligament was a little shorter than that on the other side and the uterus slightly displaced.

DE VAUCHER:<sup>31</sup> Age 23; probably congenital inguinal hernia; irreducible. Operation; sac contained left Fallopian tube without ovary; sac and tube excised. Recovery.

VOGEL:<sup>32</sup> Age 38; acquired inguinal hernia; irreducible. Operation; opening of the sac; escape of blood-stained fluid, disclosing right Fallopian tube in bottom of sac. The tube was returned into abdominal cavity; the sac removed. Recovery.

VOIGT:<sup>33</sup> Age 36; acquired right inguinal hernia; irreducible. Swelling "opened," discharged a serous fetid pus, after which patient's general condition improved. The next day a small black, gangrenous body was found in the dressings, which was recognized as the Fallopian tube. Recovery.

THOMAS:<sup>34</sup> Age 36; acquired hernia on the right side; irreducible. Omental hernia on the left side, reducible. Operation. Right crural hernial sac contained the fimbriated extremity of the Fallopian tube. Gimbernat's ligament (crural hernia) was nicked and the hernia reduced. Recovery.

TRINCI:<sup>35</sup> Age 47; X-para; crural hernia; irreducible; appeared after last pregnancy; symptoms of strangulation. Operation; sac contained the right tube; resection of the tube above the strangulated point; radical cure. Recovery.

VASSAL:<sup>36</sup> Reports another observation by Broca. Child, age 14 months; congenital inguinal hernia; strangulated for twenty-four hours. Herniotomy, the tube was found in the sac. Temperature after operation 37.4 C.; the following days, 37. Recovery.

WALDEYER:<sup>37</sup> Demonstrated before the Obstetric and Gynecologic Society of Berlin, June, 1896, an inguinal hernia, in which lay a tube.

WALTER:<sup>38</sup> Aged 14 months; at 6 weeks of age tumor was first

19. Gazette Med. de Strasbourg, 1881, No. 9, p. 97.

20. Schultz: Thèse de Paris, 1898.

21. Revue de Chirurgie, April, 1895, p. 313.

22. Wien. Klin. Rundschau, 1895, vol. ix, p. 17.

23. Hygiea, 1894, No. 5, p. 431.

24. Annals of Surgery, 1901, vol. xxxiii, p. 247.

25. London Lancet, Feb. 17, 1894, p. 403.

26. Elements de path. chir., 1857, vol. iv, p. 440.

27. Revue de Chirurgie, 1892, vol. xii, p. 330.

28. Erichsen: Science and Art of Surgery, vol. ii, p. 1297.

29. Thèse de Paris, 1880, p. 84.

30. Gazette Med. de Paris, 1840.

31. Thèse pour la doctorat, 1854, p. 45.

32. Centralbl. für Gynäk., 1886, vol. x, p. 166.

33. Hufeland: Jour. der pract. Heilkundl., 1809, No. 3, p. 139.

34. Brit. Med. Journ., 1896, vol. xi.

35. La Clinica Moderna, 1904, No. 22.

36. Thèse de Paris, 1895.

37. Centralbl. f. Gynäk., 1896, vol. xx, p. 792.

38. Schultz: Thèse de Paris, 1895.

3. Bull. de la Soc. Anat. de Par., 1842, p. 143.

4. L'Experience, 1839, p. 216.

5. Lyon Medical, 1899, vol. xci, p. 231.

6. Beit. z. klin. Chir., vol. iv, 1889, p. 32.

7. Ed. Med. Jour., January, 1871, p. 601.

8. Annales de Gynec., 1900, vol. liii, p. 203.

9. Annals of Surgery, 1904, vol. xi, p. 154.

10. Société Anatomique, 1854, p. 72.

11. Bull. de la Soc. med. de la Suisse romande, 1878, p. 115.

12. Science and Art of Surgery, vol. ii, Tenth Edition, p. 1297.

13. Rev. mens. de Med. et de Chir., 1878, vol. iii, p. 479.

14. Beit. z. klin. Chir., 1900, vol. xxiii, No. 2.

15. Internat. klin. Rundschau, Wien, 1892, vol. vi, p. 1098.

16. Berichte der med. Gesellschaft, zu Leipzig, March, 1896.

17. La veritable Chir. etab. s. l'experience et la raison, Roan, 1716, 5 partie, p. 401.

18. Revue de Chirurgie, 1893, vol. xiii, p. 13.



observed in inguinal region. Operation; the hernia contained a loop of small intestine and the Falloplan tube strangulated moderately. Reduction. Recovery.

WALTHER (G. Th.):<sup>39</sup> Age —; right inguinal hernia. Operation; sac was found to contain a cystic dilated accessory. Falloplan tube (congenital malformation).

WALTHER (G. Th.):<sup>39</sup> Age —; right inguinal hernia. Operation; displaced to the right. The right tube and corresponding tubo-ovarian ligament extended into right inguinal ring. On left side, internal inguinal ring was occluded by fibriated extremity of the left tube passing into it.

Case 2.<sup>41</sup> Age 6 months; congenital inguinal hernia of the left tube found; postmortem the sac contained the tube only. The left ovary was situated in the internal iliac fossa on the right side; tube and ovary occupied their normal position. Uterus was displaced to the left.

WYETH:<sup>42</sup> Age 38; strangulated right inguinal hernia; when sac was opened congested Falloplan tube was found; pus and feces welled up from the abdominal cavity through the neck of the small loop of intestine was found gangrenous, ruptured; death six hours after operation.

SUMMARY OF ABOVE CASES OF HERNIA OF THE TUBE WITHOUT HERNIA OF THE OVARY.

Inguinal .....	27	Obturator .....	2
Femoral .....	14	Not stated .....	3

TABLE 1.—INGUINAL HERNIA.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sac.
Andrews, 1. . .	32	A	R	Returned dur- ing laparot- omy.	R	Tubo.
Andrews, 2. . .	23	A	R	Excision . . .	R	Pyosalpinx.
Brunner. . . .	38	A	R	Returned by operation.	R	Tube and clear fluid tinged with red.
Dolbeau. . . .				Incision of ab- scess.	D	Postmortem showed tube.
Dupont . . . .	38	A		Returned by operation.	R	Tube and clear fluid.
Féré. . . . .	3 weeks	C		Postmortem...		Tube.
de Francisco. .	32	A	L	Returned by operation.	R	Tube.
de Goney. . . .	Young lady		R	Removal of extrauterine fetus.		Preguant tube sur- rounded by clear fluid.
Jalaguier. . . .	19 mo...	C	R	Excision . . .	R	Knuckle of tube in canal of Nuck.
Kousmino. . . .	36	A	L	Exeision. . . .	R	Cystic dilated tube in sero purulent fluid.
Lejars. . . . .	39	A	R	Exeision. . . .	R	Tube and part of blad- der blood-stained fluid.
Möller. . . . .	46	A	R	Operation. . .	R	Pyosalpinx.
Morf. . . . .	24	C	L	Excision. . . .	R	Tube and omentum.
Morton and Butler. . . . .	41	A	R	Returned by operation.	R	Tube.
Nelaton . . . .	1 day..	C	R	Postmortem..		Tube.
Saluelle. . . .	19 day..	C	R	Operation . . .	D	Tube, strangulated.
Scholler. . . .	20 days	C	R	Postmortem..		Tube red and swolle
Vassel. . . . .	14 mo..	C		Operation. . .	R	Tube, strangulated.
de Vaucher. . .	23	C	L	Excision . . .	R	Tube.
Vogel. . . . .	28	A	R	Returned by operation.	R	Tube and bloody fluid.
Voight. . . . .	36	A	R	Ineised . . . .	R	Cube and serous, fetid pus.
Waldeyer. . . .					?	Tube.
Walter . . . .	14 mo..	C		Returned by operation.	R	Tube and intestine.
Walther. . . .	?	C	R	Operation. . .	?	Cystic, dilated, aeces- sory tube.
Wiart, 1. . . .	2 mo...	C	D	Postmortem..		Tube alone in each hernia.
Wiart 2. . . .	6 mo....	C	L	Postmortem . .		Tube.
Wyeth. . . . .	38		R	Exeision . . .	D	Tube, gangrenous in- testine. Pus and feces walled up.

ANALYSIS OF TABLE OF INGUINAL HERNIA.

Acquired .....	11	Right .....	15
Congenital .....	12	Left .....	5
Not stated .....	4	Double .....	1
Total .....	27	Not stated .....	6

Total .....

Found postmortem (all Infants) .....	5
Deaths after operation .....	3
Recoveries after operation .....	17
Result not stated .....	2

Total .....

VISCERA CONTAINED IN SAC.

Tube and part of bladder .....	1
Tube and omentum .....	1
Tube and intestine .....	2
Tube alone .....	23

Total .....

In eleven cases the sac contained fluid.	
Clear fluid .....	3
Bloody fluid .....	2
Pus .....	6
The ages range from birth to 46 years.	

39. Centralbl. f. Chir., 1897, vol. xxiv, p. 771.  
40. Bull. de la Soc. Anat., July, 1898, vol. lxxlii, p. 537.

TABLE 2.—FEMORAL HERNIA.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sac.
Andrews, 1. . . (Judd's easo.)	56	A	L	Returned by operation.	R	Tube, strangulated; intestine and broad ligament.
Andrews, 2. . . (Haberlin's case.)	45	C	R	Exeision. . . .	R	Tube, epiploon and serous fluid.
Aubry. . . . .	70	?	?	Postmortem. .		Tube.
Berard. . . . .	45	A	R	Puncture . . .	D	Tube and clear fluid found postmortem.
Boudin. . . . .	50	A		Operation. . .	R	Tube.
Brunner. . . .	68	A	R	Returned by operation.		Tube, clear fluid and a lipoma.
Deaver. . . . .	?	?	R		?	Tube.
Goepel . . . .	62	A	R	Exeision . . .	R	Tube and serous fluid.
Lentz. . . . .	52	A	L	Exeision . . .	R	Tube and bloody fluid.
Maydl. . . . .	47	A		Excision . . .	R	Knuekle of tube and bloody fluid.
Morton and Butler. . . . .	?	?	R	Excision. . . .	D	Tube, omentum and bowel gangrenous; intestine ruptured.
Pollard. . . . .	37	A	L	Returned by operation.	R	Tube and clear fluid.
Thomas. . . . .	36	A	R	Returned by operation.	R	Tube. (Onl. side was an omental hernia )
Trinei. . . . .	47	A	R	Exeision...	R	Tube, strangulated.

ANALYSIS OF TABLE OF FEMORAL HERNIA.

Acquired .....	10	Right .....	8
Congenital .....	1	Left .....	3
Not stated .....	3	Not stated .....	3

Total .....	14	Total .....	14
Found postmortem .....	1		
Death after operation .....	2		
Recoveries after operation .....	10		
Not stated .....	1		

Total .....

VISCERA CONTAINED IN SAC.

Tube and part of bladder .....	1
Tube intestine and part of broad ligament.....	
Tube and omentum .....	1
Tube and epiploon .....	1
Tube alone .....	11
Total .....	14

In Brunner's case there was, beside the tube, a lipoma in the sac.  
In seven cases the sac contained fluid.

Clear fluid .....	4
Bloody fluid .....	2
Fecal matter .....	1

The ages range from 36 to 70 years.

TABLE 3.—OBTURATOR HERNIA.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sac.
Chiene . . . .	73	?	D	Postmortem..		Tube.
Picque and Poirier. . . .	78	A	L	Postmortem . .		Tube.

TABLE 4.—KIND OF HERNIA NOT STATED.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sae.
Demoulin. . .	?	?	?	Operation. . .	?	Tube.
Erichsen . . .	37	A	L	Returned by operation.	R	Tube.
Frank. . . . .	21	A	L	Exeision . . .	R	Tube.

As hernia of the Falloplan tube, without the ovary, constitutes less than 10 per cent. of the recorded cases of hernia of the pelvie organs, it is evident that a de-scription of the anatomy and the etiology may be best considered in a future paper dealing with the greater subject. Pathologic conditions within the tube may also be better discussed then.

The diagnosis, before the opening of the sac, has not been made, but, perhaps, in the case of a small painless hernia the tilting of the uterus toward the hernia might be sufficient evidenece that the sac held only the tube.

41. Annales de Gynec., 1900, vol. liii, p. 202.  
42. Annals of Surgery, 1894, vol. xix, p. 6.



## DISCUSSION.

DR. T. B. EASTMAN, Indianapolis, said that a woman was referred to him with what had been diagnosed as a labial abscess on the right side. It had been incised several times, but the discharge continued. Dr. Eastman made a free incision and after a rather difficult dissection he came on a badly inflamed appendix which was open at the end and discharging pus. Of course this was responsible for the patient's condition. Dr. Eastman removed the appendix and the patient made a good recovery.

DR. A. GOLDSPOHN, Chicago, stated that a number of years ago a woman of at least 60 years of age came under his care as a hospital patient. She had always been fairly healthy, and she had a femoral hernia of small dimensions that had not given her much trouble. It became irreducible, however, and occasioned more or less pain, and she had had something of a convulsion, as her illiterate relatives described it. Examination showed a small tumor in the region of the left femoral ring, corresponding to a femoral hernia, that was not reducible by ordinary taxis. On opening the sac the ovary became apparent; it was adherent, with a small amount of omentum. The operation presented no difficulty and the patient made a good recovery.

### SOME COMPLICATIONS OF PREGNANCY. TREATED SURGICALLY.\*

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Within comparatively few years, our knowledge of appendicitis and neoplasms, complicating pregnancy, has been considerably increased.

As a rule, the surgeon has been called to treat these conditions, and therefore they have been studied more from the standpoint of the influence of such operations on pregnancy than of pregnancy on conditions which otherwise might be considered operative.

In this country continuous observation of a woman during pregnancy is almost unknown.

The number of complicated cases, therefore, which have been observed by any one individual has been limited. It is true that in some well-to-do families observation is practiced; but as the importance of this observation is recognized, the occasions for it decrease.

Most obstetrical cases are in charge of general practitioners, and this condition will, undoubtedly, continue. The combination of a skilled obstetrician and surgeon is not a common one, and while the obstetrician may be most skillful in all that pertains to diagnosis of position and in the performance of obstetrical operations, the men in charge of these cases still turn to the surgeon when other operative complications are present.

Surgical interference has also been encouraged by the attitude of obstetricians toward "operative delivery" in cases which may be called, from the surgical standpoint, uncomplicated. This is on the increase, especially in large cities,<sup>1</sup> and, undoubtedly, tends to encourage surgical intervention in a growing list of obstetrical conditions. The practitioner, who has seen the development of "surgical trusts" under the name of "hospitals," hesitates when he considers what his financial end is to be if he further countenances the fallacious idea that patients can not be successfully treated at home.

On the other hand, the desire for personal consideration and to remain at home, if possible, is still strong among those who have not contracted "the hospital habit."

With the large number of competent operators who desire only fair remuneration for services rendered it rests with the general practitioner whether or not he will lose the best part of his practice among the great middle class as he has lost it among what may be considered the opulent poor and the economically inclined opulent.

The care of the pregnant woman is by far our most important duty, and any improvement in treatment or in the care which tends to lessen her dangers during this trying period is of utmost importance.

The value of recognizing deviations from the normal early in the conduct of these cases can not be overestimated; acting with conservative promptness in the presence of dangerous complications will save many lives, both fetal and maternal.

Surgical interference is more important in certain conditions in the pregnant than in the non-pregnant.

It has long been an accepted fact that high maternal temperatures are dangerous to intrauterine life, and that when the temperature runs over 104 F. for a continued period of time, no matter from what cause, it is invariably fatal to the child *in utero*.<sup>2</sup>

Suppurative conditions with much lower temperature are dangerous, especially if the process is active in close relation to the uterus.

The study by Straviskiadis of twenty-four cases, including pneumonia, typhoid fever, pyemia, etc., in which macroscopic, microscopic and bacteriologic examinations were made, is a distinct addition to our knowledge of this subject. His conclusions are: 1. An acute endometritis which is often hemorrhagic is of frequent occurrence in acute, infectious disease. 2. This inflammation is caused by the specific bacteria that caused the disease or a complication. 3. Particularly favorable conditions are present during pregnancy and the puerperium for the increase of the bacteria which reach the uterus through the blood current. 4. Abortion or premature labor is frequently due to endometritis of hematogenous origin.<sup>3</sup>

The intimate relation existing between the appendicular lymphatics and those of the broad ligament is of importance in determining the influence of septic conditions of the appendix on pregnancy;<sup>4</sup> but the hematogenous channel, in view of the fact that there is increasing evidence that septic emboli may cause disturbances in the gastrointestinal mucous membrane and elsewhere seems the most probable route of endometrial infection.<sup>5</sup>

#### APPENDICITIS.

Appendicitis frequently complicates pregnancy. The condition of obstinate and continued constipation which is so frequent during pregnancy must be looked on as a predisposing cause. Add to this increasing deviation from the usual physiologic condition of the pelvic organs of women between the ages of 15 and 45, the mechanical disturbances and congestion resulting from the rapidly growing uterus, and the wonder increases that troubles are not more common. In many cases an absolute diagnosis has not been made, because of the mildness of the symptoms.

In the diagnosis of appendicitis during pregnancy the usual signs may be obscured. Vomiting is often concurrent with pregnancy. As a rule, the pain is localized at the diaphragmatic attachments, while accelera-

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Voorhees: *Am. Jour. Ob.*, January, 1905.

2. MacPhatter: *New York Med. Journal*, 1901.

3. Monat. F. Geb. und Gyn., Berlin, 1903.

4. Clado: *Bend. Soc. de Biol.*, Paris, 1892, vol. iv.

5. Fowler: *Brooklyn Med. Jour.*, July, 1903.



tion of the pulse and elevation of the temperature are exceptional.<sup>6</sup>

Ineessant vomiting may be due to uremia, and abdominal pain with vomiting has been seen "preceding uremic convulsions of puerperal nephritis."<sup>7</sup>

The importance of leucocytosis, if found, associated with localizing pain, during the first six or seven months of pregnancy, is considerable in making a diagnosis. Its value as far as indicating need of operation is apt to be overrated. "At the same time, leucocyte counts are valuable, and a rising count is of more importance than the absolute number."<sup>8</sup>

A constant, high leucocytosis (20,000 to 30,000) in appendicitis always points to the existence of a purulent process, providing there are no other complications to which the leucocytosis may be attributed. "In diffuse peritonitis the leucocyte count loses its certainty."<sup>9</sup>

Taken by itself, it is apt to be misleading, but taken in connection with other signs, it may be of great value in doubtful cases.

There is but one point in the diagnosis which I wish to emphasize: If there is cessation of pain without amelioration of local signs, operation is indicated at once.

The relief of tension brought about by perforation of the appendicular wall will be followed, in a few hours, by an increase in the infected area, making the results of an operation more doubtful.

The first case here reported is one of appendicitis complicating pregnancy, in which a gangrenous appendix was removed at three and one-half months, and in which, aside from a few uterine contractions set up by the removal of gauze drainage, on the fourth day proceeded to term and the patient had a normal confinement.

CASE 1.—Mrs. L. W., aged 36, had been married three years.

*History.*—In October, 1900, gave birth to a son; labor was tedious, but aside from this there was nothing abnormal noted about the pregnancy or the puerperium. She became pregnant again in May, 1901. On Aug. 9, 1901, about 11 p. m., she was seized with a severe pain in the epigastrium, accompanied by nausea and vomiting; the bowels were and had been constipated; the symptoms continued through the night.

*Examination.*—Dr. H. W. Dudley of Abington was called on the morning of August 10; he found the patient with a temperature of 100 F., pulse 90. Pain was unremitting and the vomiting continued. There was marked rigidity of the abdominal muscles, especially on the right side, and the pain, worse at first in the epigastrium, had localized at McBurney's point. Hot fomentations were applied, and the same afternoon I saw her in consultation with Drs. Dudley Wheatley of North Abington and Osgood of Rockland, the two latter afterward assisting at the operation. At 5 p. m., when I saw her for the first time, the pain of which she had been complaining had in great measure ceased and there had been no nausea for some hours. Temperature was 100.5, pulse 110. Rigidity of the abdominal muscles was very marked, especially of the right rectus, and even moderate pressure over location of the appendix gave rise to pain. Believing that the cessation of pain without amelioration of local signs was not a favorable symptom, and not willing to temporize on account of the existing pregnancy, operation was advised.

*Operation.*—The usual preparations for an operation in a private house were made.<sup>10</sup> Under ether, a two-inch incision, afterward enlarged to three, was made through the outer border of the right rectus muscle. On opening the peritoneum, the appendix was found directly under the incision; it was

dark colored, full of concretions and surrounded by purulent serum which was partially walled off by fresh adhesions of the omentum. Cloudy serum also welled up from the direction of the pelvis. This was carefully sponged out. The appendix was removed in the usual way, one strip of gauze packing was passed down to the stump and another strip passed down to drain the pelvis. The incision was closed by through-and-through sutures of silkworm gut, except for about an inch at lower angle of incision, through which the gauze drains were brought out.

*Result.*—From the time of operation until the gauze was removed, four days later, there was nothing out of the ordinary to report. After the packing was removed, the patient had two or three attacks of syncope which seemed quite threatening, accompanied by regular rhythmical pains, threatening abortion, but the pain was easily controlled by morphin sulphate administered subcutaneously, and the syncope was treated by alcoholic stimulation.

*Subsequent History.*—Recovery from this point was uneventful, and the patient was up in three weeks, the abdominal incision being entirely closed. Pregnancy continued until Feb. 26, 1902, when the patient was delivered of an eight-pound daughter. Labor was easy. There was no pain or bulging in the cicatrix from operation. In fact, there has been at no time during the pregnancy or puerperium any bulging of the scar.

Abortion, from conditions either present at the time of operation or which develop after such interference, adds much to the gravity of the prognosis.

Obstruction of the bowel or ileus is not uncommon, especially after operation for suppuration. Operation causes a change in the peritoneum, so that the clinical picture is entirely changed and the usual warning signs are absent.

Temperature and pulse with obstruction may be normal. There may be no marked distension, there may be continued vomiting of dark or fetal matter. There are no colicky attacks.

The most important diagnostic sign is dullness in the flanks, which progressively increases.

Next to this in importance is the facial expression, which, with obstruction, is drawn and anxious.

There is no pain and the patient is comfortable aside from the trouble of vomiting.

There is absence of marked abdominal rigidity.

Treatment consists in change of position, cathartics, followed by enemata, and large doses of atropin until appearance of toxic effects. If response to this treatment is not reasonably prompt, reopening of the wound, with incision of distended loops of intestine, followed in severe cases by tying a Mixter tube into the cecum will give the best results.

The second case was complicated by ileus. There was a fecal fistula and the abortion of a dead fetus. Recovery took place, with spontaneous healing of fecal fistula.

CASE 2.—Dr. R. M. Birmingham, Lawrence, Mass.

*Patient.*—Mrs. S., aged 28; had been married six years. She has had four children; no accident or miscarriage. She has had no sickness other than periodical attacks of pain in the right iliac fossa during each pregnancy. With these attacks there was nausea, but all trouble was attributed to a growing uterus.

*Present Illness.*—About 5 o'clock on the morning of April 25, 1904, when she was about three months pregnant, she was seized with extremely sharp and colicky pains in the right iliac fossa; this was followed by collapse. Dr. Birmingham was called and advised immediate operation, to which the family would not agree until the afternoon of the same day.

*Operation.*—In the afternoon, assisted by Drs. Birmingham and Magee, I operated and found a gangrenous appendix surrounded by about two ounces of purulent matter. There was

6. Pinard: Bull. de l'Acad. de med., Feb. 14, 1899.

7. Musser: Am. Med., vol. 1, 1904.

8. French: The Practitioner, London, June, 1904.

9. Goetjes: Münch. med. Wochft.

10. Donoghue: Boston M. and S. Jour., Dec. 6, 1900.



slight evidence of an attempt at walling off. A gauze drain was inserted. The vomiting, which had been present from the beginning, continued, but little distension developed.

*Postoperative History.*—The temperature remained between 99 and 100, but the pulse gradually increased in frequency. Considerable fecal matter and gas was discharged following enemas. Slight vomiting or rather regurgitation persisted.

On April 29, not satisfied with her condition and influenced by the facial expression, under chloroform, the gauze drain was removed. The omentum was found to be down to the region of the appendix stump; back of this was a loop of intestine greatly distended and containing liquid feces.

The adhesion was freed and the distended loops of the intestine incised, emptied and sewed up with continuous Lembert suture.

As symptoms of ileus persisted, on May 30, at 11 p. m., a Mixer tube was tied into the cecum. A saturated solution of salts was administered, followed by three ounces of alcohol and water.

On June 7, labor pains came on and following manual dilatation a dead fetus was extracted. A fecal fistula persisted for six months and then closed spontaneously.

Pain in the right iliac fossa, which increases as the uterus enlarges and pushes up out of the pelvis, should be looked on with great suspicion. Especially is this true of cases in which abortion comes on, following such pain.

A history of one or more such abortions should suggest surgical interference, even if the physical signs do not point definitely to the appendix.

#### OVARIAN TUMORS.

Tumors of ovarian or tubal origin are dangerous from their position, obstructing delivery, from torsion of the pedicle in the case of the former, or from inflammation.

A differential diagnosis between ovarian, tubal or uterine tumors, if the tumor is low down in pelvic cavity, is often difficult or impossible.

Extrauterine pregnancy presents such a varied clinical picture that it never can be excluded in making a diagnosis.

The acceptance of the dictum that "neoplasms, wherever situated, should, if possible, be removed, no matter what their apparent nature,"<sup>11</sup> would solve most of the difficulties we encounter in endeavoring to make an accurate diagnosis in pelvic conditions before advising operation.

Reposition of a pelvic tumor, with the patient in the knee-chest position, and with or without ether, while not being free from immediate danger, does not, in any way, point toward the removal of the underlying condition, unless the tumor proves to be an incarcerated uterus.

The danger of attempting reposition of an extrauterine pregnancy is sufficiently obvious, while rupture of a cyst and intraperitoneal hemorrhage from ruptured adhesions have been frequently reported.

The danger of torsion of the cyst during manipulation can not be ignored.

If ether is to be given for examination, preparations for operation should be made in case an operative condition is discovered.

While the question of when to operate in the presence of a tumor has been much discussed, there can be no doubt but that operation as soon as diagnosis is made, will yield the best results, unless, indeed, a small tumor, which has given rise to no symptoms, be discovered late in the pregnancy. Even then, the patient should

be carefully watched after delivery to see that torsion, rupture or degeneration of tumor from changed blood supply does not take place.

The most common cause of trouble with ovarian tumors, during pregnancy, is torsion of the pedicle. This may take place at any period of pregnancy, and is accompanied by an increase in size and tenderness over the tumor, while a sharp, stabbing pain is referred to the spot at which the torsion takes place. "This is sometimes accompanied by slight bleeding and bleeding pains."<sup>12</sup>

Under these conditions, prompt removal of the tumor is indicated and is followed by cessation of symptoms referred to the uterus. It will add little, if any, to the maternal danger should miscarriage follow.

Graefe,<sup>12</sup> in a study of 178 cases of ovariectomy, undertaken during pregnancy, found that the mortality of the mothers in the entire list was 2.3 per cent. One of the deaths occurred three months after the intervention, and one death was inevitable, as extensive gangrene was found during the operation. The last 126 operations contain only this one fatality. In 119 cases the pregnancy was interrupted by the intervention in only 19, or 16 per cent. In the last series of 27 abortion followed in 5 and premature delivery in 3. This series includes the American cases of Jarman and Kahn. The pregnancy continued undisturbed in two cases, in which there were numerous adhesions or torsion of the pedicle of the tumor. In the cases in which abortion occurred, there must have been some predisposition to it, possibly from decidual endometritis as the trauma of the intervention was slight. Abortion would probably have occurred without the operation. The statistics show that ovarian tumors, during a pregnancy, induce abortion in 17 per cent. of the patients if left unoperated on. After ovariectomy, the pregnancy was interrupted in only 22.5 per cent., and a third of this number presented urgent invitations for surgical relief. The results of expectant treatment have been a maternal mortality of 39.2 per cent., and a fetal of 67 per cent., according to Orgler's and Winckel's statistics. Six of the cases in the series demonstrate that even after evidences of intending abortion have appeared, prompt ovariectomy will afford relief, and the pregnancy will continue its course uninterrupted.

Heil<sup>13</sup> adds to Graefe's statistics five new cases personally observed, and others he has collected, bringing the total to 241. He tabulates the later series, and emphasizes the necessity for careful examination of every pregnant woman who complains of pains or other disturbance indicating some irregularity in the genital sphere. If the diagnosis wavers between extrauterine pregnancy and intrauterine pregnancy with an ovarian cyst, a laparotomy is indicated at once. An ovariectomy is by far a lesser evil than the overlooking of an extrauterine pregnancy, especially for a patient who is not under constant medical supervision. He advocates leaving the tube, if possible, when operating during a pregnancy, to avoid traction on the uterus.

In case a tumor is discovered at parturition, obstructing delivery or impacted in the pelvis, the treatment should be Cesarean section, followed by removal of the tumor.

CASE 3.—Dr. R. M. Birmingham, Lawrence, Mass.

*Patient.*—Mrs. M., aged 29, had been married three years at the time of operation.

12. Graefe: *Munch. Med. M. A.*, Oct. 28, 1902.

13. Heil: *Munch. Med. Ma.* February, 1904.

11. Richardson: *THE JOURNAL A. M. A.*, Jan. 9, 1904.



*History.*—She had one other child, no miscarriages. During the first pregnancy she had severe pain from the beginning, and morphin sulphate in doses of gr. 1/12 was given subcutaneously from time to time. After delivery a tumor to the left of the median line was discovered. Some time after this confinement she had severe pain in the abdomen, followed by nausea and vomiting, and went to the Carney Hospital for treatment. Another pregnancy was suspected, and she was sent home with instructions to report later. Eleven weeks after returning from the hospital she had sudden colicky pain in abdomen and increase in the size of the tumor.

She had been uncomfortable for two or three days, and woke early on the morning of April 19, 1904, with a sudden, sharp, severe, stabbing pain in the lower part of the abdomen. She had nausea and vomited once. Her face was drawn. A large movable tumor, the size of a child's head, could be easily outlined in the lower right quadrant of the abdomen. Temperature was 99, pulse 110.

*Operation.*—Incision was made through the left rectus muscle. A large ovarian cyst, dark and hemorrhagic, from twisting of pedicle, was removed from the left side. A long free appendix containing a concretion was also removed. Recovery from operation was uneventful. The patient was out of bed on the fourteenth day. On Dec. 12, 1904, she was confined in an uneventful labor and delivered of a boy. There was no bulging in the scar and abdominal wall is perfectly solid.

Retarded menstruation, sharp, colicky and abdominal pain, and a growing tumor in the neighborhood of the uterus, strongly suggest extrauterine pregnancy, and that condition should be borne in mind in making an operative diagnosis.

As a positive diagnosis can only be made after the abdomen has been opened, there is little justification for delay.

If, at the operation, an enlarged tube, which does not prove to be impregnated, is found; or a small cyst of the ovary, which may be resected without difficulty, the patient has suffered in no way from the operation. On the other hand, the chance of a serious crisis, if the case be one of extrauterine pregnancy, should far outweigh any objection to surgical interference.

*CASE 4.*—Patient of Dr. W. G. Brown, Plymouth, Mass., was seen Oct. 5, 1904, at the Jordan Hospital.

*Patient.*—Mrs. C., ten weeks pregnant.

*History.*—For eight weeks previously she had had increasing nausea, until nothing solid or liquid was retained. The smell of food caused severe retching with great pain. There had been severe pain in the right iliac region since the nausea began.

*Vaginal Examination.*—To the right and back of the uterus a tumor the size of a hen's egg could be felt, extremely tender, and causing great pain when pressed on.

*Operation.*—Assisted by Dr. E. D. Hill of Plymouth, I opened the abdomen and removed a prolapsed cystic left ovary. The uterus was also caught forward by two sutures to the abdominal wall.

*Result.*—There was good recovery from operation. The nausea and pain were immediately relieved. The patient left the hospital in three weeks, and nothing unusual took place during rest of pregnancy.

On May 24, 1904, after a labor of fourteen hours' duration, she was delivered normally of a male child, weighing 7½ pounds. The labor was in every way normal, and much more comfortable than the former one, the woman having had one child previous to this pregnancy.

#### FIBROIDS.

When pedunculated, fibroids closely simulate ovarian tumors, and are liable to the same kind of accidents, while subperitoneal or interstitial fibroids may cause trouble in various ways. Change in the tumor itself, or in its relations, and the cardiac, vascular and nephritic

changes which take place with tumor development, all make for early operation, at least during the child-bearing ages.

Dr. Franklin H. Martin,<sup>14</sup> in an analysis of 1,188 cases of operation for fibroids, at the hands of A. Martin, Noble, Cullingworth, Frederick, Scharlieb, and a series reported by Kanner and by McDonald, to which he adds 200 of his own, forcibly shows the difficulty of exact diagnosis and notes the presence of unrecognized, serious complications, diagnosis of which was only possible by operation.

In the 1,388 analyzed cases presented in his paper, the operations revealed 32 cases of carcinoma of the body of the uterus, 24 cases of unsuspected sarcomas of the uterus, 70 cases of necrosed tumors, which were very liable to become infected and to cause death, 53 cases of intraligamentous development of the tumor, which are so liable to produce kidney complications by ureteral pressure, and many other serious symptoms; 8 adenomyomas, 2 pregnancies menacing the life of the patient; 5 ectopic pregnancies, 8 dermoid cysts, 97 suspected or unsuspected true ovarian cysts, 12 par-ovarian cysts, 72 cases of pyosalpinx, 20 cases of appendicitis, 7 cases of intestinal obstruction, 2 cases of acute intestinal obstruction, 2 cases of obstructed ureters, 2 cases of hydronephrosis from pressure.

In this list these serious conditions, incurable without operation, and unsuspected in the majority of instances, represented 31.6 per cent. of all patients operated on. This is the most instructive and startling thing about this analysis. Nearly one-third of all the cases in which operation was performed were complicated with conditions very liable to prove fatal. This does not take into consideration serious symptoms, the size of the tumors and the various degenerations which are not necessarily fatal, and which are set forth in the same table.

When we take into consideration symptoms, as shown in his 200 cases, we have interesting food for contemplation. Dangerous hemorrhage occurred in 41 cases, or 20.5 per cent.

Whether or not it is antecedent sterility that is the important causative factor in the growth of fibroids, or whether the fibroid condition is the cause of the sterility, the fact remains that fibroids are often found complicating pregnancy. The management of a pregnancy, so complicated, depends on the size and situation of the tumor. This increase in size of the tumor is due simply to its taking part in the hypertrophy common to the uterus.<sup>6</sup> During pregnancy fibroids almost invariably become flattened.

"The most important or most fortunate change which may take place in the fibroid, irrespective of whether or not it is interstitial, subserous or submucous, is the development of edema with resulting softening."

This allows a subserous tumor, if situated within the pelvis, to slip out past the presenting head, causing the disappearance of apparently hopeless obstruction, and allowing a normal delivery; or it may be compressed into a thinner and broader mass and thus allow the free passage of the child.

After the labor, the fibroid again resumes its prominent shape.

In the great majority of cases, the fibroid in the latter months of pregnancy so changes its location as to

14. N. Y. Med. Jour., June 17, 1905.



leave the pelvic canal free for the passage of the fetus.

Remarkable examples of this are reported in cases in which the tumor filling the whole of the true pelvis has risen spontaneously out of the pelvis and normal labor has occurred.

Hamilton<sup>15</sup> records a very rare case, in which he was called to a woman after labor, in whose uterus the presence of two subperitoneal myomata had already been diagnosed. Dr. Scott had delivered the child and placenta without difficulty, but some twenty hours afterward was sent for in a hurry, on account of the sudden collapse of the patient. He diagnosed intraperitoneal hemorrhage and sent for Dr. Hamilton. The patient was blanched and restless, the abdomen was tympanitic, and an area of dullness had rapidly formed in the right flank.

Abdominal section was performed, and on opening the peritoneal cavity a large quantity of blood escaped. In searching for the source of this bleeding, a ruptured vein of large size was found on the surface of one of the subperitoneal myomata, from which blood was freely escaping. The myoma was enucleated.

Examination showed that a piece of omentum had become adherent to the capsule of one of the tumors. Uterine contractions had probably separated this omental attachment and opened the vein. Good recovery ensued. He mentions that six members of this patient's family had suffered from myomas of the uterus.

Fibroids rarely become necrotic during pregnancy, but cases sometimes occur in which the tumor breaks down in the center, peritoneal adhesions sometimes form and may cause incarceration and abortion.

Dr. Carmalt<sup>16</sup> reports a very interesting case of complicated uterine fibromyoma. Operation was performed and the patient recovered and subsequently became pregnant.

That portion of the history of the case which is of interest in connection with consideration of danger at deliveries follows:

After three miscarriages, the patient became pregnant in May, 1902. By that time it was apparent that there was a large, rapidly growing fibromyoma or myomata, in the anterior wall of the cervix, and lower uterine segment pressing on the bladder, as well as filling the upper vagina so completely that the cervix could not be reached. The patient declined to have labor induced, and we decided to do Cesarean section whenever labor commenced, the period of pregnancy being very doubtful. Preparations were made and labor commenced, but before the arrival of assistants the uterine contractions lifted the tumor out of the pelvis and drove the child down to the perineum. Although this took place in less than half an hour, the length of the vagina was so great that the child was asphyxiated before I delivered it. Faithful, artificial respiration, hot and cold water, and stimulation failed to restore breathing. The patient's convalescence was uninterrupted, and the tumor (apparently the size of a child's head) shrank to less in size than a small egg. (Afterward it grew rapidly.) Oct. 25, 1903, celiotomy performed. The tumor was found occupying the anterior wall of the uterus, encroaching on the bladder below and extending into the left broad ligament. There was no pedicle, myomectomy was performed and the patient recovered and subsequently became pregnant. She was delivered Sept. 15, 1904, of a 10¼-pound boy.

It is the experience of obstetricians that "labor very seldom finds one of these tumors in the way," and this should make us conservative about operation during the

latter months of pregnancy unless symptoms of pressure appear.

Dr. Mixer,<sup>17</sup> in the report of the first case in this country of Porro operation for multiple myomata, in which mother and child were saved, reported the condition of the pelvic outlet as follows:

"Examination showed a solid, immovable mass, filling nearly the whole pelvis. The finger could with difficulty be passed between this and the pubes and a partially dilated os could be felt. This in spite of the fact that the woman, while in labor, had travelled a hundred miles to reach the hospital."

Since the report of this case, a large number of similar cases treated in like manner, have been reported by various operators, and suggest that when a diagnosis of tumor is made, the general practitioner should send for his usual operating consultant rather than for other obstetrical help.

The pedicle of a subserous fibroid occasionally undergoes torsion during pregnancy, followed by peritonitis and interstitial hemorrhage. This gives rise to symptoms which may be obscure and accurate diagnosis may be possible only at operation, as in the following case:

CASE 5.—Dr. A. A. MacKeen, Whitman, on Dec. 5, 1904, was called to New Hampshire to see Mrs. L., aged 34, who had been married the previous June.

*History.*—She had had persistent nausea and vomiting for three months, and obstinate constipation. She had menstruated last on September 24. She had a violent hemorrhage October 24, lasting only for a few minutes, and followed by intense pain in the lower epigastric region, with great weakness.

*Examination.*—On examination, Dr. MacKeen found a large mass occupying the posterior portion of the pelvis, immovable or only slightly movable. The os was slightly patulous.

*Diagnosis and Treatment.*—He formed the opinion that she was probably pregnant and had a fibroid. Possibly an ectopic gestation with early rupture. He had her brought to her home in Whitman. I saw her with Dr. MacKeen on December 10, and performed abdominal section, removing a large pedunculated fibroid from the posterior wall of the uterus. The patient made a good recovery. She was up three weeks after the operation. There was no amount of uterine pain after operation. The constipation was somewhat relieved, and the nausea and vomiting were entirely cured. She had an uneventful confinement on July 4, 1905.

Fibroids present in a uterus after the age of 40 may give rise to symptoms which are sometimes attributed, before operation, to an increase in size or to a change in the character of the uterine growth. Operations have been repeatedly done under these conditions, and a pregnancy found as the basis for the apparent lighting up of the growth.

One case of mine was of this character, and there appears to be no way surely to escape from this error in diagnosis.

On moral grounds, the induction of labor early in pregnancy has no justification whatever. It is fully as serious as the performance of an operation to relieve the condition which complicates the pregnancy, and in the great majority of cases the pregnancy will continue to term.

#### CONCLUSIONS.

When there is a history of a well-marked attack of appendicitis in a young woman, operation should be performed as an antecedent to marriage.

With well-marked, acute symptoms, referable to the right iliac fossa, in the presence of pregnancy, operate at once.

15. Australian Med. Gaz., April 20, 1904.

16. Am. Jour. of Obstetrics, January, 1905.

17. Mixer: Boston, M. and S. Jour., Nov. 8, 1888.



The same treatment should be applied when there is gradual increase of marked discomfort in the same region.

Operation should be advised, prior to marriage, if tumors of the uterus or appendages are known to be present.

The treatment of ovarian or uterine tumors, not recognized until pregnancy has occurred, should be governed by the conditions existing in the individual case.

At or near term, an operation may be performed which will remove the condition and, at the same time, permit the delivery of the child.

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#### DISCUSSION.

DR. E. E. MONTGOMERY, Philadelphia, is fully in accord with the conclusions drawn by Dr. Donoghue. There is no question, he said, that the existence of an appendicitis in a pregnant woman is a source of serious danger, and the fact that she has had repeated attacks of chronic appendicitis should be an indication for operation in the early stage of the pregnancy. The danger arising from an operation during the period of quiet would be far less than the patient would incur by continuing the possibility of the development of serious complications during the later stages of pregnancy. Dr. Montgomery has operated on such patients a number of times and the majority of them have done well. One woman had to be operated on during the seventh month of pregnancy. She miscarried, but recovered and has since given birth to two children. He also agreed with Dr. Donoghue in regard to operating on myomata. In many cases one can not tell what changes may take place during pregnancy, and unless the tumor is in the pelvis and interferes greatly with the circulation it is better to wait to see whether Nature is not able to lift the tumor out of the pelvis so as to be out of the way at the time of delivery. The presence of a growth of considerable size in the uterus may be the source of considerable trouble during delivery as the result of irregular contraction. Owing to the increased nutrition in the uterus, these tumors also grow rapidly, and sometimes it becomes necessary to operate in the later stages of a pregnancy on account of the discomfort and the danger of loss of life because of the size of the tumor. In cases in which the patient comes under observation prior to the fourth month of pregnancy and the tumor is of good size and situated in the lower arc of the uterus, it is preferable to open the abdomen and to enucleate the growth. Dr. Montgomery has done this in five patients, all of whom went on to term and were delivered without any unpleasant symptoms; nor did they suffer any discomfort or inconvenience during the convalescence. He also agreed with Dr. Donoghue that when an ovarian tumor complicating pregnancy is below the uterus it is certain to be a source of difficulty in the delivery. It may be possible to evacuate the contents of the tumor through the vagina, but by so doing the patient is subjected to several dangers. Its contents may be of such a character as to give rise to a serious peritonitis complicating the puerperium. It may be of the papilliform variety. If the tumor does not rupture, the pressure to which it is subjected may cause necrosis and the development of serious trouble during the puerperium requiring operative interference and endangering the life of the patient. For these reasons, if the tumor is situated in the pelvis below the developing uterus, the operation should be done as early in the pregnancy as possible. The danger to the patient is less than if we wait to see what Nature will do.

DR. CHARLES S. BACON, Chicago, said that he is particularly interested in the matter of ovarian tumors complicating pregnancy, having had some experience with these cases. He thinks that there is no doubt that all ovarian tumors should be removed as soon as they are diagnosticated, with the exceptions made by Dr. Donoghue. The possibility of the rapid growth of the tumor during the pregnancy, which is very common, the danger of pressure symptoms which result from that, and especially the great danger of disturbance of the puerperium, twisting the pedicle and interfering with the circulation, lead

to this conclusion. When the tumor is discovered during labor, however, Dr. Bacon is not certain that the advice to operate at once is best. There is a different condition here, and it would seem that large tumors that fill the pelvis can be replaced fairly easily and safely by making use of the knee-chest position or the Trendelenburg posture, with anesthesia if necessary. The tumor usually can be replaced and labor go on. The case must be watched, and, when symptoms supervene, operation should be done. In fibroids, his experience is against operation, even in the early months of pregnancy. The serious complications in fibroids are not so common as one would expect, and very rarely do they become troublesome during delivery. If the tumor is not situated in the cervix or in the lower uterine zone, he thinks it is best to let it alone.

DR. J. H. CARSTENS, Detroit, said that when he was an obstetrician he met quite a few cases of tumors of various kinds in which the patients died during delivery or shortly afterward, and it always impressed him strongly that these tumors should be removed. When he became an abdominal surgeon, he advocated the removal of these tumors, and some years ago he reported a few cases. An adherent tumor in the cul-de-sac can not be replaced; it must be removed, and as early as possible. A fibroid in the broad ligament growing rapidly, as these generally do, must be removed. A fibroid in the lower segment of the uterus or in the cervix, or at about the situation of the internal os, can often be removed through the vagina by lifting it up completely and enucleating the tumor. Of course, in cases of extrauterine pregnancy and appendicitis there is no question about operating during pregnancy. Strangulated hernias occurring during pregnancy must be operated on. Dr. Carstens had about thirty cases of operations during pregnancy, and he has found that women will stand an operation during pregnancy as well as at any other time. In fact, he believes that they usually stand it better. If the fibroid is down deep, a submucous fibroid, one can not tell beforehand how deep he is going down. The tumor may be over the site of the placenta, and the operator may cause some interference with the circulation of the placenta, producing fatty degeneration, and, as a result, an abortion takes place. Many more women die with tumor during pregnancy and labor than die if operated on promptly. Fibroids that are loose and movable and that are located above the brim of the pelvis, or that are subperitoneal, do not interfere with delivery. The woman will be delivered all right, and the tumor can be removed afterward. Sometimes, during subinvolution, these fibroids will be absorbed, but only in very rare cases.

DR. W. B. DORSETT, St. Louis, emphasized the remarks made by Dr. Carstens, and related a case that occurred in his practice three years ago. A woman consulted him, complaining of much pain in the pelvis. She thought she was about three months' pregnant. On examination Dr. Dorsett found an incarcerated uterus, with a fibroid tumor of conical shape behind the promontory of the sacrum. He recognized that the woman was pregnant and operated. After opening the abdomen he lifted the entire mass, tumor and uterus, out of the pelvis, and on examining the tumor he was satisfied that it dipped down deep into the uterine wall, so he thought it best not to remove it. The woman went on to term and was delivered. The tumor now is not larger than a walnut, so, he thinks, we ought to speak conservatively about enucleation of fibroid tumors during pregnancy, because one can not always tell how deep they dip into the uterine wall. He operated not long ago on a case of ovarian tumor cyst in which pain was severe and that really demanded operation. The case had been deemed one of appendicitis for a number of years. He removed a small cyst from the right side. The woman recovered from the operation, but aborted in the fourth month. Conservatism should guide us in these cases in which fibroids complicate pregnancy.

DR. F. D. DONOGHUE said that surgeons see so many end results of these cases following delivery, especially cases of sloughing fibroids with such a high mortality, that they are apt to be more radical in advising interference than the obstetrician, who only occasionally has a fatal case. Regarding the treatment of the cyst by puncture, in the last seven years



Dr. Donoghue has never punctured an ovarian cyst. Malignant disease of the peritoneum is not uncommon following the puncture of a cyst which may appear benign. The danger of the large incision is much less than the danger of dissemination papilloma of the ovary by puncture.

## NERVOUS AND MENTAL MANIFESTATIONS OF PRE-PERNICIOUS ANEMIA.\*

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Most practitioners of wide experience have probably been puzzled at times by a class of patients presenting an anomalous grouping of general and nervous symptoms, which have passed from one physician to another; perhaps labelled as "general debility" by one, "neurasthenia" by another, "crankiness" by a third, "hysteria" by others; cases which steadily progress toward a fatal termination in spite of supporting treatment, "rest cures" and optimistic prognoses.

Occasionally a residence for a more or less prolonged period in a well-equipped hospital, or an accidental falling into the hands of some young "up-to-date" village doctor, leads to a routine blood examination and the surprising discovery is made that the patient has "pernicious anemia."

During the past decade it has fallen to my lot to have under observation a number of such patients, whose chief complaints were of a distinctly mental and nervous character, and who in the course of time were found to present the characteristic blood state and somatic phenomena of pernicious anemia.

In some the nervous and mental departures were attributable to preceding or accompanying blood defect; in others, however, distinct evidence of organic nervous changes of degenerative type preceded the actual development of the pernicious feature of the anemia. These latter cases tend to raise again the questions, which have not by any means been satisfactorily answered:

1. Does the impaired enervation at times lead to morbid functioning in the blood-forming or blood-destroying organs?

2. Does the blood deterioration lead to the nervous phenomena?

3. Is there a common cause for the nervous symptoms and the blood deterioration?

It would seem to me probable that the last question will eventually be answered in the affirmative. In a few cases the opportunity has been offered to follow their development from so-called "secondary anemia" to an anemia of "pernicious" type as shown by the blood test.

### SYMPTOMATOLOGY.

Analyzed clinically these cases collectively have seemed to present a rather characteristic syndrome, the occurrence of which may be of diagnostic and prognostic import.

In its full development, this syndrome may be characterized as follows, though individual cases may be incomplete as regards one or more symptoms, as would naturally be expected:

1. General ill health.
2. Mental symptoms, viz., loss of inhibition, peevishness and gradual mental deterioration, varied however,

by control, patience, good temper, etc., for longer or shorter intervals.

Two of my cases, both women, presented this variability to a remarkable extent, the mental picture changing abruptly for better or worse within a few hours.

During the "better" periods some patients are almost "angelic" in disposition and conduct.

One patient had a distinct history of auditory hallucinations.

3. Sensory disturbances: (a) Subjective, consisting of intramuscular and articular pains. The former are never, in my experience, of "lightning" character as in tabes, but rather of the nature of "aches" or dull pains.

The articular pains are seldom accompanied by effusions and never by true inflammatory action, heat, redness, etc.

Other subjective sensory complaints which are perhaps more frequent than the above are sensations of numbness, tingling and weight in the extremities, usually more marked in the feet and legs. These symptoms, with the ataxia noted later, have occasionally led to an erroneous diagnosis of tabes, as in Case 1.

(b) Objective sensory disturbances: These are common and consist chiefly of losses of tactile and pain sensibility about the feet and ankles; "patchy" in distribution, i. e., not segmental. Sometimes in the earlier stages only delay in transmission of sensation may be found. Tabes is excluded in these cases by the often exaggerated knee jerks and spastic gait, as well as by the absence of pupillary changes.

4. Plus knee jerks, ankle clonus and "Babinski sign" (extensor plantar reflex) are present in some cases.

5. Ataxia of gait and station is often present.

6. Diarrhea of the mucous type is apt to occur sooner or later.

7. The peculiar "lemon yellow" tint of pernicious anemia occurs in the advanced stages.

A combination of all or a majority of the above symptoms should suggest the possibility of an anemia of pernicious or prepernicious type and a careful blood examination may lead to a correct diagnosis and prognosis.

CASE 1.—Mrs. J. S. M. was seen Sept. 12, 1898. She complained of peculiar feelings in fingers and feet, with stiffness of legs, all of two years' duration.

*History.*—A diagnosis of locomotor ataxia had been made. This was negated by the entire absence of either Argyl Robinson pupils or lightning pains and the presence of hyperactive knee jerks. The patient's father died of consumption, her mother was epileptic. The patient had been married sixteen years, but had never been pregnant. Syphilis, alcoholism and diabetes were excluded in the history. She had been sent south for lung disease in adolescence, with resulting recovery.

*Examination.*—Woman under average height; general nutrition apparently fair, distinctly anemic to the eye; pulse 96, small; no heart lesion. She was mentally logical, but apprehensive, and was emotionally depressed. There were no cranial nerve palsies or defects; no lightning pains; no defect of pain sense at ankles and feet.

*Motor Powers:* Patient can walk fairly well. Her gait is ataxic and slightly spastic. Legs "draw up" at night and knees are tightly flexed when she awakes.

*Grasp:* R. 45 kilos., L. 32 kilos., by Matthieu dynamometer (estimated at about 60 per cent. of normal). There was some ataxia of hand and arm movements.

*Reflexes:* Triceps was superactive and wrist jerks active. Knee jerks were present, slightly exaggerated.

*Remarks.*—A diagnosis of "probable combined sclerosis" of Putnam-Lichtheim-Dana type was made. Opportunity for blood examination was not obtained, as the patient was going away to a health resort, where she gradually lost strength in

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



spite of careful supporting treatment, and died in about three months.

The physician, under whose care she was, writes me that he concurred in the diagnosis of "combined sclerosis," and that the reflexes toward the end were "practically entirely lost."

While the diagnosis of pernicious anemia in this case may justly be open to criticism, owing to the absence of blood examination, yet the clinical features, evident anemia, the steady deterioration in strength and the fatal issue in a little more than two years, together with the absence of other disease of lethal nature, would all seem to render the presence of the morbid blood state extremely probable.

CASE 2.—This case has already been reported in THE JOURNAL, March 2, 1901. A brief abstract is as follows:

*History.*—A. W. C., male, aged 34, American, married, no children, hospital supervisor and restaurant proprietor by occupation, was under observation from July, 1899, to the fatal termination of his illness in April, 1900. There was a history of three or four years' gradual failure of health, preceding actual illness.

*Examination.*—Syphilis was excluded. His habits were good. He complained of weakness and rigidity in legs, and was unable to walk without assistance from others.

*Sensory and Motor Symptoms:* There were defects of tactile and pain senses about ankles, and delay and hypesthesia in both, without actual anesthesia. There was motor weakness with rigidity of legs and inability to walk. There was also inco-ordination in the upper and lower extremities.

*Reflexes:* Knee jerks were plus. Ankle clonus was present on both sides. Plantar reflexes were of the distinct "Babinski" type.

There was no notable mental defect until twenty-four hours before death, when coma appeared.

Mucous stools were a marked symptom during the last few weeks. Also epistaxis.

*Blood Counts,* July 8, 1899 (Dr. M. A. Brown): Reds, 1,279,440; whites, 3,600; hgn., 32 1/6 per cent.; color index, 1.3; poikilocytosis, marked; nucleated reds numerous; megaloblasts more numerous than normoblasts.

*Second Count,* Feb. 13, 1902 (at pathologic laboratory, City Hospital): Reds, 1,661,805; whites, 3,000; hgn., 54 per cent.; color index, 1.54; eosinophiles, 9 per cent.; neutrophiles, 49 per cent.; small lymphocytes, 39 per cent.; large lymphocytes, 3 per cent.; poikilocytosis was not marked; megaloblasts, three seen.

Subsequent examination showed no material change.

*Autopsy.*—Autopsy and microscopic investigation by Dr. Wolfstein showed the typical cord lesion of Putnam-Dana type of combined sclerosis.<sup>1</sup>

CASE 3.—J. W. D., man, aged 34, single, active business man, was seen Jan. 7, 1898, in consultation with Dr. G. W. Wire of Wilmington, Ohio.

*History.*—He has complained of "tired feeling" for past two months. He had a crop of "dry boils" from waist to knees, about three months previous to this examination. Family history is good. There is no syphilis. Anemia was evident. Bilateral hydrothorax was present. There was no ataxia or rigidity of limbs present and no defect of tactile or pain senses was noted.

*Reflexes:* Knee jerks were lively. Ankle clonus was absent. Plantar reflex was not noted.

*Blood Count* (Dr. W. E. Schenck): Reds, 1,200,000 (4 counts); whites, 4,000; hgn., 35 per cent.

*Subsequent History.*—I am indebted for the subsequent history of the case to Dr. Wire, who writes me that the patient did fairly well for five or six months, then rapidly weakened, but was not absolutely confined to his home until seventeen days before his death on Nov. 26, 1898.

Death was due to cerebral hemorrhage, preceded by retinal hemorrhages, which abolished vision.

CASE 4.—C. H. L., aged 57, business man and capitalist, married, four children, was seen April 18, 1903, in consultation with Dr. J. H. Landis.

*History.*—Family history was good. His habits were good. There was no syphilis and no previous illness of consequence.

He complained of peculiar feelings in hands ("as of corn-meal on them") and in feet (as if resting on a sponge). The duration of these symptoms was six months.

*Examination.*—He had a large frame, full habit; height, 6 feet; weight, 212 pounds. He was moderately anemic to the eye. Heart sounds were not sharp. There were no urinary symptoms. Pupils responded to light, but somewhat sluggishly.

*Motor Apparatus:* There was no palsy; no inco-ordination. Power was reduced in grasp, i. e., R. 66 kilos., L. 60 kilos (normal estimated at about 90).

Re-examination twelve days later showed R. 75k., L. 60k. by same dynamometer.

*Sensation:* There were no losses of tactile or pain senses and no obvious delay in transmission.

*Reflexes:* Knee jerks were good and equal.

*Blood examination* (Dr. W. E. Schenck): Reds, 3,016,000; whites, 6,400; hgn., 60 per cent.; color index, 1 per cent.; differential count; polymorphonuclears, 80 per cent.; young, 16 per cent.; eosinophiles, 4 per cent.; the reds were irregular in shape and size. Diagnosis was secondary anemia (erythrocytemia).

*Subsequent History.*—Patient was put on iron, arsenic and supporting treatment and sent to the seashore, where he appeared to improve for a time. Growing worse later, the blood was re-examined and a diagnosis of pernicious anemia was made.

*Blood Examination,* March 2, 1904 (Dr. W. E. Schenck): Reds, 1,000,000; whites, 4,360; hgn., 25 per cent.; color index, 1.5 differential count, whites, polymorphonuclears, 81 per cent.; small lymphocytes, 16; large lymphocytes, 3; poikilocytosis, chromatophilia, microcytes and macrocytes.

*Diagnosis:* Pernicious anemia.

At this time Dr. Landis informs me there was spastic gait, plus knee jerks, and "Babinski" plantar reflexes; also some diarrhea of mucous type and loss of control of rectal sphincter with retained power over bladder. There were no mental defects. The fatal termination occurred about one year from the time of his first visit.

CASE 5.—A. H., financier and man of affairs, aged 67, very active, married, with several children living and healthy, was seen in June, 1902, in consultation with Dr. H. K. Dunham.

*History.*—His only complaints were of numbness and coldness in fingers (both hands), and pain in right shoulder. He called it rheumatism. His pulse was intermittent and arrhythmic and of low tension. The arteries were tortuous. There was no cardiac bruit, but the valve sounds were not sharp.

A diagnosis was made of neurasthenia and failing heart. Prolonged rest and retirement from active business advised.

Thirteen months later there were inco-ordination and weakness in legs, with some rigidity. There was lowering of the tactile sense in legs and ankles, but no anesthesia.

Eight months later there was marked lowering of tactile sensibility below the knees. Actual patches of anesthesia were present.

There was marked ataxia of gait and station, with loss of articular and posture sense in feet and toes, and eventual inability to walk alone.

*Blood Examination.*—A blood examination about this time revealed: Reds, 2,500,000; whites, 10,000; hgn., 55 per cent.; C. I., 1.1 per cent. A few days later the reds were 2,068,000; whites, 9,600; hgn., 54 per cent. Six nucleated reds in a leucocyte count of 500.

*Remarks.*—A diagnosis of probable pernicious anemia was made. The case terminated fatally about two years after the onset of the first symptoms.

CASE 6.—For the notes of this case I am indebted to Dr. A. L. Knight, the attending physician, who, although not consulted about the case until a few weeks before death, made a prompt and correct diagnosis.

*Patient.*—Mrs. F. S., widow, aged about 30, two children, had been in failing health for some months. There was no syphilis, but marked anemia with lemon yellow tint of skin. There was general weakness, but there were no mental defects and no sensory or reflex losses.

*Blood Examination* (Dr. W. E. Schenck): Reds, 1,509,320; whites, 4,200; hgn., 45 per cent.; color index, 1.5 per cent.

1. See THE JOURNAL, March 2, 1901.



Differential Count: Adult whites, 64 per cent.; young, small, 17 per cent.; young, large, 14 per cent.; transitional, 1 per cent.; old eosinophiles, 1 per cent.; unknown, 3 per cent.; reds, normoblasts, 1,500; megaloblasts, 102; microblasts, 33; poikilocytosis present.

CASE 7.—Mrs. A. S. H. was referred to me by Dr. W. M. Seamans of Delaware, Ohio. She was under my care at the Cincinnati Sanitarium from Nov. 1, 1904, to the date of her death, Dec. 28, 1904.

For some of the notes of case I am indebted to my associates, Dr. B. A. Williams and Dr. C. B. Rogers.

*Complaint.*—Diarrhea and nervousness of three months' duration.

*Patient.*—A married woman, aged 62, who has never been pregnant. Her father died of "heart disease." Her mother is living and in good health at over 80 years of age. Patient is the second of three children. There is no nervous disease in direct family.

*Previous History.*—Patient was under treatment at a private institution for "mental disease" ten years ago. Recovery was followed by "nervousness and irritability for years."

*Examination.*—Nov. 1, 1904: General development is fair, good complexion and teeth. Patient is somewhat emaciated. Mentally she is cheerful and bright, with good memory, and is hopeful. These conditions present day of examination were quite in contrast with her disposition at other times, which is not at all amiable.

Heart and urine were negative. There was no cranial nerve palsy and no contraction of visual fields to rough test. Pupils responded promptly to light and accommodation tests.

Motion: She can walk with some assistance from others; gait is stiff; her fingers are stiff and movements slow in consequence.

Sensation: Pain sense is blunted or lost about wrists and ankles (to a pin prick). There is tactile anesthesia of feet and legs nearly to knees. Heat and cold senses are delayed, but usually correct.

Reflexes: Knee jerks are absent. Plantar reflexes flexor, but very slight.

Blood Counts (Dr. W. E. Schenck), Nov. 8, 1904: Reds, 2,248,000; whites, 1,500; hgn., 30 per cent.; color index, 0.70

Differential Count: Leucocytes, polymorphonuclears, 83 per cent.; young, small, 10; young, large, 6, 16 per cent.; eosinophiles, 1 per cent.; poikilocytosis, macrocytes and microcytes.

A diagnosis of secondary anemia was made.

Second Count, Nov. 21, 1904: Reds, 1,456,000; whites, 5,000; hgn., 30 per cent.; color index, 1.07; poikilocytosis.

Differential Count: Polymorphonuclears, 57 per cent.; small lymphocytes, 42 per cent.; large lymphocytes, 1 per cent.

A diagnosis of pernicious anemia was made.

Third Count, Dec. 6, 1904: Reds, 1,004,000; whites, 2,400; hgn., 30 per cent.; color index, 1.5.

Differential Count: Polymorphonuclears, 65.5 per cent.; young, small, 33.5; young, large, 15, 34 per cent.; eosinophiles, .5; poikilocytosis, chromatophilia, macrocytes, microcytes.

A diagnosis of pernicious anemia was made.

Fourth Count, Dec. 20, 1904: Reds, 1,268,000; whites, 3,600; hgn., 30 per cent.; color index, 1.2.

Differential Count: Polymorphonuclears, 62 per cent.; young, small, 36, young, large, 2, 38 per cent.; poikilocytosis, chromatophilia, macrocytes, microcytes.

A diagnosis of pernicious anemia was made.

Termination by exhaustion five months after onset of symptoms.

CASE 8.—Mrs. A. P. C. was referred to me by Dr. Sutton of Aurora, Ind. The patient was under the care of myself and associates at the Cincinnati Sanitarium from Jan. 19, 1905, till her death, on Feb. 1, 1905.

*Patient.*—A woman, aged 48, the youngest of several children, married, one son, 16 years old, one miscarriage at 46 years, lues probable, complains that she "feels cold all the time," has pain in left hip.

*History* (from others).—The patient has been mentally "peculiar" for two years, "heard voices" once (auditory hallucinations). She has threatened suicide. She has loss of

control of sphincters at times and there is general weakness.

*Examination.*—She is evidently extremely anemic and has lemon yellow skin. She is conscious only when aroused; does not speak, but nods head. Pulse, 130; respiration from 35 to 40; temperature, 100. There were no chest râles. Pupils were pin points; sphincters unreliable; knee jerks were absent; plantar reflexes, right flexor, left absent; there were no responses to pin pricks in lower extremities.

Blood Examination (Dr. W. E. Schenck), Jan. 24, 1905: Reds, 2,272,000; whites, 2,400; hgn., 38 per cent.; color index, .86; macrocytes and microcytes.

Differential Count: Polymorphonuclears, 71 per cent.; small lymphocytes, 23 per cent.; large lymphocytes, 3 per cent.; eosinophiles, 1 per cent.; myelocytes, 2 per cent.; total, 100 per cent.

A diagnosis of severe secondary anemia was made.

Second Blood Examination, Feb. 1, 1905: Reds, 2,412,000; whites, 4,200; hgn., 35 per cent.; color index, 0.73.

Differential Count: Polymorphonuclears, 76.5 per cent.; lymphocytes, small, 21, large, 2.5. Normoblast, one.

A diagnosis of secondary anemia was made.

*Remarks.*—While this case does not technically come within the limits of a "pernicious" type of anemia, as shown by the blood tests, yet there can be little doubt of the presence of a lethal blood state to which the fatal termination was due.

CASE 9.—R. M. J., broker, single, was originally referred to me in June, 1898, by Dr. G. M. Allen, on account of a hemiplegia.

*History.*—My diagnosis at the time was of cerebral thrombosis of gummatous origin. Recovery was nearly complete, after some months, with only slight exaggeration of reflexes in the paralyzed side. I saw him subsequently at intervals of months, up to 1905. During this period he suffered from several attacks of aphasia and monoplegia, three or more convulsive attacks, all clearing up within a few hours or days, and leaving a slight but persistent mental weakening.

He still continued to do a certain amount of routine business, and his mental deterioration was not marked to a casual observer. In the early part of 1905 he passed from my observation, for several months, and I was informed that he was taking some form of manual treatment.

After this he was bed-ridden and comatose much of the time, and came under the care of Dr. Joseph Eichberg, who has kindly favored me with the following notes of the case while under his treatment:

"Blood examination of Mr. J.: Reds, 800,000; whites, 6,400; hgn., 20 per cent.; color index, 1.25 per cent.

There was marked poikilocytosis. One large megaloblast was found in several fields. The patient died within three and one-half weeks of the time that I first saw him."

*Remarks.*—The long duration (seven years) of nervous symptoms of varied type preceding the development of anemia is notable—not, however, because of any likely connection of the two, since the history pointed rather distinctly to gummatous arteritis as the cause of the organic nervous state.

## DISCUSSION.

DR. DAVID I. WOLFSTEIN, Cincinnati, declared that this attempt to establish a prepernicious anemia is going too far and is bound to lead us into trouble, especially as pernicious anemia is a disease that is well known and in which the blood examination is very definite. One can hardly see how disturbances of sensation and inco-ordination can be considered prepernicious anemia. In his desire to establish a separate entity, Dr. Langdon has included cases that would be classed as cases of subacute degeneration of the cord, which we class as pernicious anemia. There ought to be very little difficulty in diagnosing this condition with the laboratory aids now at our disposal. Prepernicious anemia is almost a contradiction in terms. There are a great many nervous states, it is true, that might be produced by various forms of anemia, but Dr. Wolfstein has never seen anything except very severe secondary anemia, or a simple pernicious anemia, unless there was some condition in the blood findings that would account for it, that would produce so well-marked a clinical picture as Dr. Langdon presents.



DR. H. A. TOMLINSON, St. Peter, Minn., said that behind the anemia there is the instability of the individual. In these cases we are probably dealing with a secondary anemia, having its origin in chronic autointoxication; in other words, an intoxication anemia. A careful study of these cases clinically will show that behind the autointoxication there is faulty elimination. After correction of the faulty elimination, and under improved nutrition, the anemia disappears. In the majority of cases of chronic nephritis, in which there is marked sensory and often motor disturbance, there is secondary anemia, and all the manifestations described by Dr. Langdon. Dr. Tomlinson agreed with Dr. Wolfstein that there is no ground for grouping these manifestations into a special classification, because they may result from a number of disease conditions. We have no right to ascribe to the anemia the power to cause the nervous disturbance.

## THE TUBERCULOSIS PROBLEM IN LOS ANGELES.\*

GEORGE H. KRESS, M.D.  
LOS ANGELES, CAL.

The mortality statistics for pulmonary tuberculosis for the city of Los Angeles, when analyzed, suggest some rather interesting questions, not only for the physicians and citizens of Los Angeles, but for our professional brethren east of the Rocky Mountains, since it is these latter gentlemen who are largely responsible for the fact that Los Angeles has a tuberculosis problem. It is the purpose of this paper to consider various phases of these statistics, to draw some conclusions therefrom and to suggest some measures whereby such danger as exists for the public health from an unusually high mortality rate from pulmonary tuberculosis may be minimized or entirely prevented.

In order that the task may be accomplished with some degree of completeness, most of the etiologic factors that are known to influence the morbidity and mortality rates of the great white plague will be considered in turn.

### FACTORS INFLUENCING MORBIDITY AND MORTALITY RATES.

*Climate.*—We who live in this country and know its many advantages, need not be told that the pure air coming from ocean and desert, the good soil drainage, the great amount of sunshine, the temperature which, while pleasant and equable, varies sufficiently during the day and night to be anything but enervating, are atmospheric and topographical conditions not favorable to either the development or the spread of consumption under ordinary conditions.

So far as the value of our climate may be called into question as regards the treatment of tuberculosis, we have but to remember that, in a general way, there is no such thing as a specific climate for the cure of tuberculosis; that it is the manner, rather than the place of, treatment that is of first importance; that the disease has been cured, in fact, in climates of widely different characteristics, and that the Southern California climate, in allowing an out-of-door life the year round, in a pure atmosphere, with an abundance of sunshine, possesses advantages excelled by but few localities. So that what may be said later concerning a large mortality rate from tuberculosis in Los Angeles exists not because of, but rather in spite of, a climate, which with proper eases, under suitable conditions, would and does exercise a potent influence in the cure of many, many patients.

*Sociologic and Industrial Conditions.*—Our northern friends and some few others at various times, in prognosticating the industrial growth of our prosperous city, have been in the habit of saying, "Los Angeles has nothing and exists on nothing else than its climate and its tourists." Taken literally, such an assertion is, of course, a great exaggeration, but there is this kernel of truth within it, that Los Angeles has, for a city of its size, not nearly the number of manufacturing interests that are found in many eastern municipalities of the same population.

With this apology for the use of dry figures, the ordinary causal factors of consumption will be considered in turn.

### STATISTICS.

The statistics here given have been taken largely from the last United States Census reports and from the death certificates on file in the City Health Office. While allowance must be made for slight errors, since all the items on the death certificates are not invariably filled in by physicians, they are, in the main, correct. The registration area of the United States contains about 40 per cent. of the population of the country, and, as it

MORTALITY RATES FOR ALL CAUSES.	
UNITED STATES REG. AREA. DEATHS—ALL CAUSES = 1780	PER 100,000 POP.
U.S. REG. AREA. CITIES ONLY. ALL CAUSES = 1860	PER 100,000 POP.
U.S. REG. AREA. RURAL ONLY. ALL CAUSES = 1540	PER 100,000 POP.
CALIFORNIA. 1900 YEAR. ALL CAUSES = 1515	
LOS ANGELES. YEAR 1900. ALL CAUSES = 1810.	
LOS ANGELES. YEAR 1904. ALL CAUSES = 1656.	

Diagram 1.—Showing the mortality rates, from all causes, for the United States and Los Angeles. It will be seen that in spite of having the second highest tuberculosis mortality rate in the United States, the mortality rate for Los Angeles, from all causes, is below that of the average registration cities of the United States.

has much more accurate methods of keeping vital statistics, its figures are, therefore, taken in preference to those for the United States as a whole.

The following figures show the annual economic loss to the United States from preventable deaths from pulmonary tuberculosis: Annual total number of deaths in the United States from consumption, 150,000; in California, over 4,000; in Los Angeles, over 600. Average age of patient at time of death, 35 years. From one-third to one-half of all deaths between the ages of 15 and 35 are due to tuberculosis.

Average years of after-life expected by man of 35, about 32 years; cost of rearing child to age of 20, at \$100 a year for 25,000 persons, \$50,000,000; same for 60,000 other persons who die between ages of 20 and 35, \$90,000,000; diminished earning power of \$150 each for 200,000 sick consumptives, \$30,000,000; loss of future savings at \$1,000 each of those who die between the ages of 20 and 60, \$130,000,000; annual expense of sickness of 150,000 persons, at \$50 each, \$7,500,000; extra expense of caring for families of 75,000 married consumptives at \$25, \$1,875,000; grand total in monetary loss to the United States, \$309,875,000 annually.

No estimate in dollars and cents is placed on the mental and physical suffering of the patients or their families.

\* Read before the Los Angeles County Medical Association June 2, 1905.



These estimates, if anything, err on the side of conservatism. Counting the cost of rearing a child, the loss in diminished wage earnings during sickness, the loss through premature death, the expense of sickness and expense of caring for dependents of deceased consumptives, there is a loss to the United States, on a conservative basis, of more than 300 millions of dollars annually.

All this loss annually from a preventable disease!  
The accompanying charts, diagrams and tables have

logie conditions of the city are likewise unfavorable to the spread of the disease. Yet, in spite of this, Los Angeles, in the census year 1900, had the second highest mortality rate from pulmonary tuberculosis in the United States.

If the rate has diminished somewhat during the last five years, it may be said with equal truth that the mortality rates of other cities have likewise diminished, especially in the large cities where the campaign for better housing and sanitation for the poor has been vigorously carried on. New York, with its new tenement house laws and park systems, is a case in point.

The consideration of the tuberculosis mortality rate of Los Angeles in relation to such factors as race, sex, age, conjugal condition, season of the year, and so on, brought out no particularly unusual points, other than that the ordinary variations of the United States registration area were somewhat intensified. Most of the variations could be traced to that one feature which is especially responsible for our high death rate, viz., the fact that southern California is known to possess a climate favorable to the cure of tuberculosis, as a result of which knowledge people flock to this region from all parts of the country, too often, however, in such advanced stages of the disease that recovery is quite out of the question. Consequently, the Los Angeles death

### MORTALITY RATES FOR CONSUMPTION ONLY.

U.S. TOTAL REG. AREA. YEAR 1900. CONSUMPTION MORTALITY RATE = 187.3 PER 100,000 POP.

U.S. REG. AREAS. CONSUMPTION M.R. = 204.9

U.S. REG. AREA. RURAL. CONSUMPTION M.R. = 134.1

CALIFORNIA. YR. 1900. P.T.B. M.R. = 234.3

LOS ANGELES. YR. 1900. P.T.B. M.R. = 373.7

LOS ANGELES. YR. 1904. P.T.B. M.R. = 332.2

NEW YORK. YR. 1900. P.T.B. M.R. = 237.1

CHICAGO. YR. 1900. RATE = 171.9

PHILA. YR. 1900. RATE = 214.7

ST. LOUIS. YR. 1900. RATE = 177.1

BOSTON. YR. 1900. RATE = 233.4

BALTIMORE YR. 1900. RATE = 178.0

CLEVELAND. YR. 1900. RATE = 129.5

BUFFALO YR. 1900. RATE = 128.9

SAN FRANCISCO YR. 1900. RATE 269.5

CINCINNATI YR. 1900. RATE 217.1

PITTSBURGH YR. 1900. RATE = 121.5

NEW ORLEANS. YR. 1900. RATE = 256.0

DETROIT YR. 1900. RATE = 122.2

MILWAUKEE YR. 1900. RATE = 149.1

WASHINGTON YR. 1900. RATE = 210.4

Diagram 2.—Showing the mortality rates for consumption only (a larger unit of measurement being here used than in the preceding table, to bring out the differences more clearly). The first horizontal black line shows the average of the registration area of the United States. The Los Angeles line, the longest given, is almost twice as great as that for the United States registration area average. Below the Los Angeles lines are given in order the tuberculosis mortality rates and lines for the fifteen largest cities in the country. The Los Angeles rate is larger than that of any of these large cities, where local conditions would lead one to expect high death rates from consumption.

been made to bring out more clearly such etiologic factors as have a bearing on the subject under discussion.

#### CONCLUSIONS TO BE DRAWN FROM THESE STATISTICS.

To summarize, it is noted that Los Angeles has a climate and topographical environment which, under proper hygienic and sanitary living, is inimical to the development of pulmonary tuberculosis among its inhabitants. The general industrial, sanitary and socio-

### DIAGRAM SHOWING MORTALITY RATES PER 100,000 POPULATION BY DISEASE GROUPS FOR LOS ANGELES IN 1904.

I. SPECIFIC INFECTIOUS DISEASES = 534.7 DEATHS PER 100,000 POPULATION.

TOTAL TUBERCULOSIS = 382.9

PULMONARY TUBERCULOSIS = 351.7

II. RESPIRATORY DISEASES = 181.1

III. DIGESTIVE SYSTEM = 174.1

IV. CIRCULATORY AND DUCTLESS GLANDS = 170.0

V. NERVOUS SYSTEM = 156.4

VI. CONSTITUTIONAL DISEASES = 150.0

VII. INTOX., VIOLENCE AND ACCIDENTS = 110.5

VIII. MISCELLANEOUS DISEASES = 122.9

NON-PULMONARY TUBERCULOSIS = 25.29

Diagram 3.—Showing the mortality rates, for Los Angeles, of diseases by the health office groups, except that the tuberculosis mortality is added for sake of contrast. The large portion of the line for specific infectious diseases which the tuberculosis line would cover and the much greater mortality from this single disease than for the entire groups of diseases, are both worthy of notice.

rate from tuberculosis assumes most undue proportions.

There are naturally more deaths among the males, because a larger number of that sex can come here unattended. The large number of deaths among adults is likewise due to the same reason. As yet the comparatively few deaths which occur among the native population of Los Angeles from consumption take place, many of them among the Mexicans and others who live in the poorest circumstances under the worst hygienic conditions.

The table showing the term of residence prior to



death is one of the most significant given. From it is noted beyond any question of argument that from one-third to one-half of those who die of consumption in this city, and who came here in the hope of regaining health and strength, are hopelessly diseased with tuberculosis. For such persons, many of whom die within a few months after their arrival in southern California, death at home, with the tender ministrations of relatives and friends, would be preferable to the hopeless outlook presented here. Forced by the lack of material means to seek lodging in the cheapest rooming houses, unable to purchase nourishing food, without which even the best climate on earth is of but little avail; forced, when their material means are not so limited to conceal the nature of their malady from the keeper of the room-

Fernando, Santa Fe, Sickie, Sixth, Temple, Tennessee, Twenty-third and Twenty-fifth, 3 each, and so on; County Hospital, 118; coroner, 34.

One hundred and eighteen deaths from consumption in the Los Angeles County Hospital last year! Thirty-four deaths in rooms and lodging houses, without a physician in attendance, so that a coroner's inquest was necessary! The Associated Charities yearly provide transportation to an additional hundred or so of consumptive persons to enable them to return to their homes because they are unable to keep up the struggle here.

If so many patients die as charity patients in our public hospital, can there be any doubt but that, prior to their admission to that charity institution, they must have lived in the cheapest of lodging or rooming houses? Would it not be a safe assumption to state that 25 per cent. of the mortality from this dread disease—which is responsible for more than one-fifth of the entire mortality of this city—and about 50 per cent. of the morbidity from consumption is to be found in the lodging and rooming houses of Los Angeles; in brief, that 25 per cent. of the deaths and 50 per cent. of the tuberculosis morbidity (whatever this latter figure may be; under our present laws we have no means of finding this out) is to be found in those dwellings which harbor about only 30 per cent. of our population? More than

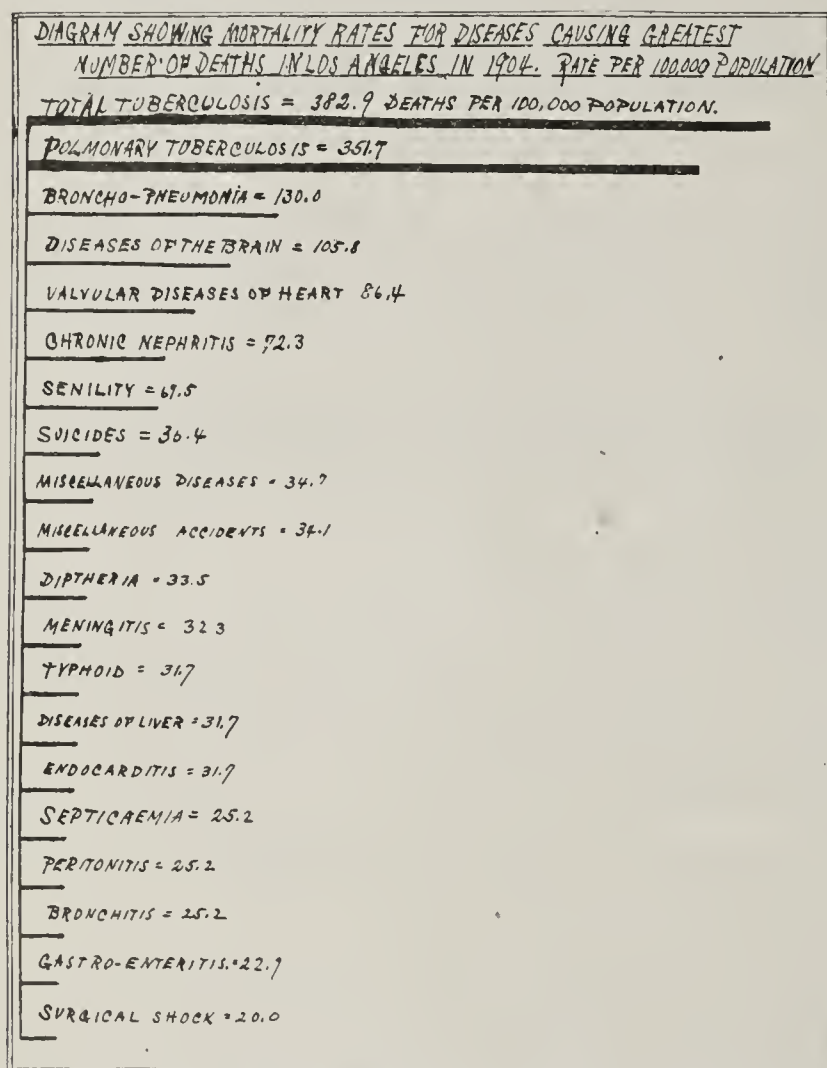


Diagram 4.—Showing how the Los Angeles death rate from consumption outclasses the other main causes of death in that city.

ing house, lest they be requested to go elsewhere for lodging; eating in the public restaurants, among the better class of which even, the cleansing of dishes is not any too well performed, and where among the cheapest this work is decidedly neglected, the lot of these hopelessly advanced victims of consumption is, indeed, hard. Their sufferings terminate somewhat when, bedridden, they are admitted to the County Hospital, where, even though the white-capped nurses be strangers, they may spend a few hours of peace before death.

The following is the tuberculosis mortality on different Los Angeles streets: Hope, 10; Fourth, Hill and Pico, 9 each; Main, 8; First and Twenty-second, 7 each; Alameda, Seventh and Twenty-sixth, 6 each; Aliso, Fifth, Figueroa, Los Angeles, St. Julian and Twelfth, 5 each; Avenue Sixth, 4; Boyle, Castelar, Eighth, Grand, Girard, Maple, Soto, Spring, Third, Twenty-first, Twenty-eighth, Vermont and Wall, 4 each; Avenue Five, 4; Buena Vista, Central, Elizabeth, Fifteenth, Flower, Marchessault, Pasadena, Ruth, San

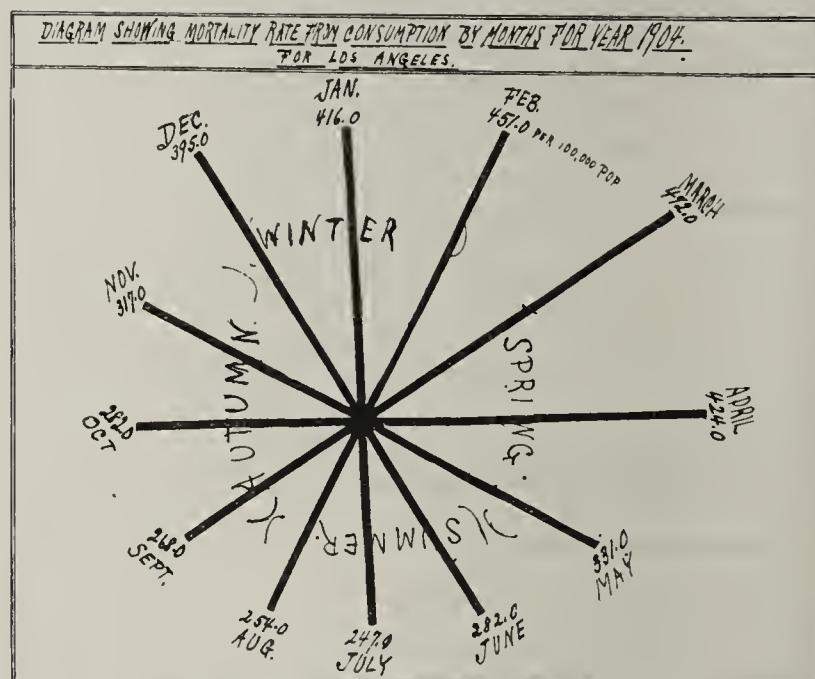


Diagram 5.—Presenting the mortality rates by months, as given in Table C, in the form of a diagram.

that, owing on the one hand to the prejudice among proprietors of good dwelling houses to accept such persons as tenants or lodgers, and, on the other, to the poverty-stricken condition of a large number of these patients, it is reasonable to assume that the proportion of consumptives to the poorer lodging houses is much larger than this. If this be true, it means that in the places where the largest number of poverty-stricken, poorly nourished and depressed men are to be found; in the buildings where the amount of cubic air space is least; where ventilation is prevented to keep up body heat and to avoid draughts; in the dwellings where the bed clothing is filthiest, where bath tubs and lavatories are the fewest and then of the crudest pattern; in short, where bad hygiene, worse sanitation, and the largest number of predisposed persons are congregated in the smallest space (precisely those conditions most potent in the spread of this disease), we find the largest number of consumptives, and not only that, but the largest number of consumptives in advanced stages of the dis-



case, that stage in which millions of bacilli are cast off by each patient in his sputum of a single day.

On what premises and by what process of reasoning are we warranted in concluding that, under such lodging-house conditions, tuberculosis does not endanger the public health of our city? When a firebrand is thrown into an inflammable structure, the result that is expected is a conflagration. When foci of infection are scattered in places where predisposed persons can most easily acquire the disease, one expects new cases of the disease to arise. The spread of the disease may be confined for a time to such places, but it does not take long before some of these diseased persons repay their debt to a criminally neglected community by infecting inhabitants in better portions of the city.

By what right does any municipality endanger the

County Medical Association, which is a component unit of the Americal Medical Association, and which is supposed to take an active participation in all efforts to promote the public health, excuse itself for its dereliction of duty?

Is it right that we as physicians should allow this work to be done almost entirely by a half-dozen men, the members of the Board of Health, and more especially by our health officer? Our politicians will not undertake this work, because it conflicts with vested interests that at once make themselves heard when reform is attempted; but let other vested interests, viz., those representing the great mass of our citizens, who stand for decent sanitation and hygiene, be heard with equal force, and our politicians will not turn an unwilling ear.

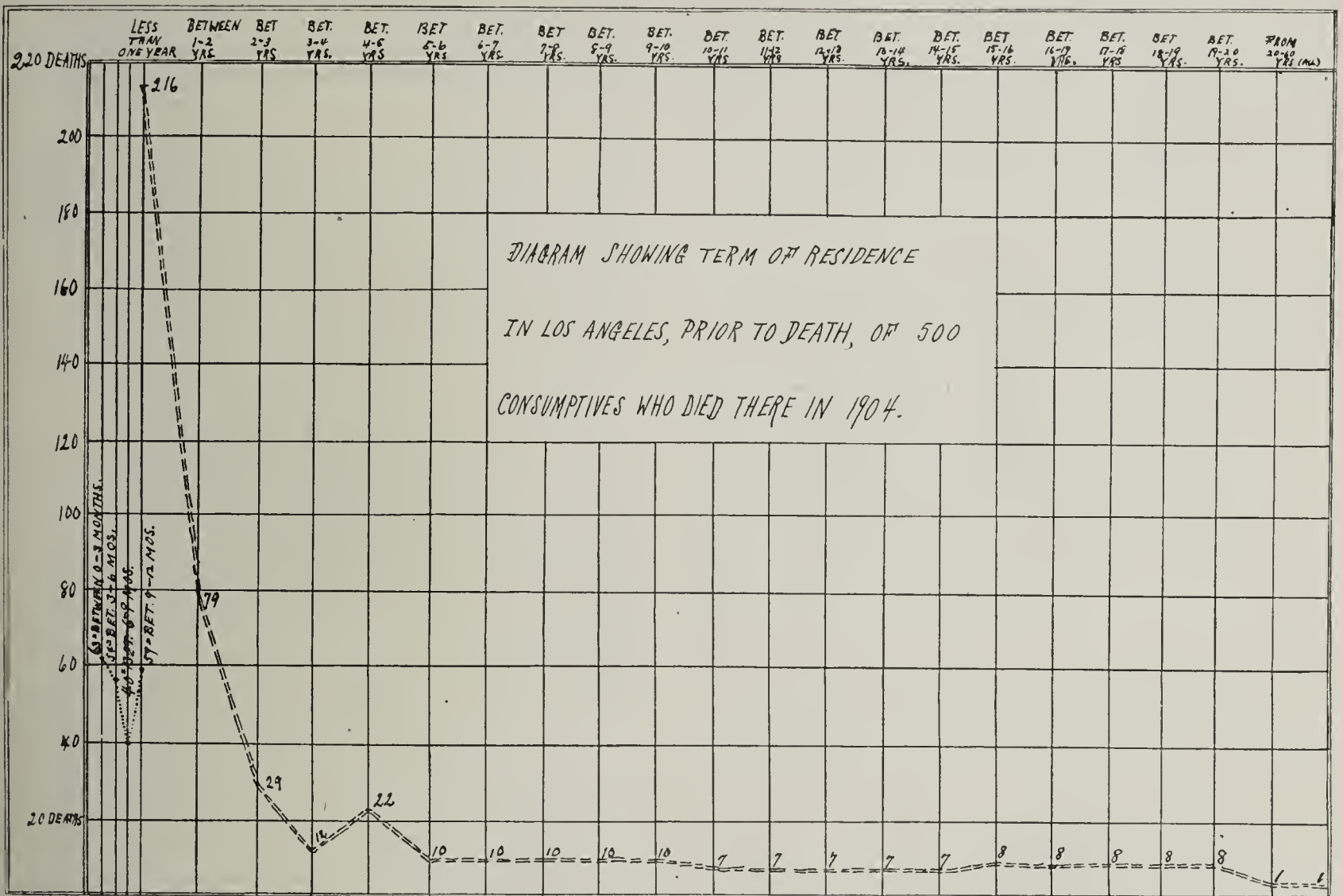


Diagram 6.—This diagram shows the length of residence in Los Angeles prior to death of 500 consumptives who died here in 1904. The high proportion of deaths for the four seasons of the first year is worthy of notice, also the height of the curve for the first year. It then drops rapidly, until about the fifth year, when it runs along at a very low figure. This means two things: One, that a large proportion of patients come here in hopelessly advanced stages of the disease; and two, that after two or three years' residence, the other patients have a fairly good chance for lengthened years of life.

life of its healthy inhabitants, especially when this danger to others comes from the violation of the most fundamental laws of decent and hygienic living? What does Los Angeles intend to do in this matter? Shall it close its eyes and allow the next census to publish the same unfavorable mortality rate from consumption? How long will it be, whether justly or unjustly, before it becomes noised abroad throughout the country that our tuberculosis mortality is so excessive as to be a danger to healthy persons?

Los Angeles can account for her tuberculosis death rate without shame to herself. The fault lies much more at the door of those eastern physicians who send hopelessly advanced patients to this community than at the doors of the local physicians. In what manner do we as physicians, and how does this Los Angeles

#### THE SOLUTION OF THE LOS ANGELES TUBERCULOSIS PROBLEM.

The solution of the tuberculosis problem in Los Angeles, while not a complicated one, has ramifications in many directions. It may be worth while to consider the more important of these in some detail.

**Compulsory Notification.**—Under the present health rules and regulations, our health officer has but little control over the tuberculosis situation, because he is denied the power to execute. This is so serious a problem that the health officer of this community should not only have mortality statistics bearing on tuberculosis, but also should know how much morbidity there is from that disease, and in what parts of the city it is located, so that intelligent action may be taken.



In New York City every physician is obliged to report every case of tuberculosis with which he comes in contact. This information is sent to the health department on a blank devised for that purpose, in which the physician not only gives the name and address of the patient, but states his opinion of the hygienic condition of the patient's surroundings. The patient is supplied with literature informing him how to avoid reinfection of himself (a most important point, in that it leads the patient to observe safeguards for others as well), and how to avoid infecting others, a precaution he is sometimes loth to take until the danger to self is first emphasized. This notification information is for the use of the health department only, i. e., the book is open to the inspection of health department officials only. When charity patients are reported, or when the attending physician states that hygienic conditions are bad, a physician or deputy from the health department investigates and gives needed information and assistance for the betterment of the conditions. From time to time inspections are made to see if these measures are complied with. When these measures are ignorantly or willfully but persistently neglected, the health officer has the power to transfer such a patient from his unhygienic surroundings to the tuberculosis hospital on North Brothers Island.

Los Angeles needs just such a law, only, unfortunately, the health officer in this state has no authority forcibly to send a patient to a hospital.

MORTALITY TABLES BY RACE										
RACE	UNITED STATES					LOS ANGELES.				
	POPULATION U.S. REG. AREA	DEATHS, ALL CAUSES.		DEATHS, CONSUMPTION.		POPULATION LOS ANGELES (ESTIMATED)	DEATHS, ALL CAUSES.		DEATHS, CONSUMPTION.	
		NUMBER	RATE PER 100,000 POP.	NUMBER	RATE PER 100,000 POP.		NUMBER	RATE PER 100,000 POP.	NUMBER	RATE PER 100,000 POP.
WHITE	29,555,120	475,640	1,725.0	47,841	174.0	196,164	2,847	1,450.	588	299.0
TOTAL COLORED	1,251,447	36,625	2,927.0	6,063	484.0	8,788	134	1,520.	40	459.0
NEGRO						4,000	88	2,200	26	650.0
CHINESE						3,500	46	1,150	10	400.0
JAPANESE									4	266.0

Table 1.—This table shows how much higher is the death rate for the colored races than for the white. The negroes, Chinese and Japanese of Los Angeles have not quite so high a death rate from this disease as their colored brethren of the United States, as a whole.

As is known, tuberculosis has been listed by our local board of health among notifiable diseases. How this voluntary notification has worked out in practice is seen from the health officer's last annual report, where, with 651 deaths from tuberculosis, only 206 cases of tuberculosis were reported, and, although the health department makes free sputum examinations, only 434 specimens were sent in, and of these only 167 specimens gave positive results.

Knowing the opposition of patients and their families to having their cases reported, is it any wonder that physicians avoid much trouble by not reporting them? The solution of this phase of the question lies not in voluntary, but in compulsory notification, and that, as stated, can best be followed out after the Biggs plan of New York, the information being for the health department's use only, no placard being placed on the house; the sole purpose of the arrangement being to protect the patient and his fellow-men, but at the same time to inconvenience both as little as possible.

Such a law Los Angeles should have. Such a law Los Angeles some day will have. Just how long the wait is to be will depend, in good part, on the attitude

the medical men of the community take on this question. It is to be hoped that those who would be tempted to oppose compulsory notification will accept the change of heart of New York medical men who at first opposed the Biggs system, as an indication of how experience would cause them to change their own opinion. Compulsory notification of cases would also perform this further excellent service to the anti-tuberculosis cause, in that it would overcome the prejudice of the laity to tuberculosis as a cause of death, so that the true number of those who die from this disease could be more accurately determined. At present, large allowances must be made for error in mortality statistics in this disease. Ultimately also, by necessitating a recorded diagnosis during life, it would be a valuable influence in leading medical men to make earlier diagnoses, i. e., diagnoses in the curable stages.

*Compulsory Fumigation.*—The health officer of Los Angeles, when a death certificate comes in marked pulmonary tuberculosis, sends out a deputy to fumigate the premises where the individual died, but the fumigator

MORTALITY RATES BY NATIONS. MORTALITY NUMBERS BY STATES.			
NATIONALITY	MORTALITY RATES PER 100,000 POP. U.S. REG. AREA.	MORTALITY RATES PER 100,000 POP. LOS ANGELES.	WHERE NATIVE AMERICANS AMONG DECEASED CONSUMPTIVES CAME FROM. LOS ANGELES, 1924
TOTAL COLORED	589.4	459.0	LOS ANGELES = 13
IRISH	428.0	240.0	CALIFORNIA = 59
BOHEMIANS	235.2	—	ILLINOIS = 45
SCANDINAVIANS	233.7	390.0	NEW YORK = 27
FRENCH	220.6	160.0	MISSOURI = 27
GERMANY	205.9	230.0	OHIO = 25
CANADA	199.7	370.0	PENNSYLVANIA = 24
UNITED STATES	162.5	290.0	INDIANA = 19
ENGLAND	151.4	202.0	MICHIGAN = 15
ITALIANS	149.9	40.0	IOWA = 15
RUSSIANS	131.1	650.0	TEXAS = 12
MEXICANS	—	770.0	TENNESSEE = 11
CHINESE	—	400.0	KENTUCKY = 11
JAPANESE	—	266.0	MASSACHUSETTS = 11

Table 2.—This gives in the three left-hand columns the mortality rates by nations, for the United States as a whole and for Los Angeles alone. In the United States registration area the Irish, next to the colored persons, have the highest death rate from consumption. In the column for Los Angeles the mortality rate of the Mexicans is especially worthy of notice. A considerable proportion of the native-born population of Los Angeles who die of pulmonary tuberculosis are of Mexican parentage. In the two right-hand columns may be seen from what states the native-born Americans who died here last year from consumption, came. Los Angeles had only thirteen deaths among her native born, and the Californians in all numbered only 59. Illinois sent us 45 consumptives, New York 27, Missouri 27, Ohio 25, and so on.

can do nothing, if the owner or lessee of the building forbids him to enter. This deputy has told me of the different ways in which he is met by the families or friends of the deceased, and has stated that in a number of cases he is denied admission. Los Angeles needs a statute that will make it compulsory to have rooms fumigated after the removal or death of a consumptive patient. The work should be carried on, of course, with as much privacy as possible. The benefit of fumigation would not be helped by undue publicity of the work, with its subsequent gossip of neighbors and the corresponding distress of the family.

A statute should also be passed to prevent the furnishings of the room from being sold to second-hand dealers until after they had been fumigated.

*Ordinances to Place Lodging House Licenses on the Same Basis as Dairy Licenses.*—In his last annual report the health officer of Los Angeles stated: "We recom-



mend that an ordinance be passed requiring all proprietors of lodging houses to secure a permit to conduct a rooming house, and that any proprietor who fails to furnish clean bed clothing, etc., be refused a permit, and in case he fails to keep or to maintain a clean and sanitary place his permit be suspended." What action has been taken in this matter? The health officer is the executive officer of the Board of Health. Is it right to thrust on him in addition the legislative functions? Is it not the duty of physicians, yes, of a committee of the Los Angeles County Medical Association, to take this matter in hand and make this suggestion of the health officer a reality? Such an ordinance should have provisions as to the amount of air space to each occupant of a room; should provide for an adequate amount of ventilation; should insist on clean bed clothing and furniture; should demand accessible bath and wash rooms and lavatories. Proprietors of places violating the requirements, and who, on notice to clean up, fail to do so, should be punished by withdrawal of license, just as a milk license is withdrawn from a dairyman for an analogous offense.

What objection can there be to such a law? If it be inconsistent for a physician or for a body of physicians to oppose fundamental provisions of cleanliness and sanitation, is it not equally inconsistent, in view of the high nature of their calling and better knowledge of these subjects, for them to make no effort to bring about the adoption of necessary hygienic and sanitary measures?

MORTALITY RATES BY SEX.										
SEX.	UNITED STATES REG. AREA. 1900.					LOS ANGELES. 1904				
	POPULATION	DEATHS—ALL CAUSES		DEATHS—CONSUMPTION		POPULATION	DEATHS—ALL CAUSES		DEATHS—CONSUMPTION	
		NUMBER	RATE PER 100,000 LIVING	NUMBER	RATE PER 100,000 LIVING		NUMBER	RATE PER 100,000 LIVING	NUMBER	RATE PER 100,000 LIVING
MALES.	16,379,332	272,819	1874.0	29,192	203.0	100,000*	1769	1769.0	376	376.0
FEMALES	16,443,937	239,850	1664.0	24,970	172.0	100,000*	1212	1212.0	232	232.0
						* In census year 1900, there were 55,577 males and 51,760 females in Los Angeles.				

Table 3.—This table shows that while for the United States registration area the deaths among males are to the consumptive deaths among females, as 8 to 7; for Los Angeles this ratio is about 15 males to 9 females.

**Building Regulations.**—We can all become indignant over the cheapest lodging houses, forgetting that, because of this very cheapness, they offer a roof to sleep under and a space to lie on for those unfortunate members of our community who have no means to turn to something better. Some of these shacks have existed for years.

To extirpate an established evil is always difficult. What is being done to prevent the erection of like places? The new building ordinance (No. 10,415, New Series) went into effect on Dec. 31, 1904, and its forty-two articles extend over more than three and one-half full pages of the *Los Angeles Times* of Jan. 9, 1905. Therein are specifications as to material and mode of construction for private and public buildings of all conceivable descriptions; fire-escape and plumbing requirements are all pointed out, but nowhere is mention made of the amount of air space per occupant nor the amount of ventilation required.

The new building ordinance deals almost entirely with material specifications. This is in keeping with this very material age. We do not know who composed the committee that drew up the specifications, but it would seem that that committee should have had among its members at least one medical man who had given

thought to building and other requirements. Such a medical man might have come to the aid of the building inspector when he sought to have a rule passed whereby the number of buildings of frame construction would be limited for certain size lots. Under the present ordinance, a single frame building may not contain more than a stipulated number of rooms or apartments. Nothing is said about the size of the lot. Hungry land and property owners violate the spirit of the ordinance by erecting buildings, each with the maximum number of rooms, a foot or so apart from one another, just enough space to enable them to state that the buildings are separate. The narrow areas between them are excellent flues, and the buildings make splendid fire traps. Where was our medical society when these laws were being adopted? It was conspicuous by its absence, as has been said, or it might have been of aid to our building inspector in having his much-needed regulations adopted.

Building requirements on the subject of air space per occupant, ventilation, lavatory arrangements, plumbing and the like need not necessarily stop with our cheaper lodging houses. Without entering into a discussion as

MORTALITY RATES BY AGE PERIODS.							
AGE →	UNDER FIVE YEARS	BETWEEN 5-10 YRS.	BETWEEN 10-20 YRS.	BETWEEN 20-45 YRS.	BETWEEN 45-65 YRS.	65 YEARS AND OVER.	TOTALS.
U.S. DEATHS, ALL CAUSES, 1900.	317,532	36,748	62,609	229,360	174,214	211,191	1,031,654
U.S. DEATHS, CONSUMPTION, 1900.	9,454	1,287	11,414	63,856	19,997	7,949	108,457
PROPORTION DEATHS DUE TO CONSUMPTION.	1.41%	3.50%	18.2%	27.8%	11.4%	3.7%	
LA DEATHS, ALL CAUSES, 1904.	474	68	166	999	154	47	
LA DEATHS, CONSUMPTION, 1904.	6	2	51	401	117	31	
PROPORTION DEATHS DUE TO CONSUMPTION.	1.26%	2.9%	30.7%	40.1%	75.9%	65.9%	

Table 4.—This shows the tuberculosis mortality rate for the United States and Los Angeles by age periods. The proportion of deaths for the adult age periods is much greater for Los Angeles than for the United States.

to the probable effect on future generations, of our present-day flat life, we may well ask ourselves what kind of physical beings these compartment buildings in time will produce, and whether children born and reared in such structures, where the ingenuity of man is bent on seeing how he can transform the dwelling house of a generation ago into one or two small rooms, and these, in turn, perhaps into living closets no larger than those used by our grandmothers in storing clothes, will be of a high physical standard? In any case the duty of the present generation is to demand that an adequate supply of oxygen and sunlight be allowed to reach the interior of all classes of dwellings. The thickly carpeted, stuffy, ill-ventilated apartment house or hotel can at times be as much of a disease breeder as the poor hovel or miserable tenement, where such of our fellows as have fallen behind in the life race are of necessity forced to make their homes. If the principle of good ventilation be applicable for the tenement, it should be made applicable to the apartment house and hotel also.

**A Municipal Dispensary for Consumptives.**—Los Angeles can not avoid the conclusion that a large number of penniless consumptives take up their residence within its boundaries. Some of these patients come here on the advice of eastern physicians. Happily, the general



awakening that has come about through the active anti-tuberculosis warfare of late years has resulted in attention being directed to the evil advice of sending advanced patients far from home; with the establishment of sanatoria in the Eastern States and the wider acceptance of the knowledge that tuberculosis in the early stages is curable in any climate, there will be fewer and fewer of such offenses traceable to our brother physicians in the states east of the Rockies. There will always be a goodly number of consumptives who will come here on their own responsibility. The potent influence exerted by a good climate in the process of cure can not be denied and the victims of consumption will ever seek it. Many come in early stages, but, lacking means, hurt themselves by overwork. Improving their condition and arresting the disease, they imagine themselves entirely well and overdo. As their illness continues and draws on their available funds, they seek cheaper and cheaper lodging and eating houses. The larger proportion who go to the County Hospital to die has already been noted.

MORTALITY RATES BY CONJUGAL CONDITION.								
CONJUGAL CONDITION	FOR THE <sup>DEATHS</sup> UNITED STATES, 1900.				FOR <sup>DEATHS</sup> LOS ANGELES. 1904.			
	ALL CAUSES	CONSUMPTION	PROPORTION DUE TO CONSUMPTION	MORTALITY RATE PER 100,000 POP.	ALL CAUSES	CONSUMPTION	PROPORTION DUE TO CONSUMPTION	MORTALITY RATE PER 100,000 POP.
SINGLE	524,271	74,924				170	UN KNOW N	164
MARRIED	326,639	48,568				230	UN KNOW N	277
WIDOWED	141,547	9,673				41	UN KNOW N	263

Table 5.—This shows the relation to conjugal condition.

To these poverty-stricken consumptives, citizens of eastern municipalities, rather than those of Los Angeles, the city of the Los Angelenos owes an obligation. First to them as individuals, because to those who are ill unto death and without means it is under obligation to provide advice and aid. They should not be made to shift for themselves. Almost any afternoon, at the office of the Associated Charities in the county courthouse, inquiries are made by one or more of these unfortunates, who, without home or shelter, realize at last that they are ill,

TABLE SHOWING MORTALITY RATES BY MONTHS FROM CONSUMPTION. LOS ANGELES, 1904.												
MONTHS →	JAN.	FEB.	MCH.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
DEATHS IN WARDS.	45	48	51	44	33	33	28	30	25	27	33	40
DEATHS IN HOSPITALS.	14	16	16	16	14	7	7	6	13	13	12	16
TOTAL DEATHS.	59	64	67	60	47	40	35	36	38	40	45	56
MORT. RATE PER 100,000 POP.	416.0	451.0	472.0	424.0	331.0	282.0	247.0	254.0	268.0	282.0	317.0	395.0

Table 6.—This shows how the number of deaths from consumption varies during the different months of the year.

indeed, and seek medical advice or transportation back to their old home. Why not put this work on a separate basis; establish a room somewhere, with a dispensary staff, where this class of consumptives can be reached and put on the road to recovery, or, at least, if that be impossible, be so guarded that their presence in this community shall not be a source of danger to healthy citizens.

**Antisputting Ordinance.**—There can be no doubt about the millions of bacilli that are expectorated by a single consumptive in the course of twenty-four hours. Fortunately, where this is expectorated on streets in the

summer season, when the sunshine is at its height, it is soon rendered innocuous. Not so, however, with the sputum in insanitary lodging houses. No matter what may be the most frequent channels of infection, whether by the respiratory or by the alimentary tract, it is generally conceded that infection from bovine sources is comparatively infrequent, if it exists at all, and that, as a rule, all individuals acquire their disease from other persons. The most frequent medium of transmission is the sputum. Antisputting ordinances are good. Too much publicity can not be given to this danger. Let the ordinance be enforced. More than that, the lodging houses should be made to have signs in prominent places, forbidding expectoration, except in suitable spittoons.

TABLE SHOWING WARD POPULATION, ACREAGE AND MORTALITY. For Los Angeles.								
WARDS.	POPULATION	PERCENTAGE OF POP. BY WARD.	WARD ACREAGE	DENSITY OF POP. PER ACRE.	DEATHS ALL CAUSES	DEATHS TUBERCULOSIS	PERCENTAGE DEATHS DUE TO TUBERCULOSIS	MORTALITY RATE PER 100,000 POP.
WARD 1.	16,429	8%	4584.	3.5	195	40	20%	1,180.
WARD 2.	20,708	10%	4628.	4.4	222	45	20%	1,070.
WARD 3.	22,851	11%	1543.	14.8	196	42	21%	857.
WARD 4.	33,907	16%	3132.	10.8	355	60	16%	1,040.
WARD 5.	21,692	10%	3,934.	5.5	241	42	17%	1,110
WARD 6.	31,118	18%	4,172.	9.3	384	69	17%	982.
WARD 7.	23,740	11%	1,153.	20.0	295	62	21%	1,240.
WARD 8.	10,031	5%	577.	17.3	184	46	25%	1,840.
WARD 9.	12,871	6%	3,939.	3.2	152	36	23%	1,170.

Table 7.—This shows the relation of tuberculosis mortality by wards, to ward population, acreage, density, deaths from all causes, and so on. The crowded Eighth Ward, i. e., the plaza district, excels in both its death rates from all causes and from tuberculosis, that of any other ward. While ward density is greater for Ward 7 by acreage, the dwelling places of Ward 8 are much more densely populated.

If sputum is dangerous on the sidewalk, it is equally and more dangerous in the public buildings, in elevators, in cabs, in streets, in steam railways, in hotels, and in lodging and dwelling houses.

**Disinfection of Pullman Cars.**—The problem of making the owners of those temporary and traveling lodging

TABLE SHOWING DWELLING CONDITIONS IN LOS ANGELES. Census Year 1900									
SIZE OF DWELLING	DWELLINGS WITH ONE PERSON.	DWELLINGS WITH 2-6 PERSONS.	DWELLINGS WITH 7-10 PERSONS.	DWELLINGS WITH ELEVEN OR MORE PERSONS.	TOTALS				
NUMBER OF DWELLINGS WITH	1,469.	17,593.	2,773.	— 676.	22,531.				
NO. OF PERSONS IN DWELLINGS OF—	1,469.	65,701.	21,814.	13,495	102,479.				
YEAR.	1900.	1890.	1900.	1890.	1900.	1890.	1900.	1890.	1900.
PERCENTAGE OF DWELLINGS FOR NO. OF PERSONS NOTED	6.5%	5.9%	78.1%	74.1%	12.3%	15.9%	3.1%	3.3%	
PERCENTAGE OF POPULATION IN DWELLING OF SIZE NOTED	1.4%	1.2%	64.4%	58.9%	21.3%	21.3%	13.2%	13.1%	

Table 8.—This gives some figures from the latest United States Census reports, showing how large a proportion of the population of Los Angeles lives in simple dwellings and in boarding houses.

houses known as Pullman sleepers fumigate the berths and furnishings is an intricate and difficult one. If the municipality can not solve it, the legislature should be requested to give the State Board of Health adequate powers in this connection.

**Municipal Sanatoria and Hospitals for Consumptives.**—New York and Cincinnati have established municipal sanatoria for consumptives. These perform a most excellent work not only through the direct cures, but also in being centers from which a better and wider knowledge concerning the best methods of prophylaxis



and cure permeate the masses. Unfortunately, the poor can not easily be taught to regard these institutions in their proper light. In Los Angeles, by the action of the city council, consumptives can go only to the County Hospital, if we except the endowed Barlow Sanatorium, with its as yet limited number of beds. The council made no effort to abate the dangers in lodging houses, but for the private hospitals, where sputa could be disinfected, stringent rules were laid down. The theory is good, but the council, in its wisdom, if it would have been consistent, should have first turned its attention to the worst offenders, viz., the cheaper lodging houses.

The Los Angeles County Hospital has several wards for bedridden consumptives and a few tents for ambulant cases. As soon as patients get in fair condition, in other words, as soon as the active stage for which they were admitted abates, they are urged to seek quarters elsewhere. The County Hospital does this in sheer self-defense. Its entire equipment could be given over to this disease. It is true that many of these patients should have been treated by other municipalities, but since they are here they must be treated humanely.

With this mild climate, why would it not be a wise and economical thing to model after the plan adopted by Texas? That state found that its prisons had an unusually high mortality from tuberculosis. Dr. Fowler, the prison physician, sought permission to take such consumptive prisoners to the Wynne State Farm, an abandoned state prison farm with buildings. These buildings were turned into a sanatorium, hospital, farm and prison, all in one. The prisoners were treated according to the extent of the disease. Light farming, dairy work and poultry raising were done by those who were able to work. The farm produce more than paid the cost of maintenance of the institution, if the expense of guarding the prisoners be deducted. The lives of many of these men were prolonged or saved, and many other prisoners who would have been their companions in the closed prisons escaped infection; escaped, in fact, a form of murder not within the pale of the law.

With the climate of California, which is equally as beneficent as that of Texas, why could not Los Angeles pursue a similar plan? With no expense for guarding, why could not such an institution, a municipal sanatorium, be made self-sustaining here? A dairy herd, a poultry ranch and a truck garden, all requiring but comparatively light work, could be instituted, and, with proper management, could be put on as self-supporting a basis as the Texas farm. With pure air, nourishing food and good medical supervision, we have the essence, the triad of present-day methods in the treatment of this disease. With these, then, the amount of good which could be done can hardly be estimated. The air costs nothing, the food could be furnished by the labor of the patients, and the other expenses of the institution need not be much.

#### IN CONCLUSION.

If Los Angeles would prevent the large number of tuberculous sick, who are domiciled within its boundaries, from being a danger to their fellow-citizens, it behooves her to consider some such measures as have been outlined above.

If the physicians of Los Angeles would remain true to the tenets of their profession, it becomes their duty to take a hand in the solution of this problem.

If the Los Angeles County Medical Association, a basic unit of the American Medical Association, would remain true to its own obligations, and true to its major

or parent organizations—the American Medical Association and the Medical Society of the State of California—it will aspire to give something more to its members than a didactic or even a clinical course of medicine or surgery, by taking a hand and doing its share in the solution of the many hygienic problems which confront this rapidly growing municipality.

One of these problems is the tuberculosis situation. It has as yet reached no undue danger. It should not be allowed to do so. To call attention to the need of its investigation has been one of the objects of this paper.

## THE TRANSPLANTATION OF ORGANS.

A PRELIMINARY COMMUNICATION.\*

ALEXIS CARREL, M.D.

CHICAGO.

This operation consists of extirpating an organ, with its vessels, of putting it in another region, and of uniting its vessels to a neighboring artery and vein. If the organ is replaced in the same animal from which it was removed, the operation is called an autotransplantation. If it is placed in another animal of the same species it is called a homotransplantation, while if it is placed in an animal of a different species, the operation is called a heterotransplantation.

The so-defined transplantation completely differs from the well-known experiments of subcutaneous or intraperitoneal grafts of small slices of organs.

#### LITERATURE.

The literature of the transplantation of organs is not extensive.

In 1901-02 I began experimenting with the view of finding a method of substituting a sound organ for a diseased one, e. g., of treating Bright's disease by replacing the diseased kidney by a normal one, or myxedema by transplanting a sound thyroid gland and securing it a blood supply by arterial and venous anastomosis. These first experiments were made in the Faculty of Medicine of the University of Lyons.

The transplantation of the thyroid gland, with its vessels, was performed on a large dog.<sup>1</sup> The right thyroid gland was dissected and its vessels cut. The largest artery and vein were united by a termino-lateral anastomosis to the carotid artery, and the external jugular vein. The circulation was re-established. It was impossible to observe physiologic results, owing to coagulation, which soon occurred, due to the bad aseptic and technical conditions of the operation.

About the same time the transplantation of the kidney was made.<sup>2</sup> The carotid and the jugular of a dog were dissected and prepared for anastomosis. The kidney, having been extirpated, with its vessels and its ureter, was put into the cervical wound. End-to-end anastomoses of the renal artery to the carotid, and of the renal vein to the jugular, were performed. The end of the ureter was united to a small opening of the skin, located a little above the sternum. On release of the clamps, the circulation was immediately re-established, and seemed thoroughly normal. After a few hours a clear fluid began flowing from the ureter. Per-

\* From the Hull Physiological Laboratory, University of Chicago.

1. Carrel: "Les anastomoses vasculaires: leur technique opératoire et leurs indications." 2e Congrès des Médecins de langue française de l'Amérique du Nord, Montreal, 1904.

2. Carrel: "La technique opératoire des anastomoses vasculaires et la transplantation des viscères." Lyon Médical, 1902.



manent results were not observed, on account of septic complications.

In the same year, and prior to this, similar experiments, of which I was then ignorant, were performed by Ullmann.<sup>3</sup> His method was different. He used Payr's tubes for uniting the blood vessels. Definitive results were not observed. In 1903 the same experiment was made by Carl Beck of Chicago, but not published.

In 1905 Floresco<sup>4</sup> continued these experiments. He succeeded in transplanting the kidney into the lumbar region. The urine escaped into the bladder. My technic of anastomosing blood vessels was used with a slight modification. The operation was successful, but the anatomic and physiologic results have not yet been published.

In 1905 several series of experiments were performed by Dr. Guthrie and myself in the physiologic and surgical rooms of the Hull laboratory, in order to study the results of the transplantation of the blood vessels<sup>5</sup> of the heart, of the thigh, of the kidney and of the other glands.<sup>6</sup> I am very glad of this occasion to thank Dr. Stewart for giving me the privilege of performing these researches in his laboratory.

#### PROBLEMS CONNECTED WITH VISCERAL TRANSPLANTATION.

It is impossible to discuss here all the problems which the question of transplantation of organs raises. We will only consider the most important conditions which are necessary to the nutrition of the transplanted organs.

In case of autotransplantation or homotransplantation, the establishment of a good circulation through the anastomoses ordinarily renders the operation successful. The life of the transplanted organs depends almost entirely on the circulation. If the vessels become obliterated, gangrene destroys the organ. Obliteration can occur very easily. It may be produced by a great many causes; for instance, injury of the endothelium by the forceps, the needles or the clamps of the temporary hemostasis, clots on the perforating stitches, fall of the external sheath in the opening of the vessel, and, above all, lack of perfect asepsis.

The ordinary surgical methods of blood-vessel anastomosis have failed to give successful results in the transplantation of organs. At first I used tubes of magnesium or tubes of "caramel," but without good results. Coagulation occurred. Afterward I found a method of suturing which was often successful. By degrees that method has been improved in such a manner that now obliteration almost never occurs. Dr. Guthrie and I, operating together, obtain practically constantly good results. That very important question of technic being settled, autotransplantation and homotransplantation become almost easy.

The problem of the heterotransplantation is much more complicated. It is well known that the serum of an animal in many cases is toxic for the cells of an animal of another species. The aim of these researches being to determine the possibility of transplanting or-

gans from animal to man, that question is very important. Fortunately, biologic laws are not without exceptions. Perhaps the human serum is not toxic for the cells of some animals. We have some reason to think that organs of the anthropoid apes transplanted on man may not be injured by the serum, for the blood of ape and man are inactive toward each other. Besides, it might be possible to use anticytolytic serums. All these points are unknown and must be experimentally studied.

#### POSSIBLE RESULTS OF VISCERAL TRANSPLANTATION.

Only a few of the possible results of the transplantation of organs will be mentioned in this paper. We do not want to discuss here the physiologic applications of the method. They are numerous and of considerable importance. Already we have performed several experiments along this line. For instance, Dr. Stewart and I have transplanted the kidney, with reversal of the circulation, in order to study the modifications of the secretion. With Dr. Guthrie, I transplanted one of the kidneys of a dog into the cervical region, and, on the third day after the operation, made a comparative study of the urine secreted by the transplanted and the sound kidney.<sup>7</sup> I performed also the transplantation of the heart of a dog on the carotid and the jugular of another dog. The heart was beating and the blood circulating through it. Dr. Guthrie and I established an arterial circulation through the right inferior thyroid vein of a dog, which had symmetrical hypertrophy of the thyroid glands. Marked changes occurred. Thus it appears that the reversal of the circulation in only one vein of a gland may alter the physiologic processes. The replantation of the thyroid gland was successfully made.<sup>8</sup> Probably our knowledge of the pancreas, the spleen, etc., may be increased by this method.

From a clinical standpoint, the transplantation of organs may become important. Perhaps it will be possible to treat myxedema, idiocy, etc., by transplanting a sound thyroid gland with anastomosis of the thyroid vessels to suitable arteries and veins. In kidney affections the transplantation of a sound kidney may be of benefit. Perhaps, after a complete amputation of arm, leg, or thigh, it may be possible to replant the limb, or another similar limb, if it is procurable.

A great many experiments on animals must be performed before using that method on man. As yet it is impossible to say whether or not the transplantation of organs will yield practical results. It seems possible, and we hope that it may open new fields in therapy and biology.

I wish to thank Dr. Guthrie for helping me in the revision of this paper.

7. Carrel and Guthrie: "Functions of a Transplanted Kidney," *Science*, Oct. 13, 1905.

8. Carrel and Guthrie: "Extirpation and Replantation of the Thyroid Gland with Reversal of the Circulation," *Science*, Oct. 27, 1905.

3. Ullmann: "Experimentelle Nierentransplantation." *Wien. klin. Wochsft.*, 1902.

4. Floresco: "Conditions de la transplantation du rein. Recherches sur la transplantation du rein." *Journal de Physiologie et de Pathologie générale*, 1905.

5. Carrel: "Anastomosis and Transplantation of Blood Vessels." *American Medicine*, 1905.

6. Carrel and Guthrie: "Transplantation of the Kidney. (To be published.)" "Transplantation of the Inferior Thyroid Vein on the Carotid Artery, in a Case of Goitre." (To be published.) "Amputation of the Thigh. Replantation." (To be published in the *American Journal of the Medical Sciences*.)

**Consultation.**—If the physician is worried and anxious about his ease and desires advice from a man who has had more experience in that particular disease, it seems only proper that his brother practitioner should come to his aid as a consultant for a small fee, or for no fee, if none is obtainable from the patient. It is the bond of professional brotherhood that seeks to lessen the mental stress in both instances. Yet consultants have been known, I understand, to refuse thus to relieve the anxiety of a doctor, because the payment by the patient of a certain fee was not possible. There is little doubt that the family physician at times pays consultation fees out of his own pocket in order to do his best for patients with whose straitened circumstances he is familiar.—John B. Roberts.



## TRANSPERITONEAL LIGATION OF THE RENAL VESSELS

AS A PRELIMINARY TO A LUMBAR NEPHRECTOMY IN  
TUBERCULOSIS OR MALIGNANT GROWTHS  
OF THE KIDNEY.

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A recent somewhat exhaustive study of tuberculosis of the kidney, the results of which have been published elsewhere, necessitated the examination of a large number of pathologic specimens, not only of renal tuberculosis but also of malignant tumors, in the Johns Hopkins Pathological Laboratory. From a careful analysis of over 400 cases of renal tuberculosis which I have collected from the literature and from personal observations on a number of instances of tuberculosis and malignant growth, I have been led to conclude that in the course of a lumbar nephrectomy for either of these two conditions, the operator is liable to squeeze tuberculous or malignant material into the general circulation and thereby cause an infection or metastasis. This conclusion is based on the following facts:

*First.*—Microscopic examination of numerous specimens of renal tuberculosis showed that the lymphatic vessels and the capillaries not infrequently end very near the tuberculous area. A certain number of these vessels are blocked by a proliferation of the endothelial cells, but in others the lumen is distinctly patent, so that it is possible in the course of certain manipulations that some of the tuberculous material may be squeezed into them, and thus gain entrance into the blood or lymph circulation. Closely similar physical conditions are seen in malignant growths.

*Second.*—In certain types of malignant tumors of the kidney the disease process extends well into the renal vein, sometimes forming a definite projection without having become an intimate part of the vessel wall. In all such cases it is very obvious that a small particle might very readily become detached and pass into the vein.

*Third.*—In two cases which came under my notice an acute, more or less general, tuberculosis followed the removal of the tuberculous kidney, and produced death within two months. In several instances belonging to my series of collected cases similar results were noted. Thus on one of my patients, who suffered from a renal and secondary bladder tuberculosis, a nephrectomy was done. A temperature of 102 degrees F. developed on the second day and the fever continued to the end. For the first ten days no focus could be found, but later trouble was discovered in the lower part of the right lung. This spread, the disease became general, and the patient died from miliary tuberculosis at the end of two and a half months.

*Fourth.*—In doing a lumbar nephrectomy, in order to free the kidney from its bed, it is necessary to press, squeeze and otherwise manipulate the organ rather roughly.

In view of the above facts, it has occurred to me that it is very possible, and indeed probable, that, during such manipulations as are required in the performance of nephrectomy, tuberculous material carrying tubercle bacilli in cases of renal tuberculosis or malignant material from a malignant growth can very readily be squeezed into the lymphatic or blood circulation, and thus give rise to a general infection.

In order to prevent such a possibility, I propose the following operation:

Do a laparotomy, push the intestines to one side, incise the posterior peritoneum, expose the renal vessels, put a double ligature around each of them, cut between and free the distal end for a short distance. In passing the ligatures it is well to include a certain amount of the immediately surrounding tissue, so as to pass around and ligate the lymph tract, which is not visible but which runs alongside of and very near to either the artery or vein. The peritoneum is then closed posteriorly and the anterior abdominal wound sutured in the usual manner. The patient is then turned on his side and the ordinary lumbar nephrectomy is done.

It may be asked why, when the abdomen is open, we should not remove the kidney through this wound. As a contraindication is the fact that with the very best operators the mortality for a transperitoneal nephrectomy is by 3 per cent. higher than for a lumbar nephrectomy.

It may be objected that this procedure produces two separate wounds and prolongs the time of operation. This is, to a certain extent, true, but it must be remembered that after the vessels have been ligated and cut, and to a certain extent freed, the time and manipulations necessary for a lumbar nephrectomy are reduced by fully one-half, so that the time spent in the preliminary ligation is offset by the lessening of the work required for the lumbar procedure.

The opening of the peritoneum under proper precautions should not in any sense add to the mortality of the operation.

The above procedure I simply propose for consideration. I have not done it, nor have I seen it done, but I suggest the method on theoretical grounds. The point which I wish to emphasize is that the usual method of doing a nephrectomy, in that it necessitates a squeezing of the kidney while the vessels are still open, is certainly dangerous in cases of tuberculosis or malignant growth.

## Special Articles

### MEDICAL AFFAIRS IN THE HEART OF THE ARCTICS.

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CHICAGO.

(Concluded from page 1569.)

*Epistaxis.*—During the summer the Eskimos become so plethoric that Nature seeks to give relief by draining away the superfluous blood by hemorrhages from the nose. Epistaxis is a very common complaint in summer. I have frequently observed it, especially in young men who rowed my boat or accompanied me on my hunting trips inland. Any unusual exertion brought on the attacks. Men were more frequently subject to such attacks than women, and, although I could not get any definite information, I surmise that in women Nature relieves the abnormal congestion by increasing the menstrual flow.

*Degeneration Diseases.*—The Eskimos in the Arctic region are singularly free from the long list of degenerative diseases which cause so much suffering and cut short the lives of so many victims in civilized life. Commander Peary assured me that he had never seen a case



of dropsy or apoplexy among his numerous Eskimo acquaintances. The only Eskimo in whom I detected arterial degeneration was the syphilitic to whom I have referred before. I examined the radial pulse of several men who were at least 70 years old, and found it as soft and as regular as that of a healthy young adult. None of these showed even a trace of *arcus senilis*. Bright's disease, cirrhosis of the liver, diabetes, arteriosclerosis, coxitis senilis, cataract and other diseases resulting from visceral degeneration evidently do not occur in the Arctic region.

*Ship Catarrh.*—When the natives came on board the *Erik* and *Roosevelt*, with the exception of a few from the North Star Bay settlement who brought with them a slight nasal catarrh, they were free from catarrhal affection of the respiratory organs. In a day or two most of them were afflicted with a severe cough and a thin mucous discharge from the nose—in other words, an acute catarrhal affection of the nose and large bronchial tubes. This is a familiar disease to seamen who visit this region. The natives expect it when they board a vessel. The pure sterile air of the Arctic region does not contain the essential microbic cause of catarrhal inflammation. The ship brings the microbes and the coal-dust inhaled prepares the soil for their specific pathogenic action. This nasal and bronchial catarrh of the natives contracted so promptly on board ship is familiarly known as “ship catarrh.” It lasts only a few days and does not appear to give rise to any considerable constitutional disturbance, as all those afflicted went about, ate their rations with a ravenous appetite, and the men lent valuable assistance in loading and unloading the cargo of both ships.

*Epidemic Diseases.*—Some ten years ago Commander Peary made a careful count of the Eskimos of that part of the west coast of Greenland north of the Danish colonies and settlements and fixed their number at 243. Since that time the population has diminished and at present does not exceed 150, and of these the women outnumber the men by far. Since that time the population has been decimated by two epidemics, Arctic dysentery and la grippe.

*Arctic Dysentery.*—During the years 1901-1902, 35 Eskimos were taken ill with fever and dysenteric discharges. During the beginning of the epidemic, which originated at Cape York, it was believed that the patients were made ill by ptomain poisoning, but the spread of the disease after change of diet soon furnished proof of the true nature of the disease. The disease pursued a very severe course and four of the Eskimos died. In the severest cases delirium was a prominent clinical feature. The tenesmus and bloody mucus pointed to the large intestine as the seat of the disease. The patients who survived became emaciated to a skeleton and did not recover their former strength for several months. It was ascertained later that the disease had its origin in Finland, traveled across Siberia, made its appearance at Cape Barrow, Alaska, finally cropped out in this remote part of the world and from here took its flight as far as Ungava Bay, an arm of Hudson Strait, where it proved very fatal to the Eskimos of that locality. The Greenland Eskimos abandoned the place when the disease had expended its force and that was the end of the epidemic. This disease traveled an enormous distance, from Finland to Ungava Bay, and crossed vast stretches of uninhabited territory, and from country to country between which there was no communication by human beings, and the only conclusion we can come to regarding its occurrence in so many isolated places

in the Arctic region is that the parasitic cause was carried by animals, undoubtedly migratory birds. Most of the water fowl in the Arctics are infested with parasites, and the most common vermin, which the Eskimos carry in their clothing and relish as a delicacy eaten raw and squirming, is a large louse which selects for its host the most numerous of all Arctic birds—the little auk. There is every reason to believe that birds can become the carriers of pathogenic germs and can convey them from place to place, either in their feathers or in discharges from the intestinal canal.

*La grippe*, in its endless clinical forms, had its origin in the cradle of the North, and has since spread from there nearly over the entire surface of the inhabited parts of the world. It seems to have no respect for climate and nationality. This disease reached the Eskimos in the north of Greenland during the winter of 1896-1897. It attacked young and old alike, but proved more fatal in adults than in children. The southern settlements suffered more than the northern, but its spread from one settlement to another was very rapid. The bacillus of la grippe in this epidemic selected the nasal passages, the pharynx and large bronchial tubes as favorite seats for localization. The exact mortality is not known, but a number of the most useful men in the different settlements succumbed to it. From eye witnesses I ascertained that in nearly all cases nasal obstruction was one of the most distressing symptoms and that in blowing the nose something like membrane was expelled. Some believed that the epidemic was diphtheria, but the disease proved much less severe in the case of children than in adults and in none of them did it extend to the larynx. Aching pains in the back and limbs and great depression, mental and physical, were invariably complained of by patients old enough to express their feelings. The disease has not reappeared since.

*Female Predominance.*—The predominance of the female over the male population, the large number of children and young widows without mates remind us of another fruitful cause of the falling off of the Eskimo population—it is the risk to life of the walrus hunter. The male walrus, and the mother walrus as long as her child needs protection, are fighters. Commander Peary says that the walrus when in a fighting mood is a more dangerous enemy than the polar bear. Walrus hunting calls for skill and strength, and among the Eskimos this work falls to the lot of the younger men. The kayak, by means of which the hunting is done, is a very frail craft. The Eskimos can not swim, hence if the walrus, with its powerful tusks, tears a big hole in the sealskin of the kayak or careens the little craft, with few exceptions it comes out victorious from the fight, and the poor hunter drowns or is killed by the infuriated foe. Few years pass without one or more lives being lost in this manner. As all property is held in common, the loss of an able-bodied man to a settlement means a great calamity, as his widow, children and other relatives whom he may have to support all become a charge on the community.

*A People Without a Physician.*—Nearly all primitive races feel the needs of some one specially qualified to dress wounds, mend broken bones, and to whom they can apply for aid when disease throws the shadows of death over them. This sense of helplessness in case of accident or disease is inborn, as well as the desire for medical aid when needed. The Polynesians have their “Kahunas,” the Indians their “medicine men,” but the Eskimos, perhaps because so few accidents occur among



them and because their climate and manner of living exempt them from so many diseases which support physicians in civilized communities, have felt no such need of medical aid. They have neither physicians nor medicines. Here is a part of the world in which disease, when it occurs, is allowed to take its own course. Even Nature has ignored medicine in the Arctics. About the only vegetable product I could find here that could make any claim to the possession of medicinal virtues was the dwarf willow, from an inch to eight inches in length; not the erect willow of our copses, but reclining humbly on the scanty soil in a begging attitude, asking protection against the merciless cold of the long polar night. Nature pursues here a prophylactic course and fills the office of a hygienist and sanitarian rather than that of a physician or druggist. She shuts the door against disease-producing germs, and incorporates in the food on which the natives subsist iodine, the most powerful and least harmful of all known antiseptics. The Eskimos, like all other primitive people, are exceedingly superstitious, and when sick and threatened by death seek help and consolation from unseen sources. They believe in a good and a bad spirit. The former is the departed soul of a father, the latter a monster human being or animal. The latter they look for and sharpen their knives with intent to kill should he be apprehended. Sorcerers (*angekoks*) are summoned, who implore the good spirit by incantations and a mournful, unceasing, monotonous chant for help. The use of remedies internally or externally is not even thought of. The art of healing has no place in the heart of the Arctic region.

#### ESKIMO SURGERY.

Surgery among the Eskimos is verily a *lucus a non lucendo*. Fortunately, injuries and surgical affections very seldom afflict them.

*Fractures.*—The occupation of the Eskimos reduces the causes of fractures and dislocations to a minimum. In case of fracture, the injured limb is wrapped up at once in fur without making any attempt at setting the broken bone. The fur dressing affords some, if not complete, immobilization of the injured limb.

*Wounds.*—Wounds heal promptly without suppuration under the only dressing in use, the skin of an animal with the bare side directed toward the wound. All of the skins in use by the Eskimos emit a very disagreeable smell and yet they are surgically clean. Suturing of the wounds is unknown to them. At North Star Bay I examined a little girl who had recently been bitten by a dog. The right upper eyelid near the internal canthus of the eye was severed by a vertical tear. The wound was cicatrized with the eyelid almost completely everted. One or two stitches in this case would not only have shortened the time of repair but would have effectually prevented this permanent and annoying deformity. Several cases of gunshot wound that I examined had evidently, judging from the size and appearance of the resulting scars, healed by primary intention. In one case the bullet passed between the fibula and tibia in an antero-posterior direction, without fracturing either of the bones. The scars were small, smooth and movable, and the muscle function was perfect.

*Frost-Bite.*—Serious frost-bite, freezing of a limb deep enough to cause gangrene, is extremely rare among the Eskimos. Their winter clothing of bear and fox skins and fur or birdskin underclothing, with double fur boots, protects them against the severest cold. When

the hands get cold the arms are withdrawn from the sleeves and crossed over the anterior surface of the chest under the coat, where they receive the benefit of the body warmth. The feet are kept warm by keeping the legs in constant motion. This restless condition of the legs becomes a habit to these people, which is kept up, although entirely unnecessary during the summer, particularly by the women. Whether sitting, standing or lying down, the women keep legs and feet busy.

In case of frost-bite the Eskimos proceed to rub the frozen part with snow and slowly thaw it out by body warmth. If it is the hand, the warmth of the chest underneath the fur coat will do it, if it is a foot, the body warmth of a willing sympathizing member of the family or neighbor is brought to bear on the congealed member. By this gradual process of restoring the suspended circulation, serious consequences are usually averted.

*Amputation by an Eskimo Woman.*—A few years ago the oldest inhabitant of the North Star Bay settlement was out on the ice hunting seal. On firing the old gun, the barrel exploded and a fragment of steel inflicted an ugly wound of the forehead over the right eye. The shock rendered him unconscious. He lay on the ice in this condition for a considerable length of time before he was discovered by one of his fellow hunters, who, with the assistance of others, conveyed him to his igloo, where he recovered consciousness. One of his feet was so badly frozen that gangrene of all the toes and a considerable part of the foot ensued. For weeks the dead toes dangled below the line of demarcation, but the tendons interfered with Nature's efforts to cast off the dead from the living tissues. The patience of the patient finally gave way and he implored his wife to amputate the toes. She consented, took a large knife and in one long sweep severed the dead toes from the granulating stump. The wound has never healed. The end of the stump is now covered with an adherent, thin, bluish scar of very low vitality but nearly the entire plantar surface of the foot is occupied by a chronic ulcer that will never heal. Since this mishap the patient has had to walk on knees and hands in going from place to place until the engineer of the *Erik* made for him a pair of rude crutches, with the aid of which he is now learning to walk erect again (Fig. 2). A gift was never more appreciated than was this one. We cleansed the filthy limb as far as the knee and disinfected the indolent, ill-looking ulcer and supplied the patient with dressing material which will last him a long time, and in the use of which his wife received adequate instruction. As the ulcer will never heal, an amputation is urgently indicated, as it is the only means which will give him permanent relief.

*Tumors.*—Extensive inquiry and a careful scrutiny of all the Eskimos that came under my personal notice confirm the statements made to me from different sources that there are no tumors of any kind to be found among the inhabitants of this part of the Arctic region. I could not even discover a wart or retention cyst of the appendages of the skin. Lipoma and fibroma, so common in the tropics, are looked for in vain here. Has the highly iodized food of these people anything to do in the prevention of tumors of all sorts, benign and malignant? It seems so to me.

*Suppurative Infection.*—The very fact that nearly all wounds and abrasions heal by primary union without either treatment or even effective mechanical protection is the strongest and most convincing proof that these people live in an atmosphere and on a soil free



from pyogenic bacteria. It is well known, on the other hand, that when the Eskimos come aboard a vessel and take part in loading or unloading cargo, the slightest scratch is liable to give rise to suppuration. It is related on reliable authority that during the Greeley expedition a member of his crew, while at Cape Sabine, suffered from a frost-bite of one of his legs resulting in gangrene which extended as far as the knee. The soft parts sloughed, leaving the bones exposed. He was never taken out of his sleeping bag saturated with his own excretions, and yet no suppuration occurred until, in this condition, he was brought to Godhavn. Here pus formed and he died in consequence of the pyogenic infection. Commander Peary remembers only one case of grave phlegmonous inflammation occurring in an Eskimo. It was in a man who accompanied him on his trip to the most northern part of Greenland in 1900. On the way the right hand and arm became enormously swollen and very painful, and he was so ill that he had to be sent back to Conger. For a long time the swelling and pain continued, when finally over the wrist-joint on the palmar surface of the forearm the swelling ruptured and a large quantity of pus escaped. Suppuration continued for a long time and a second perforation took place near the first one. Both eventually healed and the patient very slowly regained partial use of the hand. I examined this man at Etah. All of the fingers were contracted in a semi-flexed position. Two retracted scars over the wrist-joint marked the places where the deep-seated phlegmonous abscess (suppurative tendo-vaginitis) ruptured and where the scars have become permanently attached to the underlying tendons. Considering that this patient had no treatment of any kind, the functional result must be considered excellent. What dreadful suffering this man must have endured until Nature succeeded, under great difficulties, in eliminating the products of the deep-seated suppurative inflammation, can be better imagined than described. That the streptococci responsible for this fearful infection were imported requires no argument.

*Erysipeloid*.—Rosenbach's erysipeloid is an inflammation of the superficial lymphatic channels of the skin, which is seen with few exceptions only in persons engaged in the handling of fish and game, butchers, cooks, etc. Our cook on the *Erik* presented a good example of this etiologic and pathologic form of lymphangitis on the up-going trip. The sealers, of which the crew of the *Erik* was almost completely made up, informed me that a somewhat similar affection frequently occurs among the sealers when engaged in their business of killing and handling seal and is known among them as "seal finger." I expected to find erysipeloid among the Eskimos who live exclusively on game. All inquiries in this direction gave uniformly negative information and we must take it for granted that the germ of this disease, as well as the streptococcus of erysipelas, can not thrive in that climate.

#### ESKIMO MIDWIFERY.

We finally come to a part of the healing art of which the Eskimo knows something and in which he takes an active part—namely, midwifery. When a woman is in the throes of agony of labor, it is very natural that the bystanders, whoever they may be, take by suggestion instinctively, so to say, an active part in the parturient act. To lighten the curse imposed on woman for her indiscretion in the Garden of Eden is the natural dictation of a humane feeling which exists more or less in all classes of men. The Eskimo woman in

labor is made the recipient of much attention and is given the willing assistance of one or more women who have learned from experience what it means to bring a new being into the world.

"All is but lip-wisdom which wants experience."—Sydney.

Family life among the Eskimos of Greenland is an open affair. Privacy does not enter into the igloo and the tent. Within a space not larger than a good-sized family table everything is in common, including the table, which does not exist, and the common family bed, which consists of furs, the number of skins remotely indicating the size of the family. But when the Eskimo woman is about to give birth to a child, the husband, or whoever the prospective father may be, sees to it that the important act takes place in privacy. In summer he fixes a small tent for her exclusive use; in winter he builds a small ice igloo. She enters this private apartment with one or two women who have earned the title of motherhood, and on whom she places reliance during the coming ordeal. The parturient room is supplied with the necessary number of skins. When labor begins she is placed in a squatting position and one woman seated behind her with face toward her back passes her arms around her, clasps hands over her abdomen and when labor pains come on, makes firm compression. If a second woman is present, she takes firm hold of the patient's hands and does her good share of the grunting and straining simultaneously with the uterine contractions. A man gives official notice to the community of what is happening by going from tent to tent or igloo to igloo and with a stick or bone striking the roof with a rap that announces the news without making use of his tongue. When the child is born the officiating midwife takes a sharp stone and severs the cord near the umbilicus. As the cord is not tied, hemorrhage is prevented by dividing it with a dull instrument. The infant is wrapped in fur and is at once placed in the care of its mother. The only remaining function of the midwife consists in tamponing the vagina of the delivered woman, which is done with a bird skin. The woman then takes her child to the family igloo and resumes at once her usual household duties. Should the labor prove to be a protracted one, a small hole is made in the wall of the tent or ice hut, and through this opening food is thrown into the room for its inmates. The mother carries the child in the hood of the fur jacket on her back, next the skin, with its head on a level with or a little above the collar of its mother's fur coat. At night the infant takes its place in the common family bed. The Eskimo women nurse their children until they are two or more years old. When they are three months old they are given their share of blubber. Small pieces are placed in the mouth and they swallow them whole.

I saw many Eskimo infants and all of them were very pictures of health. Seven of them were on the *Roosevelt* when she sailed for the farthest North. Infantile mortality is very small notwithstanding the lack of care bestowed on the newborn. The fur clothing, the mother's body heat and the warmth of the joint family bed protects them against cold and instead of gorging their little stomachs with food prepared by the chemist they thrive on their mother's milk and the simple food Nature has provided for them. Neither children nor adults exhibit any indications of the existence of rachitis.

Judging from the robust appearance of the Eskimo



women, I have reason to believe that they are free from uterine and ovarian diseases and that gynecology would be useless in the Arctic regions.

#### ANIMAL DISEASES.

The only domestic animal the Eskimo knows and owns is the dog, or rather a mixture of dog and wolf. The dog is his beast of burden on which he must rely in traveling over ice and snow. The dog is to him vastly more than the horse is to us, it is—besides his own strength—his only motor power. Commander Peary took with him more than 200 of these beasts on this expedition, and if he succeeds in reaching the pole these faithful animals are entitled to their good share of credit. Nansen, Peary and other Arctic explorers have been seriously hampered in their work by a lack of dogs owing to the breaking out among them of a disease that nearly always proves fatal. The dog population all over Greenland suffers annually great losses from this disease. Neither Nansen nor Peary is satisfied that it is hydrophobia, although many facts and symptoms point that way. The governor of Godhavn, who has seen much of this disease, informed me that there are two distinct clinical types, acute and subacute. In the acute form the animal bites, froths at the mouth and dies within forty-eight hours; in the subacute type the dog sickens, is not vicious, does not froth at the mouth, the hind legs become paralyzed and the animal dies after an illness of about two weeks. If this disease is hydrophobia it is not the same as hydrophobia in other countries, because persons bitten by the sick animals do not contract the disease. Peary's own daughter was bitten by one of the sick dogs, but no ill results followed. The postmortems made on some of Peary's dogs revealed, as the only demonstrable pathologic condition, internal congestion of the mucous membrane of the small intestine, which induced Peary, acting on the supposition that the disease had its origin here, to administer a pint of castor oil to the next dog that sickened. This treatment proved curative, as the animal recovered. That dogs may contract the disease without being bitten by a diseased animal is a well-established fact, and the eliminative treatment would suggest itself the rational one. Loss of dog life from this cause is a source of constant anxiety to all Arctic explorers and of much concern to the natives, whose wealth is proportionate to the number of dogs they own.

Hares, rabbits and dogs are favorite hosts of the tapeworm, and the tapeworm, in turn, is the parasitic cause of echinococcus disease, which is so common in Iceland, Northern Europe and Australia. I took special pains to investigate whether or not tapeworm is present in the intestinal canal of the Eskimo dogs and the Arctic hare. I had more opportunities than I desired to examine the fecal discharges of more than 200 dogs for days on the decks of the *Erik* and *Roosevelt*. Not a trace of this parasite could be found. I killed many Arctic hares and examined their intestinal canals with the same negative result. It thus became clear to me why echinococcus cysts, so prevalent in Iceland, a neighboring island of Greenland, could not be found as one of the few diseases which afflict the Eskimo race. Pondering over this, as well as the numerous other prophylactic measures which Nature employs in protecting these simple, childlike people against disease, I became fully convinced that Providence rules here, like elsewhere, wisely and with forethought, the destinies of man.

## IMMUNITY.

### CHAPTER XXXII (CONCLUDED).

#### INFLUENZA.

Influenza occurs sporadically and in epidemics of greater or less proportions. Its extreme contagiousness is shown by the striking rapidity with which it spread over the whole civilized world in the epidemic of 1889 and 1890, leaving behind it a trail of lesser epidemics which have prevailed up to the present time.

During the epidemic just cited a number of organisms were erroneously described as the cause of the disease. In 1892, however, Pfeiffer discovered a minute bacillus which he found constantly and in large numbers in the sputum of those suffering from influenza, whereas it was absent from other maladies. The observations of Pfeiffer have been confirmed by a large number of investigators, and the organism, *Bacillus influenzae*, is now generally accepted as the cause of the disease. It is one of the smallest of bacteria (0.2 or 0.3 by 0.5 microns), is non-motile and forms no spores. A medium containing blood or hemoglobin is essential for its artificial cultivation, and even under the best conditions it grows somewhat meagerly and slowly. A number of bloods, but particularly those of man and the dove, favor its growth. It is a strong aerobe. The organism is best stained by a dilute solution of carbol fuchsin (1 to 10), and it shows a property called polar staining, i. e., the ends stain more deeply than the central portion.

When the staphylococcus and some other organisms are grown in mixed culture with the influenza bacillus, the latter is stimulated to a more vigorous growth (symbiosis). According to Jacobsohn, killed cultures of the streptococcus greatly increase the virulence of the influenza bacillus when the mixture is injected into animals.

Pfeiffer designates as pseudo-influenza bacilli a number of influenza-like organisms which have been found in man and animals. They have the morphology of the influenza bacillus, are a little larger, and also prefer a medium which contains hemoglobin, but since some of them occur in animals which are known not to be susceptible to influenza, it is concluded that they can not be identical with the influenza bacillus. The influenza-like bacillus which Joehmann and Krause consider as the cause of whooping-cough, may be mentioned in this connection.

The resistance of the bacillus to desiccation, sunlight and unfavorable temperatures is very low. It dies in from twenty-four to thirty-six hours at room temperature. when contained in sputum, and lives for about thirty-two hours in hydrant water (Pfeiffer). It is not highly virulent for experiment animals, although a condition said to resemble influenza has been produced in monkeys by placing pure cultures on the nasal mucous membrane. Fatal infections may be produced by intravenous inoculation of the bacillus into monkeys and rabbits, and killed cultures produce a fatal intoxication in rabbits. When virulent cultures are injected into the peritoneal cavity of guinea-pigs in sufficient quantity, the bacilli proliferate, and peritonitis ending fatally is produced. Since the bacilli seem not to proliferate when fatal quantities are injected intravenously into rabbits, and since fatal intoxication, without the occurrence of bacteremia, may take place when a tracheal infection is induced in the ape (Pfeiffer), it is concluded that the toxic phenomena of influenza are due to the absorption of bacterial toxins from the mucous surfaces. A soluble toxin has not been obtained in culture media. The organism is a facultative pus producer.

So far as is known the influenza bacillus is excreted only with the secretions of infected surfaces, i. e., from the upper respiratory passages, conjunctiva, ear, etc. The belief, commonly held, that the influenza bacillus does not enter the circulation is based on the fact that cultures have not been ob-



tained from the blood (Beck). That this may be an erroneous belief is suggested by a case of fatal influenza peritonitis reported by Hill and Fisch, in which the latter cultivated the organism in large quantities from the spleen. When the bacilli reach the blood it is probable that they are killed quickly. That metastatic infection is possible, however, either by way of the lymph or blood channels, is shown by the occurrence of influenza meningitis, and, rarely, of influenza peritonitis. It is probable that the ordinary nervous phenomena of the disease are due to intoxication rather than to actual infection of the nervous structures. As to whether the symptoms of so-called intestinal influenza are due to an invasion of the intestines by the bacilli or to a specialized action of circulating toxin seems not to have been definitely settled. There certainly is abundant opportunity for infection of the intestines in cases of bronchial influenza. In the bronchitis of influenza the organisms are found in large numbers in the smaller bronchial tubes, both free and within leucocytes; hence, in searching for the bacilli clinically it should be certain that the sputum examined represents the bronchial exudate. In influenza pneumonia, which usually is of the lobular type, the bacilli, mixed with pus cells and contained in them are found in large numbers in the alveoli. Pure cultures of the bacillus have been obtained from cases of conjunctivitis, and they occur not infrequently in middle ear complications which develop during the course of the disease. Influenza conjunctivitis sometimes occurs in epidemic form, particularly in institutions and schools.

Pneumonic foci which develop during influenza frequently show the pneumococcus, and sometimes the streptococcus or the bacillus of Friedlander in addition to the influenza bacillus, and similar mixed infections occur in pleurisy and in middle-ear disease. Influenza may be superimposed on other infections; individuals suffering from pulmonary tuberculosis are particularly susceptible to influenza and in them the prognosis is unfavorable.

The disease is transmitted directly from man to man and, chiefly, it is supposed, by means of infected droplets of sputum which are expelled in coughing and sneezing. Obviously kissing affords opportunity for infection. Infection by indirect contact is of less importance because of the rapid death of the bacillus after it leaves the body, but living germs may well be disseminated by soiled handkerchiefs or other contaminated linen. Dust infection possibly is of minor consequence. Chronic influenza in which the bacilli may persist in the bronchi for weeks, and cause recurrent acute attacks, is of importance for the maintenance of an epidemic. Particularly in tuberculous cavities the bacilli may flourish for long periods.

Primary infection takes place in the upper respiratory passages, and the disease readily extends from one part to another as from the nose to the pulmonary tissue. Infection of the ear usually is a complication of pharyngeal or pulmonary infection. Occasionally an influenza conjunctivitis is found without other localization of the infection. "Primary" infection of other organs, as the brain and peritoneum, are metastatic, although the original focus or atrium may not be observed.

Little or nothing can be done in the way of general prophylaxis. Washing of the nose and mouth with antiseptics during an epidemic may reasonably be practiced, but with what success is uncertain. The aged and those of low vitality should avoid exposure to infection, for in them the severer complications, such as pneumonia, are more likely to occur. When influenza conjunctivitis appears epidemically in schools the latter should be closed or the infected children excluded.

Although little or nothing is known concerning the possibility of a natural immunity in man, experience teaches that he is on the whole very susceptible. The belief expressed by some that nursing children are less susceptible than older people seems to have some foundation in experience, although it is well known that they are not entirely immune. Influenza is sometimes cited as an

infection in which one attack creates a predisposition for a second, but the truth of this is doubted by many who have had extensive experience with the disease. Wutzdorff, in a study of the epidemic which prevailed in Germany during 1891-92, finds in the small number of cases, the irregularity of their distribution, and comparative exemption of rather large districts, reasons for believing that one attack confers a degree of acquired immunity; that is to say, the population had been so thoroughly infected (*durchgeseucht*) during the preceding year or two that comparatively few remained who were susceptible, although the disease itself appeared to be more malignant than in the previous year (cited from Beck). However, the occurrence of second attacks shortly after the first, and the occurrence of repeated infections in some individuals, are sufficiently well known, hence it seems fairly clear that immunity which may result from infection is of short duration. The aged, those of low vitality, and those with pulmonary tuberculosis, have low resistance to infection.

Although Delius and Kolle were able to produce a slight increase in the resistance of guinea-pigs by the intraperitoneal injection of cultures, nothing like a well-marked immunity was obtained; nor did the serum of immune animals or convalescent man show any increased protective power for other animals. Slatinéano, however, obtained serum of some protective power for guinea-pigs, by the immunization of rabbits and guinea-pigs, but it had no curative effect. The results of Cantani were similar, and both observers noted the development of bactericidal power, as determined by the Pfeiffer reaction, and of agglutinins. At the present time there seems little to hope from vaccination.

There is said to be some increase in agglutinins in man as a consequence of infection. The agglutinating power of the serum of an immunized animal may be as high as 1 to 500 (Cantani).

#### SOFT CHANCER.

The independence of soft chancre from syphilis, and its infectiousness by inoculation with the purulent secretions of the ulcers, were established long ago. Rollet found that filtered pus lost its infectiousness.

A large number of observers had found bacteria of one kind or another in the pus and in stained sections of the walls of the ulcers, and probably some of them (e. g., Unna), had seen the bacillus which Ducrey described (1889) and later cultivated, and which is now proved to be the cause of the disease. The bacillus is very small (0.4x1.5 microns), is non-motile and shows polar staining. It resembles the plague bacillus in form, but is somewhat smaller, and does not show the extensive involution forms of the latter. In the ulcer it lies singly, in small groups, or more characteristically in the form of bands, made up of two or more parallel chains, which penetrate the wall of the ulcer. Large numbers are often found in the polymorphonuclear leucocytes of the pus, particularly in an early stage of the lesion (Kroefting). Great difficulty was encountered in cultivating the bacillus and Ducrey's first success was obtained with a medium which contained human skin. It has since been cultivated on agar which contains the blood or serum of man, rabbit or dog. Himmel attempted to cultivate it in the fresh defibrinated blood of the guinea-pig, but was unsuccessful because the bacilli were phagocytized by the leucocytes (Babes).

An ulcer resembling that of soft chancre may be produced in the ape, and also in the cat, by the inoculation of pure cultures. Didey reinoculated man from the ulcers of the cat. When living cultures are injected into the guinea-pig (peritoneal cavity, subcutaneous tissue, dura mater), the bacilli are quickly taken up by leucocytes and digested (Himmel). Himmel reports having so decreased the resistance of guinea-pigs by peritoneal injections of lactic acid that they became susceptible to infection. After two or three passages the culture became so virulent that fatal bacteriemia was caused without previously lowering the resistance of the animal.

In man the infection is transmitted to the inguinal lymph glands, but never becomes general.



## CHAPTER XXXIII.

## PNEUMOCOCCUS INFECTIONS.

## PNEUMONIA.

Although there are several types of pneumonia or pulmonitis, no one organism is the exclusive cause of any one type, except perhaps the viruses of syphilis and tuberculosis, and

any organism which can cause pneumonia can also set up inflammations in other organs. The following organisms are known to cause acute pulmonitis: *Diplococcus pneumoniae*, *Streptococcus pyogenes*, *Staphylococcus pyogenes*, bacillus of Friedlander (*B. pneumoniae*), *B. influenzae*, *B. pestis*, *B. diphtheriae*, *B. typhosus*, *B. coli communis*, and *Micrococcus catarrhalis*. The organisms of tuberculosis, actinomycosis, the virus of syphilis and of some other infections cause chronic inflammations of the lungs. Some of these organisms have already been considered and others will be briefly discussed later, in their relation to pneumonia, without, however, entering into details as to the various types of the disease.

The *Diplococcus pneumoniae* is the commonest cause of lobar pneumonia, and not infrequently produces lobular pneumonia, and has been found as the only organism in acute interstitial pneumonia (Weichselbaum). Friedlander (1882) found that encapsulated cocci were present constantly in the exudate of pneumonia. Such cocci in all probability represented the organism which at present is known as the diplococcus of pneumonia, yet the cultures which he obtained somewhat later showed the characteristics of the organism now known as the bacillus of Friedlander. Fraenkel in 1884 obtained the first named coccus in pure culture, and his investigations, together with those of Weichselbaum and many others, eventually established the independence of the two organisms, and showed that the pneumococcus is the most frequent cause of pneumonia, but that other organisms, including the bacillus of Friedlander, may occasionally produce the disease.

The typical pneumococcus is slightly elongated, and both in the tissues and in culture media it grows in pairs. Typically, also, the pair possesses a capsule which is present constantly in the tissues and may be obtained on certain culture media, as milk and serum. It is non-motile, non-flagellated, forms no spores and stains by Gram's method.

Rather scant growth occurs on the ordinary culture media in the form of small colonies which resemble those of the streptococcus, and unless special media are used it usually can not be carried through many generations. When grown in sputum, or on a medium which contains the blood or serum of man or some other favorable animal, it may be preserved for many months in a fairly high state of virulence. By growth at 39° C. virulence is lost rapidly. Strains which are atypical in one of several ways are encountered not infrequently. Such strains may show a low virulence, may grow well at ordinary temperatures (the typical organism not doing so), may produce long chains in liquid media, or may grow without a capsule.

Recently the danger of confusing the pneumococcus with the streptococcus has received renewed attention, and newer methods of differentiation render it extremely probable that such confusion has occurred in the past. An important differential method is that of growing these organisms on agar plates which contain blood (Schottmüller); the streptococcus produces a clear zone of hemolyzed corpuscles about its colonies, whereas the colonies of the pneumococcus present a greenish color and produce no hemolysis. In using this test Ruediger found a surprising number of pneumococci in normal throats, whereas previous work had shown them to be much less common than streptococci.

In spite of the poor viability of the organism on ordinary culture media, it is fairly resistant to desiccation and sunlight, especially when imbedded in sputum. It is possible that the sputum forms a protective coating about the organism and that the well-formed capsule which it possesses as a parasite, increases its resistance. Like other bacteria, it resists diffuse sunlight better than direct, and in the former may live for as long as fifty-

five days in a dried state (Bordoni-Uffreduzzi, cited by Weichselbaum). It has very little resistance to heat, being killed by a temperature of 52° C. for ten minutes. Virulence is lost rather quickly in ordinary culture media, but is retained longer when grown in sputum or media which contains serum or ascitic fluid.

No soluble toxin characteristic for the organism has been obtained, although more or less poisonous substances, some of them of a chemical nature have been described. Presumably the toxic properties depend on the presence of an endotoxin. The pneumotoxin of F. and G. Klemperer was prepared by precipitation with alcohol. The pneumococcus is a pyogenic organism and causes exudates which are rich in fibrin. Occasionally serous rather than purulent exudates are produced. Its toxic action is directed toward various organs, and it is doubtful if any of the tissues of the body are non-susceptible. Some strains are supposed to be more neurotoxic than others.

The susceptibility of animals varies greatly. Rabbits and mice are extremely susceptible and are used as test animals for the identification of the organism. Other laboratory animals have greater resistance, and the pigeon and chicken are almost absolutely immune. In susceptible animals a rapidly fatal coccemia or more or less extensive local lesions are produced, depending on the virulence of the culture, the seat of inoculation and the susceptibility of the animal. In rabbits lobar pneumonia has been produced by inoculation into the pleura, trachea, blood stream or subcutaneous tissue.

The pneumococcus is present in the nose, mouth and pharynx of a large percentage of individuals. It is found frequently in the conjunctiva and occasionally in the deeper air passages. That it may reach the stomach and intestines with the sputum is apparent, and it has been found there as the cause of diphtheritic enteritis, a condition which may be followed by pneumococcus peritonitis or general infection.

In the production of lobar pneumonia it is believed that the organisms are carried into the lungs by inhalation in most instances. Suspended in droplets of saliva or mucus, or adherent to foreign particles, they may be carried fairly deeply into the bronchial tubes. That they ever reach the alveoli by this means alone is questioned by many. Two factors would seem to prevent their being carried to the alveoli by currents of inspired air: First, foreign particles or infected droplets are likely to strike and adhere to the walls of the respiratory passages before they have traversed a great length, and from this situation may again be carried out by the action of the ciliated epithelium or coughing; the tortuous passages of the nose and its hairs and moist surfaces undoubtedly arrest many micro-organisms. Second, the velocity of the inspired air is greatly reduced or is nil by the time the particles might have reached the alveoli, a condition which renders their arrest all the more probable. Nevertheless, pneumococci do reach the alveoli, and by some it is supposed that even in health they are carried there more or less constantly and are as constantly destroyed. They have occasionally been found in the parenchymatous tissue of the lungs of individuals who have died of other than pneumococcal infections or of non-infectious diseases. In order to show that micro-organisms may be carried into the parenchyma by inspiration Nenninger allowed animals to inhale a spray containing *Micrococcus prodigiosus*, and killing the animals after one-half hour was able to cultivate the coccus from the base of the lungs where only alveoli and the finest bronchial branches were present (cited by Weichselbaum).

Various other agencies have been suggested by which the cocci may be carried to the parenchymatous tissue. For example, during the forced respiratory efforts which accompany coughing they may be carried from the bronchial branches into the alveoli. Or the organisms having reached the bronchi, in some way may be carried through the walls of the latter, perhaps by the leucocytes, and reach the alveoli directly through the lymph chan-

Lymphogenous and Hematogenous Infection.



nels or after having caused infection in the peribronchial lymph glands. Others express the opinion that pneumonia follows blood infection in many or most instances, i. e., that the infection is hematogenous, the cocci having reached the blood in some obscure manner. That the infection may be hematogenous is shown by the occasional occurrence of pneumonia secondary to pneumococcus infection in other parts of the body. These theories are sufficiently reasonable, but, unfortunately, little positive proof of their correctness is at hand.

Knowing the fairly constant presence of pneumococci in the upper respiratory passages in the normal individual, it seems certain that some unusual condition must arise to precipitate infection of the pulmonary tissue. Concerning the exact nature of these conditions or changes, we have at present little but theories. Manifestly they may rest either with the microbe or the individual, or with both. The pneumococci on the mucous surfaces for some unknown reason may undergo an increase in virulence preceding infection, or more virulent organisms from the outer world, or from pneumonic patients, may be inhaled. The latter condition is an important one in relation to the contagiousness of pneumonia and the development of epidemics. Park and Williams found a larger percentage of virulent organisms in the sputum of pneumonics than in that of normal persons. It is possible that the pneumococcus in being passed from one patient to another undergoes an increase in virulence, similar to the increase which may be obtained by passing bacteria through animals.

On the other hand, it is very probable that essential changes take place in the individual, changes which in some may cause the lowered resistance which is so often referred to as a condition for infection. Exposure to cold has long been known as an important predisposing factor, although we continue in ignorance of its precise effects. Experimentally it has been shown that animals are more susceptible to pneumococcus infection after artificial reduction of the body temperature. It is possible that a lowered body temperature may decrease antibacterial activities; that the activity of the bactericidal ferments of the plasma or of the leucocytes may be suppressed, or phagocytosis may be inhibited so that organisms which reach the bronchi and peribronchial lymphatic structures are allowed to proliferate. It is probable that in health the leucocytes continuously pass through the bronchial and alveolar walls where they may englobe foreign particles (coal dust) or bacteria and leucocytes are present on the mucous membranes of the mouth cavity. Following exposure and the reduction of the body temperature, or following the prolonged inspiration of cold air; the activity of the phagocytes may be inhibited so that cocci which reach these surfaces are not ingested and continue to proliferate, or the same conditions may decrease the exudation of the leucocytes from the vessels. It is possible also that the activity of the ciliated epithelium is reduced similarly so that the cocci are not so readily carried to the exterior.

Extreme exposure is not always followed by pneumonia, however, and not all cases of pneumonia are preceded by exposure; many other conditions may predispose to infection, as a lowered resistance due to alcoholism, other infections or to non-infectious processes. That certain local conditions may favor infection is indicated by the frequency with which individuals with chronic tuberculosis of the lungs die of pneumococcus pneumonia, and the development of the disease in areas of hypostatic congestion. Age is of influence. "To the sixth year the predisposition to pneumonia is marked; it diminishes to the fifteenth year, but then for each subsequent decade it increases" (Osler). The cause of these variations is not known, although the rise in later years may be associated with increased exposure.

The conditions which predispose to infection are now the subject of active study in many laboratories, and the commission which the New York Department of Health has established for the study of acute respiratory diseases has already made important observations as to the prevalence and virulence of pneumococci.

Many observers have found pneumococci in the blood in a large percentage of the cases, and recent work by Rosenow indicates that the blood is probably infected in all cases at some stage of the disease. This being the case, the frequency with which pneumococcus infections occur in other organs as complications of the disease is readily understood. Pleuritis is present almost constantly, pericarditis frequently, and the peritoneal cavity is invaded not infrequently by way of the diaphragm, with general peritonitis as the occasional result. Endocarditis, meningitis and arthritis are frequent complications. Conjunctivitis, otitis media, cutaneous or subcutaneous infections, intramuscular abscesses and osteomyelitis may develop, and the kidneys and liver usually show acute degenerations.

Diplococcus pneumonia occurs as a complication in typhoid, diphtheria, tuberculosis, influenza, erysipelas and other infections, the organism of the primary infection also being found in the lungs. Not infrequently staphylococci or streptococci, or the bacillus of Friedlander, are found together with the pneumococcus, the latter being the predominating organism.

Prophylactic measures are largely of an individual character and in the main they are suggested by what has been said.

One should not come in contact unnecessarily with those suffering from pneumonia. The susceptible should be guarded against exposure; in hospitals pneumonia should be considered as a contagious disease, the cases isolated as such, and the sputum disinfected; expectoration in public places should be limited. To what extent the dust-laden atmosphere which prevails in most of our large cities is a factor in causing pneumonia is unknown. Vaccination is not yet an established procedure.

It is probable that the susceptibility of man varies greatly. Under equal conditions of exposure not all contract pneumonia, and an individual who eventually contracts the disease may have undergone many similar exposures previously. Klemperer introduced a culture of the pneumococcus which was virulent for rabbits under his skin without suffering more than temporary disturbance.

Recovery seems to indicate an acquired immunity or resistance which is by no means permanent, and often is of very short duration. One may have as many as eight or ten attacks of pneumonia, the intervals between attacks being from three to five years on the average (Griswolle). What the recovery or acquired resistance depends on is unknown. The marked leucocytosis of pneumonia, and the known phagocytic power of the leucocytes for the diplococcus, suggest strongly the importance of the leucocytes for recovery. The serums of convalescents and of immune animals show no increased bactericidal power for the organism, nor are they strikingly antitoxic.

Beginning with Fraenkel (1886), many have shown the possibility of increasing the resistance of susceptible animals to the pneumococcus by injecting first dead or avirulent and then virulent cultures; in this way the subjects can be made to withstand many multiples of the minimum fatal dose.

Culture filtrates and precipitates (the pneumotoxin of F. and G. Klemperer) have been used for similar purposes. The serum of immune animals, and in some instances of convalescents, has been found to have a protective effect when injected into other animals, and by some a curative effect is claimed when the serum is given shortly after infection. Mennes made the interesting observation that "normal leucocytes only become phagocytic toward pneumococci when they are lying in the serum of an animal immunized against this bacterium" (Muir and Ritchie). This action may have been due to the effect of the opsonins which Wright and Douglass have shown to be essential for phagocytosis of the pneumococci. According to Neufeld and Rimpau, antipneumococcus serum is not bactericidal, but through the influence of bacteriotropic substances (opsonins ?) which it contains renders the cocci more susceptible to phagocytosis.<sup>1</sup> Likewise, Park

1. This bacteriotropic substance, according to Neufeld, differs from the opsonin of Wright in that it is not destroyed by low degrees of heat.



and Williams found antipneumococcus serum from the sheep to be protective for mice and to stimulate phagocytosis. The correspondence between bacteriotropic action and protective power was variable, however, so that it did not appear certain that the protective power of the serum was due entirely to its influence on phagocytosis. We are, of course, not sure that events in the animal body correspond with those in the test glass.

Some of the serums which have been prepared have been used therapeutically in man. The results have not been sufficiently satisfactory to put them on a good basis, although some favorable reports have been given. The serum of pneumonic patients shows an increased agglutinating power for the pneumococcus. The maximum is reached at or near the time of crisis, but rarely has a higher value than 1 to 50 to 1 to 60 (Neufeld, Rosenow). It disappears quickly after recovery. In immunized animals the agglutinating power may be pushed to much higher limits. Not all strains yield agglutinins equally, and not all are agglutinated equally by the same serum. According to Collins, pneumococci fall into different groups, depending on their agglutinating properties; the same author determined the presence of group agglutinins in an immune serum. Neufeld states that avirulent strains were not agglutinated by the serum of pneumonic patients.

#### OTHER INFECTIONS BY THE PNEUMOCOCCUS.

Complicating infections by the pneumococcus during the course of pneumonia were mentioned above. They may occur by way of the lymph channels, as in pleuritis, pericarditis and peritonitis (through the diaphragm), by contiguous extension, as in infection of the bronchi, nose and, perhaps, the middle ear, or as metastatic infections following the invasion of the blood stream by the organisms. It is undoubtedly in the last named manner that meningitis, endocarditis, arthritis, muscular and subcutaneous abscesses arise.

Other infections by the pneumococcus occur independent of the existence of pneumonia. Such conditions are alveolar abscesses, conjunctivitis, dacryocystitis, serpent ulcer of the cornea, inflammation of the middle ear, meningitis, enteritis, rarely peritonitis, and pneumococcus septicemia which may be complicated by infection in various organs. The eye is exposed to infection from without and the ear from the pharynx. The meninges may be infected by way of the middle ear or the nose, or the organisms may gain entrance through the circulation from a primary focus in another organ, perhaps an undiscovered focus. Infection of the peritoneum may follow an intestinal infection; a pure pneumococcus infection of the peritoneum in the absence of pneumonia is extremely rare. Pneumococcus infections of the eye, ear, intestines and peritoneum are likely to be accompanied by other organisms.

Pneumococcus conjunctivitis occurs in epidemic form and the same precautions should be taken to limit it as for the limitation of influenza conjunctivitis.

Serpent ulcer of the eye, a progressive phagedenic process in the cornea, has the pneumococcus as its essential cause, although other organisms may be present. Roemer treats the condition with an antipneumococcus serum and claims that he is able to arrest the process if the treatment is begun sufficiently early. The serum is injected beneath the conjunctiva.

### Clinical Reports

#### A CASE OF ACCIDENTAL ESERIN (PHYSTIGMIN) POISONING WITH RECOVERY.

B. F. STEVENS, M.D.  
EL PASO, TEXAS.

*Patient.*—A woman, aged 28, because of a mistake in telephoning a prescription, received a dose of two grains of eserine sulphate hypodermically, instead of a fiftieth of a grain as was intended.

*History.*—I had operated on this patient four hours pre-

viously for a double pyosalpinx, and gave the eserine to aid in passing flatus. An hour before receiving the eserine she had been given morphine,  $\frac{1}{8}$  grain, with atropine,  $\frac{1}{200}$  grain, for pain. Within two or three minutes after receiving the eserine, she turned purple and her bowels moved profusely and involuntarily. Respirations became shallow, the trachea, pharynx and larynx filled with mucus, and the pulse became imperceptible, even over the carotids. She remained unconscious for about twelve hours.

*Treatment.*—The following drugs were given hypodermically in divided doses: Atropine,  $\frac{1}{10}$  grain; nitroglycerin,  $\frac{1}{30}$  grain; strychnia,  $\frac{1}{10}$  grain; brandy, a dram, and aromatic sulphuric acid, a dram; 1,200 c.c. of normal salt solution was also given subcutaneously around the breasts. She was surrounded with hot water bottles and given plenty of fresh air, the tongue being drawn forward with ordinary vulsellum forceps. She was catheterized every half-hour.

Recovery was probably due to the fact that she had received a small dose of atropine and morphine a short time before the eserine was given. Potter says that immense doses of eserine may be given without harmful effect if preceded by even minute doses of atropine, which is the physiologic antidote. The salt solution, no doubt, was of great benefit, because eserine is eliminated almost entirely through the urine. A mild enteritis followed, but this persisted for only a short time.

#### OBSTRUCTIVE JAUNDICE CAUSED BY A ROUND WORM IN THE COMMON BILE DUCT.

J. G. HILLEARY, M.D.  
DUBOIS, PA.

The patient was a bright, well-developed boy, aged 10, who had never been confined to bed on account of sickness in his life. I was asked to see him on the eighth day of his illness. Besides being intensely jaundiced, his trunk and limbs were covered with large patches of urticaria, which caused him great annoyance from the burning and itching. Nausea and vomiting, with loss of appetite were present throughout the attack. The tongue was coated and the mouth dry. Bowels were constipated; stools clay colored, pasty and fetid. Temperature was normal; pulse 60. The lungs and heart were normal; the abdomen was normal except for pain and tenderness over the region of the gall bladder.

Having lately read an abstract of an article in the October number of the American Journal of the Medical Sciences, by W. Epstein, on the diagnostic significance of strangulation marks on round worms, and with the cause of the obstructive jaundice in this child not clear, coupled with a history of the passage of two round worms a few months previously, I made a probable diagnosis of a round worm in the common duct. Calomel and santonin were given, and in ten hours the worm was passed with complete relief of the symptoms. The worm showed a distinct strangulation mark two inches below the head.

As such markings are never found normally, I think it is safe to say the worm was the cause of all the trouble in this case.

#### SAFETY PIN SAFELY PASSED BY A CHILD OF ELEVEN MONTHS.

L. W. LITTIG, M.D.  
IOWA CITY.

On October 19, Dr. W. D. Phillips, Victor, Iowa, consulted me regarding an 11-months-old baby who had accidentally swallowed an open safety pin, one and one-eighth inches in length. I was inclined to locate the pin with the x-ray and to at once remove, if seen in the stomach, but it was decided to wait for trouble and then to operate without delay. On October 24, a few hours less than five days after the pin had been swallowed, it was passed by the child. No inconvenience at all was suffered and no special treatment was given. The parents lived in the country, and did not bring the child for x-ray examination; hence, there was no opportunity to observe the progress of the pin through the intestine.



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## THE DIAGNOSIS AND PROGNOSIS OF PARALYSIS AGITANS.

The art of diagnosis requires a knowledge not only of the main types of a given disease, but also of its atypical forms, the so-called *formes frustes* of French writers. In some diseases easy of recognition in their typical form, atypical forms are common and difficult of recognition, and of no disease is this more true than of paralysis agitans. According to Erb's observations, paralysis agitans presents itself in an atypical form in about 20 per cent. of all cases, and Oppenheim believes that this estimate is too low rather than too high. Under such circumstances, a knowledge of the atypical forms of this disease is a necessity, as the condition is not uncommon.

Oppenheim<sup>1</sup> has recently expressed his views regarding this disease in a masterly paper in which he pays especial attention to the diagnosis of masked cases. Paralysis agitans without tremor, first described by Charcot in 1875, is stated to be quite common. In some instances the tremor is latent, and may be elicited by active movements, or by plunging the limb into cold water. In connection with tremor Oppenheim describes a procedure which produces what he calls false ankle clonus. The foot is strongly flexed dorsally and held in this position for some time; on release a rhythmical tremor may result, and is quite characteristic of paralysis agitans. In typical cases without tremor the diagnosis usually may be made on the general attitude of the patient, the muscular stiffness and the propulsion and retropulsion. The cases most difficult of diagnosis are those in which the disease is just beginning, and in which only one side or one limb is involved. Oppenheim states as a general proposition that a slowly developing stiffness and unwieldiness in the limbs of one side occurring in an old individual is generally paralysis agitans. The slowing of the movements in these cases and the stiffness usually begin first at the distal parts of the extremities, so that special attention must be devoted to the finger and toe signs if early diagnosis is to be made. In the fingers difficulty in flexing or extending the fingers one after another may be noted early, or abduction and adduction may be difficult. Changes in the toes are more difficult to detect, as the normal mobility of these structures varies a great deal. In unilateral cases, however, Frank has described a valuable

diagnostic sign. This consists in the fact that any attempt to move the toes on the affected side results in movements in the toes of the non-affected side; the reverse is not the case. In some cases changes in the handwriting are of value in connection with other tests. Oppenheim lays stress on the tendency of these patients to write slowly and to construct much smaller letters than they formerly did.

Various early or premonitory signs are mentioned which may render diagnosis easier in doubtful cases. Rheumatoid pains, gastric disturbances, salivation and hyperidrosis are mentioned as not infrequently preceding paralysis agitans or accompanying the early stages. Bladder and rectal disturbances are rarely seen. Besides the ordinary difficulty of gait, the trouble in starting and stopping, an exaggeration of the former is occasionally seen. In some instances, the patient seems totally unable for some time to start walking, even when he desires to pass merely from one room to another. He stands as if rooted to the spot, and appears quite helpless. Oppenheim thinks that in these instances there is a strong psychic element at work.

So far as the prognosis of this disease is concerned, Oppenheim takes a much more optimistic view than formerly. He still states that he has never seen cure result in this condition, but he also states that under proper conditions he has seen the progress of the disease apparently delayed for a considerable period of time, and he has seen severe cases transformed into mild ones. The prognosis, of course, is most favorable in those cases in which the condition is recognized early, and the recognition of the atypical forms is necessary for this.

## FOOTBALL AND ITS DANGERS.

Football is not as bad as the Fourth of July. In the first place it costs only ten to fifteen per cent. as many lives and fewer eyes; furthermore, the fun lasts three months instead of two or three days, so we get more per boy. Yet in spite of this evident innocuity, the popular protest against the game, as played at present, seems to be stronger and more general than ever before. Not that the game is waning in popularity, for as usual the attendance at the big championship games is limited to the number of people the grounds will hold, plus as many more as can get in. We hear a great deal about lessening the danger of football by making the game more open, and substituting end runs, trick plays and punting, for the steady hammering down the field a yard or two at a time, with a unanimous pile-up at each down. Interesting as the open game is to the spectator, the idea that the only real football is the line-bucking, bone-breaking game seems to have a firm hold. This was well illustrated by a recent championship game between two of the great universities of the Middle West. One coach had developed the open game to an unusual extent, not with any idea of "elevating the

1. Deutsche Med. Woch., 1905, vol. xxxi, p. 1705.



stage," but simply because his team was best adapted to that style of game. The team met another which limited its efforts to steady line plunging, and the open game won. The ball was on the opponent's side of the field the majority of the time, the line-plunging team made fewer yards than were made by the open game of the winner, and the team playing the open game did not have to take out a man for injuries during the entire game; and yet, almost unanimously the press and the public insisted that the defeated team played the better game, simply because it had gained more ground by line bucks than had its conqueror. The public verdict seems to be that five yards made by line bucking is worth more than ten yards made through open plays. While the public attitude is such it seems improbable that any reformation in football is near at hand.

From the standpoint of the educator, one of the greatest dangers of football is the degree to which it absorbs the student's interest. For the first two months of every school year the entire mass of students is concerned chiefly with the football prospects of the college team. As for the athlete himself—even if he is a *bona fide* student and not simply hired for his football ability—he is being crammed full of signals, new plays and "dope" of all varieties until there is little time or cephalic capacity left for anything else. In those colleges where a fair class-room standing is required by an unappreciative faculty, the football manager finds it necessary to provide tutors for his team in order to keep them on the eligible list. The whole student body is in such a state of excitement over football, to which the daily papers add in every possible way, that the many other interests that go to make up a normal college life are neglected hopelessly in the very beginning of the year's course.

Little good can be claimed for football on the grounds of physical training, either. The men on the teams are the very ones whom Nature has endowed superabundantly with physical capacity, but on them the physical director bends most of his energies, while the average student is left to get his physical development by yelling from the bleachers. The Rugby game, as Americanized, can never be a popular game in which all the members of a school can participate. To withstand the violence of hard tackling, and the crush of line plays, one must be in the best of training, and after a hard game the novice, if he lasts through, finds himself sore and weary for many days.

What is needed is a game that can be played by the majority of the students, without going through a prolonged course of training and preparation, and which is suitable for the coolness of the autumn and early winter days. Lacrosse has often been suggested as a substitute for football, and as a game that is both interesting to the spectator and full of good wholesome exercise it can not be surpassed. It might well form a part of our college sports and in a few colleges it does so, but there seems to be one obstacle to its general adop-

tion—it requires a high degree of dexterity on the part of the player not soon acquired by a man not trained in athletics. Like baseball, it requires for satisfactory playing that it be taken up early in life and followed continuously, but still a certain degree of success and much pleasure may be obtained by the average student taking up the game for the first time after entering college.

There seems a much better prospect for the Association football game, and we welcome the effort that is now being made in several colleges to introduce it into their lists of sports. The use of the hands being eliminated, there are none of the dangers of tackling, and there are no mass plays. The ball is in sight always and in constant motion, features that appeal to the onlooker. Being a game that the most awkward novice can play after a fashion, and that still permits of high development of skill and of team play, it should offer opportunities to all classes of students. Such a game should be played within the circle of the individual college, between classes, departments, fraternities, dormitories and the other innumerable divisions of the student body. Without the strife incident to intercollegiate athletics there would be no more heard of professional coaches at large salaries, of professional players and other unacademic accusations. The game would then do far more for the physical welfare of the students as a whole, and there would be much less bitter feeling between sister institutions.

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#### NEW YORK HEALTH BOARD FROM A GERMAN VIEWPOINT.

We have grown so accustomed to criticism from at home and abroad on our municipal government, we have come so to expect unfavorable comparisons between ourselves and other countries in this respect that we experience a shock of pleasurable surprise when we hear that a municipal department in one of our great cities is held up to general admiration. Still more gratifying is it to hear that the praise comes from Germany, from Berlin itself.

At a meeting of the Berliner Medizinische Gesellschaft,<sup>1</sup> Professor Wassermann, in a paper on "Municipal Hygiene," spoke of the Department of Health of Greater New York as a model to German cities, especially in the direction of public control of infectious diseases. Professor Wassermann pointed out the undeniable fact that the general practitioner has neither time nor authority sufficient to enable him to control the infectious diseases especially among poor, ignorant people. It is this function which the Department of Health of Greater New York has assumed without thereby encroaching on the rights of the physician. The two diseases which Wassermann chose to illustrate New York's methods are diphtheria and tuberculosis, and incidentally his comments throw light on the methods in use in German cities, which, apparently, are far behind New York and a few other cities in such matters. Although

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1. Cbl. f. Bakt., Ref. Aug. 28, 1905, p. 45.



in many respects the methods in use in New York are common to our large cities, yet in completeness of detail they are unequalled, so far as we are aware, anywhere, and it may be worth while to outline them here, lest it should be said that foreigners do us more justice than we do ourselves.

Professor Wassermann describes, as he sees it, what occurs in New York when a physician visits an indigent case of tuberculosis. The first physician fills out a card which is sent to the Department of Health, stating the hygienic and social surroundings of the patient, and answering "yes" to the printed question whether or not he desires an inspector to visit the patient. The inspector—a physician employed exclusively in the control of tuberculosis—visits the patient, decides whether he may be left at home or must be sent to a hospital. In the former case, if he thinks necessary, he places him under the supervision of one of the department nurses for the tuberculous poor, who sees his directions as to care and precautions against infection are carried out. Meanwhile, elaborate statistics are in course of compilation, so that the department is gaining "an extraordinarily clear picture of the distribution of tuberculosis in the city, the existing sources of infection," etc. If a tuberculous patient dies at home, a placard is fixed on the door of the apartment stating in different languages (including Hebrew and Chinese) that tuberculosis is a communicable disease, and that the apartment must not be thrown open until it has been thoroughly disinfected.

The free examination of throat cultures for physicians, and the administration of antitoxin free to poor patients is so common a function of municipal health departments for us that we are surprised to find Professor Wassermann speaking of it as something extraordinary. In this respect New York does not differ from other cities, but we doubt whether many can boast of so careful and complete a system of supervision of diphtheria and other infectious diseases. As soon as a positive bacteriologic diagnosis of diphtheria has been made, the department notifies the principal of the school attended by the child. A list of quarantined patients, with their addresses, is furnished daily to schools, institutions, settlements, etc., together with the names and addresses of those just released from quarantine. A sanitary inspector, and if necessary, a department nurse, visits each quarantined case to make sure that the proper precautions are being observed. Disinfection is not performed nor the quarantined removed until two bacteriologic examinations of the throats of the patients and other members of the family have given negative results.

Professor Wassermann emphasizes New York's enormous task in combating disease among the thousands of ignorant immigrants from all parts of the world yearly landed in her midst. It is certainly a matter of pride that in the face of these difficulties she has shown herself able to perfect a system superior to that of cities which have not such enormous problems to solve.

#### TRANSPLANTATION OF ORGANS.

An interesting illustration of the application of clever surgical work to experimental physiology and pathology is the recent work of Carrel and Guthrie<sup>1</sup> of the University of Chicago. They have successfully removed a kidney from a dog and transplanted it into the neck of the same animal, uniting the renal artery with the carotid artery, the renal vein with the jugular, and the ureter with the esophagus. The circulation was not impeded by the formation of thrombi, and was completely re-established in a short time. In this new location the transplanted kidney secreted urine about five times as fast as the normal one. The constituents of the urine were the same, but in composition the chlorids were increased, while the organic sulphates, pigments and urea of the normal kidney were greater. The transplanted kidney examined some days following the operation was larger and darker in color than normally and the circulation distinctly increased. They claim this as the first successful transplantation of kidney on record.

They also successfully reversed the circulation in the thyroid gland of a dog by removing the gland and then replanting it, suturing the blood vessels in such a way that the blood entered the organ through the vein and left it through the artery. Forty-seven days later the replanted gland was normal, the only change being a slight increase in size.

This work is suggestive, not only from the standpoint of physiology, but particularly from that of therapeutics. It is in close relation to the work done by Cristiani<sup>2</sup> on transplantation of thyroids from one animal to another of the same species, and also to that of a different species. He showed that successful thyroid transplantation could be done with ease in animals of the same variety, but his results were not so good when transplantations were made from one animal to another of a different group, this depending on their relation in the animal scale. For instance, a graft from one class or family of animals to another always fails; from one order to another, as from dog to cat, usually fails; while from one variety to another, as between varieties of birds or of dogs, the result is usually successful. He did not unite the vessels, as do Carrel and Guthrie, and it is possible that with this improved technic the results may be much more successful.

Cristiani has promised experiments on transplantation of human thyroids into monkeys. This work is of great significance, because of the possibility of furnishing a permanent remedy for disease dependent on the loss of thyroid secretion, such as myxedema. This idea may be applied to other diseases also; thus in human diabetes one may consider the possibility of transplanting a portion of the pancreas from the anthropoid apes

1. *Science*, Oct. 13, 1905, "Functions of a Transplanted Kidney"; also Oct. 27, "Extirpation and Replantation of the Thyroid Gland with Reversal of the Circulation." See also the article by Carrel in this issue.

2. *Journal de Phys. et Path. Gén.*, vol. iii, p. 200, also vol. vi, p. 476.



to the diabetic. It may even be possible at times to obtain human organs for this purpose, as in case of persons killed accidentally or dying suddenly from some other cause. The same question arises in connection with diseases of the suprarenal, though it appears that so far all attempts to transplant this organ have failed. Then there is the suggestion that eventually it may become possible to replace a permanently diseased kidney with a normal one. While many of these therapeutic possibilities are as yet more or less remote, the operative results obtained by Carrel and Guthrie show that a new way has been opened for the experimental study of many problems in glandular physiology.

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#### THE JOURNAL OF BIOLOGICAL CHEMISTRY.

The development of medicine is along lines that were hardly dreamed of a quarter of a century ago; and not the least important of these is that which is known as biologic chemistry. Until now there has been no journal in the English language devoted to the subject. Under the circumstances, therefore—and this in spite of the fact that we have in this country ten times more medical journals than can be legitimately supported—we welcome a new one that has just appeared—the *Journal of Biological Chemistry*. It will be devoted to recording progress made in the biologic sciences, chemical in nature, and consequently that particular branch of science that now seems to promise so much for medicine. The editors are J. J. Abel of Baltimore and C. A. Herter of New York, and they will be assisted by an exceptional corps of collaborators. The *Journal of Biological Chemistry* should receive the encouragement of every physician who is interested in that branch of medicine.

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#### PHYSICIANS' RESPONSIBILITY IN THE CRUSADE AGAINST PATENT MEDICINES.

As its share in the present concerted efforts to curb the nostrum evil, the main task of the medical profession of course must be to eliminate the objectionable features of the "ethical proprietary" trade. But it must also recognize its responsibility in the fight against the patent-medicine abuse. The lay publications that are exposing so thoroughly all the evils of the nostrum traffic can be depended on to continue their crusade, but they also must have medical support, if genuine reform is to be ensured. Further, in order to enjoy the benefit of a really free press or to secure pure food and drug laws, the newspapers must be constrained by public opinion to repudiate nostrum advertisements containing the enthralling "red clause." To this the medical societies should give immediate attention, as the time is at hand when advertising arrangements are made for the ensuing year. Resolutions do some good, and especially do they encourage the brave lay journals that are taking the lead in this reform. *Collier's Weekly* published November 18 a list of nine medical societies that have endorsed its efforts, and urged the societies to unite in some plan of action. The most effective method of persuading publishers to refuse contracts that throt-

tle the free speech is the appointment by local medical societies of committees to visit the publishers. The personnel of these committees should be adjusted to the object of bringing to bear the greatest possible pressure by persons of amiable dispositions, intimate acquaintance, respected standing and enlightened minds. These committees, armed with facts and knowledge of conditions as only medical men can be, will, if tactful, be almost irresistible, and should play a foremost part in abating a grave peril. Certainly the patent-medicine manufacturers will cry that we are interested from selfish motives, but this should not deter our action in the least degree. In the main, the public will discount that drowning plea of all monsters. At any rate, we should do our plain duty, being confident that such conduct will not long be misjudged. Only the other day a very prominent newspaper owner asked why physicians do not take the lead in informing the public of the real dangers of the patent-medicine traffic. He asked who were to inform the public and editors of newspapers of the physical harmfulness of the indiscriminate use of patent medicines if not physicians. It seems, then, that we are expected to act, and that other forces of reform are depending on us. This was emphasized by Mr. Bok's letter, which we published some months ago. In addition to the passage of resolutions and the appointment of committees, our societies should aid in the wide distribution of the literature of the crusade, and should present the real reasons why patent medicines should not be used.

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#### THE SUPERVISION OF HOSPITALS.

Following the lead of certain foreign critics who some little time since charged financial extravagance in the construction and the management of quasi-public hospitals in New York City, action has been urged recently to bring about some needed reforms. It would appear that the self-perpetuating lay boards of control of some of these hospitals are largely responsible for the evils of which complaint was made, and it is a natural consequence of excessive expense in building and management that such institutions must be seriously curtailed in usefulness to the general public. As adjuncts to charity they must necessarily be a failure to a very great extent. While we are apt to be suspicious of public control of such institutions in our large municipalities, a certain amount of it might be an excellent thing and would be only a reasonable offset to the exemption from taxation which such institutions enjoy. It is a rather striking coincidence that while the City and County Hospital at St. Paul was being held up—at a New York meeting of physicians—as a model of comparative excellence in the particulars in which the New York hospitals were open to criticism, the mayor of the twin city, Minneapolis, had just been calling attention to another hospital evil that is not peculiar to any one municipality. That is, the existence of private hospitals, conducted for gain or advertisement and uncontrolled by any special higher authority. It would appear from his remarks that special evils or scandals have brought such into prominent notice within a recent period in his city. That this is not a common occurrence is due to



the fact that so many of these establishments carefully avoid any publicity. They are sometimes conducted by off-color physicians, sometimes by typical quacks and sometimes are respectably conducted by reputable medical men. In the latter case they generally have a corporate existence and a sort of quasi-public character, and, apart from a certain commercialism in their management, are unexceptionable. Not making pretenses to being charitable institutions their financial management is not open to public criticism. Nevertheless, if we are to insure against abuses, a certain public control and inspection is advisable and—if we are to reach all the disreputable “homes” “retreats,” etc., which advertise in the daily press—is absolutely necessary. A public sanction or certificate of character based on rigid inspection laws would be a damage to no reputable institution. That there is a class of institutions requiring police surveillance can not be denied. They exist in every city, and the borderline between them and more respectable institutions may not be as distinct to the public as is desirable. While we do not accept as generally correct the allegation of the Minnesota mayor that reputable physicians connive at the unlawful practices of the shady practitioners, there are evil possibilities in the existence of these institutions that we should be on our guard against as a profession, and a reform in this regard should be supported if not originated among ourselves. If a layman can point out the evil of unregulated establishments of this kind it is an indication that public opinion is getting ripe for a reform.

#### LAVAGE FOR THE RELIEF OF VOMITING.

Vomiting results from such a diversity of causes that it is not to be expected that one measure will suffice for its relief under all conditions. Of course, the fundamental indication is to remove, when possible, the underlying or exciting factor, but not rarely the gravity of the symptom does not permit of delay, but demands speedy relief, either by palliation or by other means. One of the most distressing secondary phenomena of vomiting is the thirst resulting from the repeated loss of fluid. To compensate for this loss and to relieve this thirst, injection of large amounts of water into the bowel or the administration of small amounts by the mouth has been practiced, but neither of these methods always succeeds. An old and valuable household remedy is the free ingestion of water as hot as can be taken—with a pinch of salt, for flavor, if desired. It is popularly said that the water will either correct the stomach or will make vomiting easy and less unpleasant if it must continue. Attention is again called to the value of this procedure by Sir William H. Bennett,<sup>1</sup> who has adopted the suggestion made and put into practical effect by a patient, namely, the ingestion of ordinary cold or tepid water or other perfectly unirritating fluid in as large amounts as the patient desires. The vomiting may and is likely to persist, but the stomach is gradually washed out automatically and the patient is made more comfortable. A number of illustrative cases are reported, in some of which the vomiting itself seems to have been controlled.

1. Lancet, July 8, 1905, p. 67.

## Medical News

### CALIFORNIA.

**Bequest.**—By the will of the late James C. King, Chicago, \$10,000 is devised to a hospital in Pasadena, Cal., which the testator believed to be a worthy enterprise.

**Hospital Incorporated.**—The Oakland Central Hospital has been incorporated in Oakland by Drs. William D. Huntington, Oakland; T. A. Williamson; Edward R. Sill, Alameda; Robert T. Stratton, Alameda, and Chauncey H. Wilder, Alameda, with a capital stock of \$75,000.

**Will Not Change Meeting Place.**—At a meeting of the San Bernardino Medical Society November 8 an attempt was made to change the by-laws so that Redlands should hereafter be the permanent headquarters of the society instead of San Bernardino. The motion, however, was voted down by the older members of the society with the assistance of the members from San Bernardino.

**Charge Against Physician Dismissed.**—Dr. W. Fred Stahl, Los Angeles, charged with illegal practice of medicine, was dismissed by the jury November 10. It was alleged that Dr. Stahl did not hold a license for practicing medicine from the state board of medical examiners, but the discharge of the prisoner was based, it is stated, on the contention of his attorney that he had applied three times to the state board to take the regular course, and that his application had been neglected each time.

**Opposed to Lodge Practice.**—Shasta County Medical Society has manifested its opposition to contract or lodge practice by adopting the following resolutions:

**WHEREAS**, It is the sense of this body that contract society and lodge practice as now performed is detrimental, degrading and humiliating to the medical profession, therefore be it

**Resolved**, By the Shasta County Medical Society in regular meeting assembled, that no member of Shasta County Medical Society be permitted to enter into contract relations with such society; and be it further

**Resolved**, That no physician in the employ of such societies be eligible to membership in the Shasta County Medical Society. Be it further

**Resolved**, That no member of the Shasta County Medical Society be permitted to consult with any physician following such contract practice.

**Personal.**—Dr. Reuben M. Bonar, Santa Rosa, has been appointed a member of the medical examining board for pensions in that city, vice Dr. Melville M. Shearer, deceased.—Dr. John H. Love, Ventura, was stricken with cerebral hemorrhage November 2.—Dr. Theodore D. Kellogg, Chino, was appointed medical superintendent of the San Bernardino County Hospital, vice Dr. Johann H. Meyer, removed, but resigned, and Dr. A. J. Aldridge has been appointed temporary medical superintendent.—Dr. John S. Hogshead, Laytonville, has been appointed physician of Mendocino County, vice Dr. William N. Moore, committed to the State Hospital for the Insane.—Dr. Solon Briggs, Los Angeles, has returned from the Atlantic Coast.—Dr. August Liliencrantz, Oakland, has resigned as a member of the board of health, and Dr. Charles A. Dukes has been appointed his successor.—Dr. Fred W. Colman has been appointed health officer of Lodi.—Dr. Spurgeon F. Priestly has been appointed health officer of Stockton.—Drs. Robert F. Rooney, Auburn, and Martin Sehnabel, Newcastle, have been elected physicians of Placer County.—Dr. Jackson L. Martin has been made a member of the Fresno health board.—Dr. William J. Walsh has been appointed coroner of San Francisco County, vice Dr. Thomas B. W. Leland.—Dr. Granville MacGowan, Los Angeles, has been removed to his home after a successful operation for appendicitis.

### DISTRICT OF COLUMBIA.

**Milk Dealers Fined.**—Three milk dealers who sold milk from cows which had been allowed to feed and drink from the sewer and marsh adjacent to the Smallpox Hospital, were arrested and tried. One was discharged and two were fined \$20 each.

**Health of the District.**—During the week ended November 4, 118 deaths were reported, 64 white and 54 colored. During the same period 144 births occurred, 100 of which were white and 44 colored. There were 9 stillbirths, 3 white and 6 colored. At the close of the week there were under treatment 44 cases of diphtheria, 16 of scarlet fever, 160 of typhoid fever and 8 of smallpox.

### ILLINOIS.

**Cornerstone Laid.**—The cornerstone of the John Warner Hospital, Clinton, was laid with simple formalities November 8.



**Personal.**—Dr. James H. Davis, Atwater, has returned after three years in Germany.

**Diphtheria.**—Reports to the State Board of Health show that cases of diphtheria are reported in 39 cities and towns, in 26 counties, from Cook County on the north to Alexander County on the south.

**Epidemic Jaundice.**—An epidemic of catarrhal jaundice, the cause and nature of which is obscure, is reported throughout the state, especially in Mount Pulaski and Rushville. The State Board of Health has instituted an investigation.

**Valley Physicians Meet.**—The eighty-first semi-annual meeting of the Fox River Valley Medical Association was held in Aurora, November 13. Dr. J. Forrest Bell, Elgin, was elected president, and Dr. Albert A. Fitts, Batavia, vice-president. The annual meeting will be held in Elgin in May.

#### Chicago.

**Druggist's License Revoked.**—The pharmacy license of Paul Vito, owner of two drug stores on the South Side, has been revoked by the State Board of Pharmacy on account of two convictions for the sale of cocaine.

**Bequests.**—By the will of James C. King \$10,000 is devised to the Chicago Home for Incurables and \$20,000 to the Presbyterian Hospital. The late Louis Schroeder has bequeathed \$1,000 each to the Michael Reese Hospital, Alexian Brothers' Hospital and the German Hospital.

**Personal.**—Dr. Emma A. Hackett, resident physician at Hull House, is seriously ill from an infection of the hand due to an operation wound. Dr. Engelbrecht Nelson has returned from abroad. Dr. Albert H. Andrews has been elected professor of otology and rhino-laryngology in the Chicago Eye, Ear, Nose and Throat College.

**Fraud Order Issued.**—A fraud order against "Professor" Howell has been issued by the postoffice department. It is alleged that this individual, on receipt of the date of the birth of customers, sent to each a horoscope, telling him that he was suffering from a dangerous nervous disease. For the cure of this malady he sold a medicine for \$4.80. Horoscopes of twelve varieties were distributed.

**Urological Election.**—The Chicago Urological Society, at its annual meeting, October 26, elected Dr. William L. Baum, president; Dr. Gustave Kolischer, vice-president, and Dr. J. Allen Patton, secretary. This society meets the last Thursday of each month excepting July, August and September. All regular practitioners in good standing in Cook County who are interested in medical or surgical urology are eligible to membership and welcomed at meetings.

**Deaths of the Week.**—During the week ended November 18, 510 deaths were reported, equivalent to an annual mortality rate of 13.35 per 1,000. The number of deaths was 31 greater than during the corresponding week of 1904, and 41 greater than for the preceding week of 1905. Pneumonia, for the first time this season, leads the death causes with 77, followed by consumption, with 70; nephritis, with 41; violence, including suicide, with 37; heart disease, with 36; cancer, with 31, and nervous diseases, with 21.

#### INDIANA.

**Contagious Diseases.**—Scarlet fever is reported at Windfall. Ten cases of typhoid fever are reported at Cambridge City.

**Ten Instead of One.**—In the Indiana news, November 18, it was announced that James Laboyteaux had given \$1,000 for the erection of a hospital at Muncie, and that, if necessary, he would double his gift. Mr. Laboyteaux' original gift was \$10,000, which he has promised to double, if necessary.

**Personal.**—Dr. Richard Schillinger has been elected mayor of Richmond. Dr. Ebenezer P. Weist, Elwood, who soon leaves for Oklahoma, was given a dinner by the physicians of New-castle November 10. Dr. Isaac N. Cochran has been elected mayor of Delphi. Dr. Oliver G. Mercer, Reelsville, has been appointed local surgeon of the Vandalia Road, vice Dr. Joseph F. Gillespie.

**October Mortality and Morbidity.**—The reports to the State Board of Health for October show that typhoid was the most prevalent disease and rheumatism the next most prevalent. Bronchitis, influenza and pneumonia prevailed extensively. On the whole, however, October was more healthful than the corresponding month last year, and also more healthful than September. The total number of deaths reported was 2,681, equivalent to an annual death rate of 11.9 per 1,000. Of these 426, or 16.9 per cent., were under 1 year of age, and 659, or 26.2 per cent., were 65 and over. Consumption deaths numbered 307; typhoid, 152; diphtheria, 78; scarlet fever, 5;

whooping cough, 14; pneumonia, 138; diarrheal diseases, 167; cerebrospinal meningitis, 29; influenza, 4; puerperal fever, 9; cancer, 100, and violence, 155. Pneumonia showed a decided increase over September, and there were 30 more deaths from this disease than in the same month last year. Of the tuberculosis deaths 124 were males and 283 females. Of the males 22 were married in the age period of 18 to 40, in the prime of life, and they left 45 orphans under 12 years of age. Of the females 54 were in the age period of 18 to 40, in the prime of life, and left 111 orphans under 12 years of age. This disease invaded 271 families and tore the parents from 94 homes, making in all 156 orphans.

#### KENTUCKY.

**Fraud Order Issued.**—The postoffice department has issued a fraud order refusing the delivery of mail matter to the French Capsule Company, Covington, and to Dr. Ernest E. Schmidt of that city, who are alleged to be using the mails to promote the sale of a drug contrary to law.

**Jefferson County Referee.**—Dr. William H. Wathen, for a number of years county referee for the State Board of Health, has resigned, and Dr. William Bailey has been appointed in his stead. The executive committee, acting for the board, with Dr. Chester Mayer, temporary secretary, spread resolutions on its minutes expressing satisfaction at Dr. Wathen's work. Dr. Wathen, being dean of the Kentucky School of Medicine, felt it best that he should not continue to act in a dual capacity.

#### MARYLAND.

**Personal.**—Dr. Gordon T. Atkinson, Crisfield, has been re-elected comptroller of the state. Dr. William Winder Goldsborough, Greensboro, has been elected a member of the state senate.

**University Attendance.**—There are 331 matriculants in attendance at the University of Maryland, of whom 99 are in the medical department, the remainder in the departments of pharmacy and dentistry.

**Debt to be Paid.**—The floating debt of \$4,000 of the Western Maryland Hospital, Cumberland, will be wiped out, the state having appropriated \$2,000 and an equal amount having been raised by private subscription.

**State Examination.**—The Board of Medical Examiners of Maryland will hold the regular examination December 13 to 16 at the hall of the Medical and Chirurgical Faculty of Maryland, 847 North Eutaw Street, Baltimore. Applications will not be received after December 7.

**Society Election.**—The Washington County Medical Society met last week and elected the following officers: President, Dr. Luther H. Keller, Hagerstown; vice-president, Dr. W. S. Richardson, Williamsport; secretary, Dr. Victor D. Miller, Jr., Hagerstown; treasurer, Dr. Hamilton K. Derr, Hagerstown, and censor, Dr. D. C. R. Miller, Mason and Dixon, Pa.

**Hospital Report.**—At the Springfield Hospital for the Insane there were 662 patients, of whom 388 are male and 274 female. The Edwin Warfield Cottage, named after the governor, will be ready for occupancy in about four weeks, and will accommodate about 60 additional patients. The managers are gradually providing artesian wells and thus doing away with the use of surface water at the institution.

#### Baltimore.

**Bequests.**—The late Dr. Charles C. Shippen left \$5,000 each to St. Paul's Protestant Episcopal church and the Charity Organization Society.

**Hospital Staff Changes.**—Four of the resident physicians at the City Hospital have resigned: Drs. Robert Wriston, West Virginia; Alfred Brinham, Maryland; Edwin Bledsoe, Virginia; and George Berkleimer, Pennsylvania. Their places have been supplied by Drs. Lamar, Kentucky; Downey, Virginia; W. A. Glines, New York, and F. E. Knowles, New Jersey.

**Mushroom Poison Antitoxin.**—It is announced that Dr. W. W. Ford, instructor in bacteriology at the Johns Hopkins University, has discovered an antitoxin for mushroom poisoning. By boiling and filtering the poisonous species he obtained a toxin with which, by the same process that was used with the diphtheria antitoxin, he immunized small animals, thus obtaining a protective serum. The substance has not been tried yet in a human being.

**St. Luke's Day Service.**—A special service was held at Grace Protestant Episcopal church Sunday, November 19, for physicians, medical students and nurses. For many years such a service has been held in St. Paul's cathedral on St. Luke's Day, October 18. The sermon was preached by Bishop Court-



land Whitehead of Pittsburg, chaplain of the St. Barnabas Guild for Nurses of America. After the sermon Dr. Howard A. Kelly addressed the audience.

**Personal.**—Dr. Henry Barton Jacobs returned to Baltimore November 13.—Dr. Randolph Winslow has been elected chairman of the section on clinical medicine and surgery, Medical and Chirurgical Faculty of Maryland, also consulting surgeon to the Hebrew Hospital.—Dr. Roland B. Whitridge will spend the winter in Europe.—Dr. Fairfax G. Wright, assistant medical superintendent of the University Hospital, has been ill with an infected wound of the hand.

#### MASSACHUSETTS.

**Hospital Opened.**—The remodeled Holyoke City Hospital was formally opened for inspection November 1.

**Check for Hospital.**—George E. Keith, Brockton, gave a check for \$500 to the Brockton Hospital on the occasion of the dedication of the Douglas Surgical Pavilion and the Wales Memorial Ward, October 31.

**Would Prohibit Animal Experimentation.**—It is said that there will be introduced in the legislature this winter an "act to prohibit all experiments under any circumstances and for any purpose whatsoever, with or without an anesthetic, on dogs and cats." It is anticipated that physicians and the friends of science and progress and humanity in Massachusetts will be ready to oppose such legislation.

**Superintendent of Leprosarium.**—Dr. Louis Edmonds of Harwich, who has been associate medical examiner of Barnstable County, has resigned, in order to become superintendent of the new State Leper Colony, to be located on Penikese Island, fourteen miles from New Bedford. There are at present five lepers, two Chinese and three Portuguese, one of the latter being a woman, who will be moved with Dr. Edmonds from Harwich, where for a year he has had charge of them.

**Tuberculosis Exhibition.**—A free tuberculosis exhibit under the auspices of the State Board of Health is to be opened in Faneuil Hall, December 28. The project is the result of the efforts of the Boston Association for the Relief and Control of Tuberculosis and is backed by a state appropriation of \$2,000. For ten days there will be lectures and demonstrations, both day and evening. Much literature in several different languages will be distributed and explained. Apparatus and demonstrations of methods for the prevention and cure of the disease will be presented in great detail and specific efforts will be made to popularize the exhibits. Reciprocal arrangements, too, have been made for the display of the entire New York City exhibition, whose date precedes this one in Boston.

**Tufts College News.**—Tufts College Medical School opened September 27 with a large entering class. There are now 379 students, of whom 109 are in the entering class. The following changes in the faculty have been made: Dr. Charles P. Thayer has retired as secretary because of ill health, and has been made emeritus professor of anatomy and has had bestowed on him a substantial pension; Dr. Frederick M. Briggs has been made secretary; Dr. Harry H. Germain has been appointed assistant professor of anatomy; Dr. Karl August Hoch, instructor in neuro-pathology, has resigned; Dr. Frederick C. Hollis, formerly of Yale Medical School, has been appointed instructor in medical chemistry; Drs. C. H. Staples and L. W. Strong, assistants in hematology; Dr. Edwin B. Neilson, assistant in gynecology; Dr. John D. Clark, instructor in anatomy; Dr. Theo. C. Beebe, Jr., assistant in surgery and assistant demonstrator of anatomy; Drs. John W. Lane, George McIntire, F. E. Haskins and Robert E. Andrews, assistant demonstrators in anatomy; Drs. Edison W. Brown and Leon S. Medalia, assistants in pathology and bacteriology, and Drs. Sidney C. Hardwick and Margaret E. Carley, assistants in physiology.

#### MICHIGAN.

**Scarlet Fever Closes Schools.**—Because of the prevalence of scarlet fever on the east side of the town, the school board of Elk Rapids has deemed it advisable to close the schools for a time. Rigid quarantine is being enforced.

**Vote for Detention Hospital.**—By a vote of 234 to 49 Ann Arbor has decided to raise \$3,000 for a detention hospital for contagious diseases, to be built and equipped by the city, but to be maintained by the University of Michigan.

**Personal.**—Dr. Henry G. Glover, Jackson, has moved to Philadelphia, and Dr. H. T. Brown, Stockbridge, succeeds to his practice.—Dr. John B. Wright, Detroit, is ill with pneumonia at Grace Hospital.—Dr. Herbert M. Best, Ludington, has returned from the Pacific Coast and will practice in Grand Rapids.

**Copper Range Changes.**—Dr. Addison D. Aldrich, formerly of the Champion Mining Company, has been appointed physician at the Challenge mine, Hancock.—Dr. W. D. Whitten, formerly surgeon to the Quiney Mining Company, has been appointed physician at the Baltie mine.—Dr. William E. MacNamara, Brighton, has succeeded Dr. Cole at Redridge.—Dr. William K. West, Calumet, has been appointed chief surgeon of the Copper Range Mining Company and will reside at Painesdale.

**Lockwood Hospital Report.**—The annual report of the treasurer of Lockwood Hospital and Deaconess Home, Petoskey, for the fiscal year ended July 31, 1905, shows total receipts from all sources of \$6,357.68, and total expenditure of \$6,299.03, leaving a balance in hand of \$858.65. The loss in operating the institution for the year 1903 was \$2,393.10; for the year 1904, \$949.63, and for the year 1905, \$200.60. During the fiscal year 216 patients were admitted to the hospital, 201 discharged, 12 died and 16 remained in the hospital at the close of the year.

**October Mortality.**—There were 2,838 deaths reported for October, or about 200 fewer than in the preceding month. The death rate was 13.1 per 1,000 population, somewhat higher than the rate for October, 1904, which was 12.0. By ages there were 691 infants under 1 year, 219 children aged 1 to 4 years, and 747 deaths of elderly persons over 65. Important causes of death were as follows: Tuberculosis of the lungs, 190; typhoid fever, 102; diphtheria, 57; scarlet fever, 11; measles, 2; whooping cough, 13; pneumonia, 97; diarrhea and enteritis of infants, 357; cancer, 141; accidents and violence, 175. There was a very marked increase in the number of deaths from typhoid fever, and the number of deaths occurring from this cause, 102, was the largest reported for any month since the year 1900.

**Wayne County Society on Vaccination.**—Wayne County Medical Society, at its meeting October 1, put itself on record against the action of the superintendent of schools of Detroit in allowing children to enter school without having been vaccinated, by adopting the following resolutions:

WHEREAS, The superintendent of public schools of the city of Detroit on September 16 issued an order to the principals of all the public schools in this city directing them to admit pupils applying for admission to the public schools, whether they had been vaccinated or not; and,

WHEREAS, This action throws down all legal safeguards for protecting the public school children from the remarkably contagious disease, smallpox, and is directly contrary to a standing order of the school board still unrepealed; and

WHEREAS, Smallpox has been continually prevalent in the state of Michigan for the last four years; and

WHEREAS, The Supreme Court of the United States has held legal the right of the state to impose compulsory vaccination;

Resolved, That the Wayne County Medical Society considers this action on the part of the superintendent of Detroit's public schools an assumption of authority not belonging to his office, a dangerous and indefensible action and a serious menace to the city of Detroit.

#### NEW JERSEY.

**Diphtheria.**—The public schools of Winslow have been closed on account of an epidemic of diphtheria.—Several cases of diphtheria are reported from Elizabeth.

**Personal.**—Dr. William V. McKenzie, Metuchen, is seriously ill and it is feared that he will have to give up practice.—Dr. Calvin Anderson has been elected mayor of Madison.—Dr. Joseph H. North, Jr., has been elected mayor of Pleasantville.

**Gifts to Hospitals.**—The Entre Nous Club Atlantic City, has given \$5,000 to the Atlantic City Hospital for the endowment of a bed in that institution.—Mrs. Harvey E. Fisk has sent a check for \$500 to the Monmouth Memorial Hospital and will also endow a bed.

**To Start Medical Library.**—For the purpose of organizing a medical library association for the use of physicians of Essex County and vicinity, a call was issued for a meeting in Newark November 18. The object of the proposed society is two-fold: First, the establishment of a technical working library of practical value to physicians and which will receive the co-operation of the public library authorities in its maintenance and growth; and, second, the creation of an independent medical organization.

**Verdict Set Aside.**—The Supreme Court has rendered an opinion in which it sets aside the verdict obtained by George Lees, Plainfield, against Dr. Albert Wickman, Newark. - In October, 1904, Lees sued for \$20,000 for injuries alleged to have resulted from the improper application of a plaster jacket, and was given a verdict by a Somerset County jury for \$780.20. At the trial it was shown by expert testimony that the injuries alleged could not have been the result of any treatment applied. The Supreme Court held that the verdict of the lower court was contrary to the evidence.



**Italian Hospital Opened.**—The new Hospital of the Immaculate Conception, Orange, was opened October 29 with due ceremony. The institution has now 25 beds and in a few days accommodation for 10 additional patients will be added. The medical staff consists of Drs. Thomas N. Gray, East Orange; Frank B. Lane, Orange; William O'Brien, West Orange; Antonio J. Amico, Newark; Ralph H. Hunt, East Orange; Frances E. Knowles, South Orange; W. D. Garrett, East Orange; M. W. Newcomb, East Orange; Carlo Martinetti, Orange; M. Herbert Simmons, Orange; Frank W. Lockwood, East Orange, and Charles W. Banks, East Orange.

#### NEW YORK.

**Red Cross.**—The first annual meeting of the New York state branch of the American Red Cross was held in New York City November 14. This society has 374 members. It is the intention of the state branch to organize subdivisions throughout the state. An interesting feature is the enrollment of doctors and nurses for emergency service. Drs. George E. Brewer, Samuel E. Lambert and John W. Brannan have consented to act as the advisory committee.

**Charity Workers.**—The New York State Conference of Charities and Corrections was in session in Carnegie Lyceum on November 14 and 15. Dr. Thomas Darlington, health commissioner of this city made an address at the opening session. In reviewing the important philanthropic events in the state during the past year he mentioned the passage of a special charities appropriation bill, instead of leaving the appropriations a part of the general bill, and the undertaking by the city of New York of establishing a tuberculosis sanitarium on Staten Island. The subject of the care and relief of needy families in their homes was discussed by Dr. Lee K. Frankel. He placed the total value of philanthropic agencies in New York state at \$100,000,000 and the annual expenditure for the care of the poor and afflicted not less than \$23,000,000. It was to be regretted that this large expenditure was not rather for the prevention of future ills than for the palliation of suffering already existing. A committee is looking into the matter of keeping accounts and the better financial administration of the hospitals. Dr. E. D. Shiner told what had been done by schools in the way of training atypical children and advocated a further development of the plan. The treatment of criminals, social betterment and the elimination of politics from charitable institutions was also discussed.

#### New York City.

**Seagoers.**—Dr. and Mrs. Calvin T. Adams sailed on the *Moltke* November 15.—Dr. L. P. Williamson, United States Navy, sailed on the *Minnetonka*, for London, November 18.

**Italian Sanitarium.**—City officials and leaders have interested themselves in the Harlem Italian Sanitarium, which was established a year ago by Dr. C. Atonna, Dr. F. Sanarelli and Mr. Caterain, and which is doing good work among the poor dwellers of the uptown Italian colony. At a recent benefit sufficient funds were raised to put the hospital on a permanent basis.

**Good Health of the City.**—The death rate of the city for the week ending November 11 was at the annual rate of 14.89 per 1,000. There are practically no contagious diseases at present. Among 600,000 school children there were only five deaths. Deaths from pneumonia have fallen to 60 and from tuberculosis to 74. Deaths from violence and suicide were most numerous.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ending November 11, 335 cases of tuberculosis, with 160 deaths; 275 cases of diphtheria, with 22 deaths; 155 cases of measles, with 8 deaths; 105 cases of typhoid fever, with 12 deaths; 96 cases of scarlet fever, with 5 deaths; 13 cases of cerebrospinal meningitis, with 7 deaths, and 62 cases of chickenpox.

**The Seaside Hospital.**—The report of the society which supports this hospital shows that \$90,000 has been raised during the past year, of which sum \$3,000 remains in the bank after paying an indebtedness of \$25,000 and paying the running expenses of the past year. During the past summer 33,661 mothers and children were cared for on the hospital boat, and 2,521 patients were admitted to the Seaside Hospital. It is the present object of the society to keep this institution open during the winter as a convalescent hospital; so there is great need of such an institution in or near the city. Dr. Ernest J. Lederle was elected one of the trustees.

#### OHIO.

**Diphtheria.**—Diphtheria is reported in North Amherst.—Bergholz is reported to have more than 20 cases of the disease.

**Goes to Penitentiary.**—"Dr." Charles Lewellyn, Youngstown, has been sentenced to imprisonment for one year in the penitentiary for impersonating a United States pension officer.

**Violator of Law Fined.**—W. W. Hodgkins, Toledo, pleaded guilty in the police court November 15 to practicing medicine without being registered, as being required by law, and was fined \$50 and costs, but the fine was suspended until November 25 to give the defendant an opportunity to comply with the law.

**Ill and Injured.**—Dr. Phineas S. Conner, Cincinnati, is seriously ill from nervous trouble at the Good Samaritan Hospital.—Dr. William D. Hamilton, Columbus, was operated on for appendicitis in Chicago November 15.—Dr. Jerome Bland, Bucyrus, who has been seriously ill from cerebral hemorrhage, was taken to Hot Springs, Ark., for treatment November 14.

**Farewell Banquets and Presentation.**—The medical staff of the National Military Home, Dayton, gave a farewell banquet to Dr. D. Clark Huffman, formerly chief surgeon of that institution, October 31, at which he was presented with a loving cup.—On November 1 the officers of the home met and presented Dr. Huffman with a beautiful mantel clock.—The Guernsey County Medical Association gave a banquet at Cambridge, October 31, in honor of Dr. Frank M. Mitchell, president of the association, who left for his new home in Greeley, Colo., two weeks later.

**Personal.**—Dr. Charles C. Booth has been appointed local surgeon for the Lake Shore Road at Youngstown, vice Dr. Albert E. Warren, deceased.—Dr. Albert McClintock, New Moorefield, has returned from Raton, N. M.—Dr. Isaac C. Kiser, Fletcher, has been elected coroner of Miami County.—Dr. James A. Hubbell has been elected mayor of Quincy.—Dr. Robert Henderson, Urbana, has been elected a member of the board of public safety.—Dr. David N. Kinsman, Columbus, has been elected secretary of the State Board of Medical Examination and Registration, to succeed Dr. Frank Winders, resigned. This will necessitate Dr. Kinsman's resignation as chancellor of the Ohio Medical University.—Dr. William N. Bradford has been elected mayor of Cambridge.

#### PENNSYLVANIA.

**Bequest.**—By the will of the late Frank F. Risinger, the York Hospital will receive \$5,000.

**Personal.**—Dr. J. Trechler Butz of Allentown, Pa., has been elected coroner of Lehigh County.

**Antitoxin Stations Established.**—Dr. Samuel G. Dixon, state commissioner of health, has established 500 stations throughout the state for the free distribution of antitoxin to the needy poor. The antitoxin can only be secured by personal application of the physician attending the case. Free antitoxin used by the state is made especially for it and bears a special label.

#### Philadelphia.

**Northeast Branch to Organize.**—It is announced in the roster of the county medical society that a meeting of medical men of the northeastern section of the city will be held November 27, to organize a northeast branch of the county society.

**The Mütter Lecture.**—The Mütter lecture for 1905 will be delivered in the hall of the College of Physicians, Thirteenth and Locust Streets, on Friday, December 1, at 8:30 p. m., by Dr. Aloysius O. J. Kelly on "Infections of the Biliary Tract."

**Discharged.**—Dr. Thomas B. Williams, who was arrested two weeks ago on the charge of having performed an illegal operation, has been discharged from custody, as the woman, her husband and the physician who was called in to attend her, failed to appear as witnesses.

**Health Report.**—The deaths from all causes in the city for the week numbered 407, which is a decrease of 31 from the number reported last week, and an increase of 6 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 6; whooping cough, 3; diphtheria, 11; tuberculosis, 47; cancer, 16; diabetes, 5; apoplexy, 25; heart disease, 37; acute respiratory disease, 63; enteritis, 18; Bright's disease, 32; suicide, 6; accidents, 26, and marasmus, 6. There were 253 cases of contagious disease, with 18 deaths, as compared with 251 cases and 18 deaths the preceding week.

**Bequests.**—By the will of the late Mrs. Nancy W. King of Doylestown, Pa., the Episcopal Hospital of Philadelphia receives \$5,000 for the endowment of a free bed.—By the will of the late G. E. Gillingham the Pennsylvania Hospital receives \$50,000; the Philadelphia Home for Incurables, \$5,000; The Women's Medical College of Pennsylvania, in Philadelphia, \$5,000, to be used for founding and maintaining a schol-



arship in said college; the Hospital of the Good Shepherd in Rosemont, Pa., \$5,000 for founding and maintaining a free bed and other purposes, in the name of his deceased wife, Clara D. Gillingham; the Bryn Mawr Hospital, \$5,000 for founding and maintaining a free bed in the name of his deceased wife, Clara D. Gillingham; the Maternity Hospital of Philadelphia, \$5,000, and the Charity Hospital of Norristown, Pa., \$5,000.

#### VIRGINIA.

**Want Tax Abolished.**—The Richmond Academy of Medicine has appointed a committee to try to have the city license tax abolished; a similar work will be pushed in the legislature in regard to the state license.

**City Bacteriologist.**—Richmond has just passed an ordinance creating the office and defining the duties of a city bacteriologist. The salary is \$900 per year and the position is filled by election by the members of the board of health.

**Physicians Raise Fees.**—The Norfolk Medical Society has decided that calls responded to between 9 p. m. and 7 a. m. are to be considered night calls, and such visits shall be charged for at the rate of \$5. It was considered wise to bring this matter before the public through the daily press.

**Establishment of a Tuberculosis Sanitarium.**—At the invitation of Dr. William F. Drewry, superintendent of the Central State Hospital, Petersburg, a number of physicians from different sections of the state met in Petersburg. The treatment of tuberculosis was discussed and the proposition to establish a sanitarium for this disease at Ironville, Bedford County, was considered. A considerable tract of land has already been secured, some cottages erected and a few patients are now under treatment.

#### GENERAL.

**Yellow Fever in Havana.**—The health officials of Havana, Drs. Finlay and Delgado, have officially notified the United States Public Health and Marine-Hospital Service of the presence of five cases of yellow fever and of several suspects in that city.

**Wabash Surgeons' Association.**—At the meeting of the Wabash Railroad Surgeons' Association, November 10, Dr. C. B. Powell, Albia, Iowa, was elected president, and Dr. Christian B. Stemen, Fort Wayne, was re-elected secretary, a position which he has held for the last twenty-four years.

**College Association to Meet.**—The annual meeting of the Southern Medical College Association will be held in one of the parlors of the Seelbach Hotel, Louisville, Ky., at 10 a. m., Monday, December 11, which is the day preceding the meeting of the Southern Surgical and Gynecological Association. The secretary is Dr. G. C. Savage, Nashville, Tenn.

**Yellow Fever Subsidies.**—Pensacola, on November 12, reported that there was not a case of yellow fever under treatment, but a new one was reported the next day. Florida quarantines were removed on November 19.—Texas alone maintains quarantine, except that there is general quarantine against Havana.—Texas did not participate in the quarantine conference.—New Orleans, on November 11, had two cases under treatment and no new cases reported for the previous four days.—In Louisiana, outside New Orleans, there remain only some half-dozen cases in all.

**Meeting of Western Bellevue Alumni.**—The fifth annual meeting and dinner of the Western Alumni Association of the University and Bellevue Hospital Medical College was held at the Sherman House, Chicago, November 10. The president, Dr. Charles C. Hunt, Dixon, Ill., acted as toastmaster. The following officers were elected: President, Dr. John M. Ristine, Cedar Rapids, Iowa; vice-presidents, Drs. Calvin M. Fitch, Chicago; James F. Percy, Galesburg, Ill., and Dr. Frederick W. Werner, Joliet, Ill.; secretary-treasurer, Dr. Willis O. Nance, Chicago, and executive committee, Drs. G. Frank Lydston, Chicago; Paul Caspers, Chicago; James F. Todd, Chicago; John W. Van Winkle, Chicago, and Charles C. Hunt, Dixon, Ill.

**Ohio Valley Medical Association.**—The Ohio Valley Medical Association met in Henderson November 8 and 9. The following officers were elected: Dr. Daniel M. Griffith, Owensboro, Ky., president; Drs. Brooks F. Beebe, Cincinnati, H. Preston Sights, Paducah, Ky., and Curran Pope, Louisville, vice-presidents, and Dr. Benjamin L. W. Floyd, Evansville, Ind., secretary and treasurer (re-elected). Louisville, Ky., was selected as the next place of meeting. The association appointed a committee to work up a sentiment in the different states in the Ohio Valley regarding the proper care and treatment of inebriates by the state, with Dr. Dudley S. Reynolds, Louisville, as chairman. A resolution was also adopted asking the Kentucky

State Legislature to have a bust of Dr. Ephraim McDowell placed in the Capitol in Washington.

**The Southern Quarantine Conference.**—Following is the full text of the quarantine resolutions which were unanimously adopted by the conference of southern states, to which we referred last week:

#### QUARANTINE RESOLUTIONS.

WHEREAS, The experience of recent years, and especially the experience of this year, have demonstrated beyond cavil that the house mosquito, known as the *Stegomyia fasciata*, is the sole known cause of yellow fever epidemics and have demonstrated the futility and nuisance of many antiquated methods of quarantine hitherto resorted to, and the wisdom and necessity, in the interest of the public health and the public business, of uniform regulations to prevent the importation into the United States of yellow fever and its spread from state to state in the unfortunate event of its introduction; now, therefore, be it

*Resolved*, That we, delegates from Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, Maryland, North Carolina, South Carolina, Tennessee, Virginia and West Virginia, hereby respectfully request the Senate and House of Representatives in Congress assembled to enact a law whereby coast maritime and national frontier quarantine shall be placed exclusively under the control and jurisdiction of the United States Government, and that matters of interstate quarantine shall be placed under the control and jurisdiction of the United States Government, acting in co-operation with the several state boards of health.

We, furthermore, respectfully request that congress shall make adequate appropriation to enforce and perfect the objects of this memorial and to stamp out as nearly as practicable the yellow fever-carrying mosquito in its breeding or living places in the United States, and by negotiating arrangements with the governments of Central and South America and the West India islands, in places where the said mosquito has its breeding places or exists in said countries.

*Resolved*, second, That we urge on the legislatures of the several southern states that they enact quarantine regulations as nearly as possible in accord and conformity as hereafter enacted.

We, furthermore, urge the governors of the said several states with the above object in view specifically to call the attention of the legislatures of their respective states to the wisdom and policy of this course.

The Norfolk *Virginian-Pilot*, November 12, said editorially:

The Southern Quarantine and Immigration Conference has in our opinion, acted wisely in adopting a resolution requesting congress to enact a law "whereby coast, maritime and national frontier quarantine shall be placed exclusively under the control and jurisdiction of the United States Government," and the *Virginian-Pilot*, for one, earnestly hopes that the suggested legislation will be speedily enacted.

In our opinion, the South is the section of the country which will derive the most benefit from national control, and every southern representative, who has the best interests of his section and his country at heart, should not hesitate to declare in its favor.

The New Orleans *Democrat*, November 11, said:

There can be no question whatever of the jurisdiction of the Federal Government in regard to interstate quarantine affairs, its absolute constitutional jurisdiction, and some day this will be recognized so fully by all that there will no longer be any objection to its assuming sole charge of them.

**American Tuberculosis Exhibition.**—This exhibition, as we announced two weeks ago, will be held in the American Museum of Natural History, New York City, November 27 to December 9, under the auspices of the National Association for the Study and Prevention of Tuberculosis and the Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York City. Chief stress is to be laid on a popular presentation of the facts of the situation and the approved methods of prevention and cure. This will be done by charts, tables, photographs, plans, models and apparatus. The co-operation from sanatoria of standing in the United States and Canada has been particularly cordial, and both public and private institutions from all parts of the country will be elaborately represented. A representative collection of material from the recent exposition in Paris will form an attractive feature. Models of various tents and buildings for open-air treatment will be given a prominent place. A series of public meetings has been arranged. On the opening night the principal address will be by Mr. Talcott Williams, of Philadelphia, while brief addresses will also be made by Mayor McClellan, of New York, by Dr. Darlington, commissioner of health, and by President Jesup, of the museum. Wednesday evening, November 29, at a special meeting devoted to tuberculosis and the trades, the principal address will be by Mr. Graham Taylor, Chicago, with short addresses by President Gompers, of the American Federation of Labor, and other well-known representatives of organized labor. Friday evening, December 1, at a special meeting for physicians, addresses will be made by Drs. Lawrence F. Fliek, Philadelphia; W. A. Evans, Chicago; A. Jacobi, New York; Vincent Y. Bowditch, Boston, and others. Friday, December 8, at a meeting for the teachers of the public schools, Dr. S. A. Knopf, New York, will speak. The New York Board of Education is cordially aiding the movement and is officially urging the teachers to attend the meeting and exhibition. The committee is in receipt of numerous requests from other cities for the loan of the material. The National Association for the Study and



Prevention of Tuberculosis is also endeavoring to form one or more traveling exhibits on a smaller scale which may be packed in small compass and kept constantly on the move, being exhibited in towns and villages where it would be impossible to arrange for or to finance a large exhibition. A special exhibition of pathologic material has been installed, the nucleus of which is formed by contributions from the Phipps Institute in Philadelphia and the Laboratory at Saranac Lake. Sanatorium physicians are specially asked to meet on the afternoon of December 1. Further information may be obtained from Mr. Livingston Farrand, secretary, 105 East Twenty-second street, New York.

**National Tuberculosis Association Nomenclature.**—We publish below the report of the committee on nomenclature to the National Association for the Study and Prevention of Tuberculosis, presented at the annual meeting in Washington. The association is anxious to have the proposed system tested by physicians in sanatoria and hospitals in order that criticism based on experience may be received. The executive secretary of the association is Dr. Livingston Farrand, 105 East Twenty-second Street, New York City. The report recommends the use, with additions thereto, of Turban's scheme for a method of comparative statistics for pulmonary tuberculosis. This is now used by the International Association for the Prevention of Tuberculosis in Europe. Following is a translation, with some modifications, from *Tuberculosis*, the monthly publication of the Central International Bureau for the Prevention of Consumption, September, 1904 (Johann Ambrosius Barth, Leipsig).

TURBAN'S SCHEME.

1	Extent of disease in the lungs.	I II III	For exact definition see below:
2	How long consumptive?	3 months..	Period to date from the observation of the first clinical symptoms, e. g., stubborn coughing, hemoptysis, pleurisy, loss of flesh, etc.
3	General condition of the patient.	A..... X.....	A = favorable. X = unfavorable.
4	Digestion.....	B..... Y.....	B = unimpaired. Y = impaired.
5	Pulse.....		The pulse is to be registered every morning and evening, the patient resting.
6	Temperature..	F..... f..... t n.....	F = Maxima for the day over 101 F. f = Maxima for the day from 99 F. to 101 F. t n = normal temperature (mouth).
7	Tubercle bacilli.	+..... 0.....	+ = tubercle bacilli present. 0 = tubercle bacilli absent.
8	Tuberculous complications.	Larynx....	Name of the organ suffering from tuberculosis.
9	Other complications.		Name of the disease.
10	Result of treatment.		(Vide classification of results of treatment proposed by committee on nomenclature.)

DEFINITION OF THE EXTENT OF DISEASE IN LUNGS, ACCORDING TO TURBAN.

- I. Slight lesion extending at most to the volume of one lobe or two half lobes.
- II. Slight lesion extending further than I, but at most to the volume of two lobes; or severe lesion extending at most to the volume of one lobe.
- III. All lesions which in extent of the parts affected exceed II.
- By "slight lesion" we understand disseminated centers of disease which manifest themselves physically by slight dullness, by harsh, feeble, or broncho-vesicular breathing, and by râles.
- By "severe lesion" we mean cases of consolidation and excavation such as betray themselves by marked dullness, by tympanitic sounds, by very feeble broncho-vesicular, bronchial, or amphoric breathing, by râles of various kinds.
- Purely pleuritic dullness, unless marked, is to be left out of account; if it is serious, the pleurisy must be specially mentioned under the head of "tuberculous complications."
- The volume of a single lobe is always regarded as equivalent to the volume of two half lobes, etc.

ADDITIONS BY THE COMMITTEE.

PROPOSED CLASSIFICATION OF CASES AND RESULTS OF TREATMENT IN PULMONARY TUBERCULOSIS, TO BE USED IN CONNECTION WITH TURBAN'S SCHEME.

- Progressive:** (Unimproved). All essential symptoms and signs unabated or increased.
- Improved:** Constitutional symptoms lessened or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present.
- Arrested:** Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs stationary or retrogressive; the foregoing conditions to have existed for at least two months. (The length of time mentioned is of course somewhat arbitrary, but is intended to cover the cases which frequently occur, where the patients leave a sanatorium for various reasons, contrary to advice, after a stay of a few weeks, although all active symptoms may have ceased completely soon after entrance.)
- Apparently Cured:** All constitutional symptoms and expectoration with bacilli absent for a period of three months; the physical signs to be those of a healed lesion.
- Cured:** All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

- Incipient (Favorable):** Slight initial lesion in the form of infiltration limited to the apex or a small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.
- Moderately Advanced:** No marked impairment of function either local or constitutional. Localized consolidation moderate in extent with little or no evidence of destruction of tissue; or disseminated fibroid deposits. No serious complications.
- Far Advanced:** Marked impairment of function, local and constitutional. Localized consolidation intense; or disseminated areas of softening; or serious complications.
- Acute Miliary Tuberculosis.**

PLAN SUGGESTED BY THE COMMITTEE ON NOMENCLATURE FOR TABULATION OF CASES FOLLOWING TURBAN'S SCHEME.

Name	Condition.	Amount of Involvement.	Duration of Disease.	General Condition.	Digestion.	Range of Pulse.	Max. Temp. for day. Deg. F.	T. B.*	Complications.	
									Non-tub.	Tub.
Mr. X.	On admission	Advanced	II	3 mo.	Favorable.	Impaired.	76-100	100	+	Neg.
	At discharge.	Arrested.	II	9 mo.	Favorable.	Unimpaired.	76	98.6	0	

\* Absence or presence of tubercle bacilli to be determined only after repeated examinations while patient is under observation.

CANADA.

- More Insanity in Montreal.**—Insanity is said to be increasing in Montreal. In 1898 the commitments for insanity numbered 158; in 1900, 174; in 1904, 251; this year, 171 up to November 1.
- Smallpox in Ontario.**—Thirty cases of smallpox have developed in a township near Peterboro, Ont.—Five new cases of smallpox developed last week in Toronto. Eleven patients are now in the smallpox hospital.
- Personal.**—Dr. G. Forrest Weatherhead, assistant physician of the Protestant Hospital for the Insane at Verun, Quebec, has been given a medal by the Montreal branch of the Royal Canadian Humane Association, for heroism in life-saving.—Dr. A. J. Rieher, Montreal, delivered a public lecture in Quebec, November 6, on the new outdoor treatment of tuberculosis.—Mr. Z. A. Lash, K.C., Toronto, has contributed \$10,000 to the proposed new Toronto General Hospital. The total now subscribed is \$989,000.—Dr. H. R. Duff, Kingston, Ont., has been appointed vice-chairman of the Kingston General Hospital.—Dr. C. J. Fagan, provincial medical officer of British Columbia, has returned to Victoria from a trip east.

**Hospital News.**—During October there were 10 patients in the Swiss Cottage Hospital, Toronto, with smallpox. Four were discharged cured during the month, and 6 remained at the end of the month.—About \$15,000 has been subscribed in Hamilton, Ont., for the purpose of a consumption sanitarium for that city.—A by-law will be submitted to the citizens of Winnipeg to raise \$150,000 to aid in additions to the Winnipeg General Hospital.—The Toronto Nursing-at-Home Mission has cared for 327 patients since the first of June. The seven nurses connected with this institution made 2,578 visits to these patients.—A new hospital, Misericorde Hospital—will soon be completed at Edmonton, Alberta. The edifice will be four stories high and will cover an area of 100x50 feet.—St. Paul's Hospital, Montreal, the new contagious diseases hospital in connection with Notre Dame Hospital, was consecrated by Archbishop Bruchesi on October 29.—A conference is to be held between the board of trustees of Toronto General Hospital, the Ontario government and the representatives from the University of Toronto, at a nearby date. The present board of trustees, which consists of five, three appointed by the government, one by the subscribers and one—the mayor—by Toronto, will hand in their resignations. It is likely that a larger board will be appointed to administer the affairs of the new hospital which will shortly be erected.—A new staff has been organized recently in connection with St. Boniface Hospital, Winnipeg. A meeting was held October 19, when Hon. Dr. O'Donnell was elected president and Dr. J. McKenty, secretary. The staff consists of the following members: Consulting physicians, Drs. O'Donnell, J. R. Jones and William Rogers; consulting surgeons, Drs. England, McArthur, R. McKenzie; attending physicians, Drs. Lambert, Nicholas, McKenzie, Peatman; attending surgeons, Drs. Todd, McKenty, Lehman; attending physicians, children's ward, Drs. Davidson, Dubue, Slater; infectious diseases, Drs. Devine, Hal-



penny, Teney, Gardner, Howden; oculist, Dr. Good; pathologists, Drs. Bell, McLean and Turnbull. Heretofore this hospital has been an open institution.—The late Senator Fulford of Brockville, Ont., left \$25,000 to the Brockville General Hospital.—The Dominion government will erect a new detention hospital at Quebec with accommodation for 300 to 400

### FOREIGN.

**Closure of Russian Universities.**—The *St. Petersburg. med. Wochst.* states that all the Russian universities are closed.

**Plague at Zanzibar.**—Bubonic plague is reported to be present in Zanzibar, but steamship lines are said to be taking both passengers and freight.

**Bubonic Plague in China.**—The United States consuls at Antung and at Niuchwang report that plague has appeared at these places and that there has been one death from the disease at Niuchwang.

**Variola in Chili.**—It is reported from Valparaiso that since the beginning of the recrudescence of variola in that city in January, 1905, 11,000 people have been stricken with the disease and over 5,000 deaths have occurred.

**Cholera in Europe.**—Scattered cases of cholera are reported here and there in Russia close to the western border. The mortality was 1 to 3 in the epidemic in Germany, while in Russia it seems to be 2 to 3.

**Australasian Association for the Advancement of Science.**—The next session of this association was to have been held in Adelaide in September, 1906, but it has been postponed till January, 1907, as September is not a convenient date for many of the members who are engaged in educational work.

**Typhus Fever in Glasgow.**—An outbreak of typhus occurred in a house intended to accommodate 4 or 5 individuals, but in which 9 persons were living. The health officer of the city calls attention to this case and urges the necessity of dealing severely with cases of overcrowding, as they are a menace to the health of the community.

**Fee for Consultation by Telephone.**—The Prussian medical chambers (*Aerztekammer*) have been discussing the question of the fee to charge when a physician is consulted over the telephone. The medical chamber in Pomerania has announced that the fee is the same for medical advice given over the telephone as when the patient comes to the physician's office. The other organizations will probably adopt the same rule.

**Organization of the Profession in Germany.**—We learn that the *Leipziger Verband*, to protect the economic interests of the members of the profession in Germany, now numbers 17,000. Great efforts are being made to enlist the recent graduates in the society as valuable material for the future. For this purpose an employment, exchange and information bureau has been opened at the central office, which is accomplishing good work.

**A Medical Library for India.**—A movement is said to be on foot among the officers of the Indian Medical Service to establish at a convenient center a circulating medical library. At present there is no such library in India which is of any practical use to medical men. At the medical colleges in the larger cities there are reference libraries, but these are not available to men throughout the empire. A model for such a library is that at Manila, for the use of United States employes in the Philippines.

**Prizes Offered by the Mexican National Academy of Medicine.**—Two prizes of \$500 each are offered by the *Academia Nacional de Medicina* and published in its organ, the *Gaceta Medica de Mexico* for August 1. The subjects appointed are: "Early Diagnosis of Tuberculosis and Means to Prevent Its Spread" and "Study of Leprosy in Mexico." Articles must be written in Spanish and be received by the academy before Oct. 1, 1906. Address: Apartado postal num. 517, Mexico. The competing essays must be accompanied by the name of the author in a sealed envelope.

**Pure Food Bill in Victoria.**—The pure food bill, recently introduced into the Victorian parliament, says the *Australasian Medical Gazette*, provides that no person shall sell beer which contains more than a hundredth part of a grain of arsenic per imperial gallon, or that contains any lead, copper, strychnin, coenul indiens, picric acid, or any substance which is not a normal and proper constituent of beer or a necessary ingredient in its manufacture. In future it will be an offence to make or sell toys colored with varnish that contains arsenic or any other substance in a quantity exceeding that prescribed by regulation.

**Cholera in India.**—It is reported that the outbreak of cholera, which has been raging in Madras since last July, has at

last shown signs of abating. The average death rate from cholera during August was over 50 a day, but the returns for September showed about 30 a day. The cause of the epidemic has been traced to the emigration depot in the north of the "Black Town." It was adjacent to this depot that an outbreak of plague occurred last year and that it was only by prompt and very energetic measures that the danger of the outbreak spreading to the whole city was averted. Naturally there has been an outcry for the removal of the depots beyond corporation limits.

**Evening Surgical Demonstrations.**—Professor Hochenegg of Vienna has inaugurated a series of weekly surgical evenings, free to physicians, when he will demonstrate various common operations. The first of these "evenings" attracted a crowded audience and aroused great interest. A lively discussion followed the presentation of two patients who had been treated by resection of a tuberculous ankle with Mosetig iodoform filling of the cavity. Certain physicians expressed fear of iodoform intoxication from the procedure and others of the dissemination of germs, claiming that the faultless healing of the wound does not necessarily imply that local and general recurrence is out of the question.

**Importance of a Third Person at Consultations.**—A dentist in Berlin was recently sentenced to three years in the penitentiary on account of the unsupported testimony of a young woman patient who had a slight fainting spell while he was attending to her teeth. She became pregnant and claimed that he must have committed a criminal assault on her during her unconsciousness. She testified that his clothing was disarranged when she regained consciousness. A correspondent writing from Berlin states that physicians there are becoming very scrupulous in regard to the presence of a third party in all their consultations, especially with young girls and even with men, as the frequency of homosexual practices has warned them to be on the alert.

**The Medical Building at Brussels.**—The official inauguration of the "Maison des Médecins," on the Grand' Place, in the heart of Brussels, occurred November 19. A number of prominent officials were present, as well as delegates from all the medical and scientific societies of the district. The building contains a large assembly hall and numerous lecture and committee rooms, with a well-equipped library of periodical literature. A number of medical and scientific societies have already engaged quarters for their meetings, and glass show cases have been installed and space on the walls rented for advertising purposes. The second floor has been set apart for a permanent exposition of everything connected with the installment of hospitals, operating rooms, disinfection apparatus, etc. The basement is given up to a restaurant.

**Australian Health Society.**—The annual meeting of the Australian Health Society was held on September 30 at Melbourne. The governor, Sir Reginald Talbot, presided. The annual report stated that during the year arrangements had been carried out for the amalgamation of the society with the Association for the Prevention and Cure of Tuberculosis. This association has been instrumental in arousing public attention to the need of concerted action for the prevention of consumption, and it is believed that the union of the two societies will further the spread of hygienic knowledge and promote the cause of sanitary progress. The annual examination of public school pupils in the subjects of health and temperance, conducted by the council with the co-operation of the education department, formed an important branch of the society's work.

**Carnegie College of Hygiene.**—The Carnegie College of Hygiene at Dunfermline was formally opened October 4. The course of study is very comprehensive. The college year is divided into three terms of twelve weeks each, and the work is divided into two sections—theoretical and practical—which, in turn, are subdivided. The theoretical includes human anatomy and physiology, personal and school hygiene, theory of movements and teaching, symptomatology in connection with remedial gymnastics and school hygiene, and voice production. The practical course includes (1) educational gymnastics—Ling's Swedish system, (2) remedial gymnastics and massage, students being allowed, under medical supervision, to treat cases; (3) methods of class teaching, students having charge, under supervision, of classes of all ages in the public schools and in the gymnasium; (4) games, dancing, and swimming.

**Tuberculous Immigrants in New Zealand.**—Dr. Mason, chief health officer of New Zealand, calls attention to the fact that of 190 patients with pulmonary tuberculosis treated at the Cambridge Sanatorium, 16 were stated to have come from other countries, and that most of them were unable to pay anything toward the cost of their maintenance. He is reported as saying that shipping companies are the natural enemies of



the health department, and that the natural desire of the shipper to escape quarantine delays is the cause in nearly every instance of infectious diseases being introduced into a hitherto clean country. He maintains that if a strict examination were made at the port of departure of all persons proceeding to New Zealand to take up their residence, there would be no grounds of complaint against the health department on the score of their methods of dealing with consumptive immigrants.

**Celebration of the Tercentenary of a British Physician: Sir Thomas Browne.**—A portrait statue of Sir Thomas Browne was unveiled at Norwich with great ceremony on the three hundredth anniversary of his birth, October 19. Although he did not contribute anything to the science of medicine, yet his great works, "Religio Medici," "Christian Morals," "Vulgar Errors" and "Urn Burial," and the beauty of his character and public spirit have immortalized his name. Professors W. Osler and Clifford Allbutt were delegates to the celebration from Oxford, and Osler stated in the course of his address that he had visited Norwich thirty-three years ago as a pilgrim to the place hallowed by the memory of Sir Thomas Browne. He remarked further that there are three lessons to be learned from his life, all of value to the profession to-day: "First, we see in him a man who had an ideal education. He was thoroughly versed in the classics, and lived abroad for two years, thereby becoming a citizen of the whole world. The second important lesson from his life is that he presents a remarkable example in the medical profession of a man who mingled the waters of science with the oil of faith. The third lesson is that the perfect life may be led in a very simple, quiet way. Norwich was a small town in his day." The one blot on his memory was that he believed in witchcraft, and testified in the last trial of witches in England, the women being condemned.

**Cholera in Europe.**—Germany is dealing successfully with cholera as it is brought over the Russian border, but the outlook in Russia is very discouraging, as scattered cases are reported from a number of points along the frontiers and elsewhere. The congress of medical men summoned to Moscow last spring to discuss measures to protect the empire against invasion by cholera passed resolutions urging radical changes in the taxation, etc., which grind down the people, keeping them at the point of starvation and thus rendering them unable to cope with disease. The congress further went on record with the statements that the prevailing unrest was so great that attempts to arrest the spread of cholera would be likely to meet with opposition on the part of the peasants, and prove dangerous to life and limb of those engaged in prosecuting sanitary measures. Also that the return of troops from the seat of war is liable to spread disease, and if there should happen to be a grain shortage the outlook would be very threatening. The congress officially voted in favor of a national representative assembly which could deal with these and allied questions. The congress was denounced by the authorities as revolutionary, we remember, and its transactions were suppressed, but the czar has done what the congress demanded in regard to summoning a national assembly. The problems before it, however, take time to solve, and the danger from cholera is pressing.

**Sanitary Regulation of Costumes, Libraries, Pawnbrokers, Etc.**—The authorities in Bohemia have recently decreed that the clothing and bed linen of persons who have recovered or died from infectious diseases should be disinfected, and also the clothing and linen of persons who have been in contact with the convalescent or the deceased. Masks for the face are not allowed to be rented, and wigs must be revarnished inside before they can be rented to another party. All garments which come in contact with the body must be washed clean before they can be rented out again. Books and pieces of music in circulating libraries need not be disinfected before being given out, as no effectual means of disinfecting them has yet been found practicable. But a warning should be pasted in each book or piece of music cautioning against turning the pages with the moistened finger, and also suggesting the advisability of putting a paper cover on the book or piece of music before handling it. The warning notice should further request the holder of the book to notify the proprietor of the circulating library in case there is infectious disease at his house. In case of notice of infectious disease the proprietor should withdraw the books or music from circulation until after formaldehyde disinfection. The proprietors of large theaters are required to disinfect the costumes, especially all garments coming in contact with the body, used by the stock company. Pawnbrokers' establishments must be equipped with their own disinfecting plants.

**Eighth French Congress of Internal Medicine.**—The main addresses at this congress, which was held at Liège in September, were on "The Clinical Forms of Chronic Rheumatism," "Avoidance of Salt in the Diet in Nephritis," and "Secretions of the Pancreas." Widal outlined the treatment of nephritis by "dechloridation" as requiring first the removal from the organism of the salt and the edema encumbering it; when this has been accomplished, then allowing in the diet only enough salt to correspond to the degree of permeability of the patient's kidneys for the salt. At first all salt should be forbidden, but when the organism has once been freed from the excess of salt and fluid, then increasing amounts of salt should be permitted, always keeping below the strict tolerance of the patient. The "dechloridation" may be aided by diuretics; theobromin and its compounds are the most effectual dechloridizers. An ordinary diet with 2,600 calories contains about 1.5 gm. of salt. Comparative dosage of the salt ingested and eliminated will reveal at once the degree of permeability of the kidneys. Beco's experience has been that the use of diuretics to supplement abstention from salt is equally effectual whether the effusion is of renal or cardiac origin. His experimental research has demonstrated that certain diuretics act on the wall of the renal vessels, dilating them and thus augmenting the circulation through the kidney. Dechloridation treatment is one of the rare examples of a therapeutic progress logically deduced from progress in theorizing. The *Presse Médicale*, Nos. 78 and 82, contains the full text of the reports.

**Ninth French Congress of Urology.**—The French congress of urology always follows the congress of surgery at Paris, and this year it met October 5-7. Tumors of the bladder, prostatectomy and functional diagnosis of kidney disturbances were the main subjects treated. Rafin declared in regard to tumors of the bladder that surgical intervention for their removal should be within narrow limits. It is a trivial operation and the remote results are extremely satisfactory when the tumor is pedunculated or can be pedunculated, but when the tumor is infiltrated the immediate results of attempts to remove it are extremely grave and the outlook is serious. In 96 cases of partial cystectomy for epithelial cancer, there were 21 deaths at once, and in 25 cases the outcome is not known. In the remaining 50 cases, 5 of the patients were alive after three to six years, but 30 succumbed to recurrence and in 16 the outcome is not known. Total cystectomy has been done 30 times, with 17 operative deaths. Pawick's patient is the only one still surviving. Hagge's patient lived for five and a half years. The operative mortality from sarcoma has been 43.6 per cent. and rapid recurrence is the rule. The operative mortality for myoma has been 28.5 per cent. and recurrence is liable. Weinrich stated that Nitze had removed 101 papillomata by his intravesical technic, and 72 cases have been followed to date without a recurrence. There has been recurrence in 18 cases; the others have been lost to sight. Cathelin exhibited some new instruments to facilitate his technic of perineo-suprapubic prostatectomy. Several speakers urged that the fact of there being only one kidney should not deter from surgical intervention. One reported a case of severe hematuria with a single kidney cured by decapsulation. Another cured a patient in uremic coma by decapsulation of the remaining kidney after removal of the other kidney two years before on account of tuberculosis. One speaker reported clinical cures even in advanced stages of tuberculosis of the kidneys. In 3 such cases the nephrectomy was followed by the entire subsidence of all the lesions in the bladder and prostate.

**French Congress of Surgery.**—The eighteenth congress met at Paris during the first week in October, immediately after the first International Congress of Surgery. The subjects appointed for discussion were "Surgery of the Pancreas," "Reparative Surgery of the Face," and "Conservation in Treatment of Traumatism of the Limbs." Nimier delivered the address on the last subject, emphasizing the fact that the modern surgeon should not only aim to preserve the injured parts by correcting the primitive lesions, applying the necessary bloodless measures, but he should also strive to restore function to the parts, with surgical intervention if necessary for this purpose from the very first, as soon as the diagnosis and the indications are established. Repair of the traumatic lesions is easily done, but functional repair requires persevering massage, mechanotherapy, hydrotherapy and electrotherapy. Massage has taken in surgery the place it deserves, but the other physical measures are still in a somewhat rudimentary condition. Hospitals should be better equipped for functional cures of traumatic lesions than is the case at present. Doyen reported the successful suture of a severed axillary vein. He used very fine, round needles, suturing at separate points, and fastening the stumps to the surrounding parts to prevent any traction on the suture. In case of complete destruction of the



axillary vein, he suggested that the external jugular might be transplanted on the stump of the shoulder, anastomosing it with the cephalic vein. To facilitate the suture of a vein, he advises suction cleansing of the field with an aseptic tube connected with a suction pump. This aspirates every particle of blood, etc. Calot described a new method of treating congenital dislocation of the hip joint. He makes a very small incision, less than 2 cm. long, and introduces through this a special dilating instrument, with which, instead of cutting the stricture in the capsule, he stretches it. When the capsule is thus stretched, the dislocation can be easily reduced, as he has accomplished in two cases with excellent results. The discussion of surgery of the pancreas showed once more the difficulty of differentiating lesions in this organ. Garré said that he was able to save only 3 out of 11 patients with acute purulent inflammation or infarcts in the pancreas.

**Crusade Against Tuberculosis in the Argentine Republic.**—Among the measures adopted by the Antituberculosis League of Argentina is the publication and distribution of 200,000 copies of a "catechism" with questions about tuberculosis, and the same number of copies of a circular with directions for its cure and prevention. These circulars are distributed to children in the schools and to the audiences at public gatherings and at religious services. Two large wall tablets have also been issued, which are hung up in factories, public halls, schools, etc. One gives the proportions of the mortality from various diseases in the sixteen largest cities of the country, the proportions being shown in colored sections of circles. In Corrientes the mortality from tuberculosis is considerably more than half the total mortality, and in all it has the "lion's share," except in the two hotbeds of malaria. The second placard has in display type "the Disease," "Contagion," and "Curability." The second column, "Contagion," gives illustrations of the bacilli, the diseased lung tissue, and of pocket and standard cuspidors. Under the heading of "Curability" are included the means of getting cured by life in the open air, plenty of light and air, food and rest. A list of the tuberculosis sanatoriums and dispensaries, existing or projected, is appended, the list concluding as follows: "Sanatoriums for children, none; country homes for convalescents, none; seaside sanatoriums for children, one, the Hospicio at Mar del Plato; capacity, 125 children." Another measure which has served to popularize the ideas in regard to prevention and cure of tuberculosis has been the printing of antituberculosis maxims on all the boxes of matches issued by the principal company. As 10,000,000 to 12,000,000 boxes are sold each month, this is regarded as a great aid in the propaganda. The isolation of the tuberculous is now accomplished in the public hospital at Buenos Ayres, as the curable applicants are sent to the public sanatorium and the incurable to the Muniz Hospital. The other hospitals have solved the problem of isolation by refusing tuberculous applicants altogether. An illustration of the placards is given in the last *Semana Medica*, with the address on the subject presented by E. R. Coni at the recent International Tuberculosis Congress.

#### LONDON LETTER.

##### The New Cancer Research Laboratories at the Middlesex Hospital.

Cancer research at the Middlesex Hospital may be said to have gone on for more than 150 years. Records of cases have been accumulated since 1747 and are now being investigated. The new cancer research laboratories have the advantage of receiving material from two different classes of cases—those seen in general hospitals and susceptible of amelioration by operation, and those seen in the infirmaries and progressing to a fatal end. The laboratories were opened in 1900, at the same time as the present cancer wing, which contains forty-nine beds for incurable cases. The first director of research was Dr. A. Foulerton and the present one is Dr. Lazarus-Barlow. Under the latter the facilities have been greatly extended. In 1900 the director had three assistants; now he has eight, including four trained paid assistants, two holders of research scholarships and two voluntary workers who are training for research. Each worker has a separate laboratory and there is still room for others. The laboratories are fitted with all the most recent apparatus for histologic, bacteriologic and biochemical work. There are also a workroom, where apparatus are constructed, altered or repaired; a preparation room, where the tissues, organs, etc., are hardened, embedded and cut; a library containing the most recent monographs on malignant disease and current periodical literature on the subject, and cold-storage rooms in the basement which are used for specimens. The specimens and material in all its forms are so well classified and catalogued that any case from the year

1747 onward may be investigated at short notice. Every member of the department undertakes at one time at least two pieces of work—one statistical, based on the accumulated data of years, and the other a piece of research. Annual reports are issued comprising not only the description of the researches, but also the pathologic findings in some 300 fresh cases of malignant disease.

##### Sir Frederick Treves on the Army Medical Service.

At a largely attended meeting of the Brighton and Sussex Medico-Chirurgical Society, Sir Frederick Treves delivered an address on the army medical service. He pointed out that the so-called hospital scandals of the Boer war five years ago led to an extremely violent attack on the army medical service, which was undeserved by a body of men who were endeavoring to make bricks without straw. Since that time the medical service has been reorganized, according to the advice of a commission of experts appointed by the government. The chief change made in the status of the army surgeon is that his promotion now depends on merit and not on seniority. He is sent to the Army Medical College for study before he advances any step. Any man who does unusually well at the examinations gets accelerated promotion. It is now possible for the army surgeon to qualify as a specialist and the number who have done so is extraordinary. When so employed special pay is given. The result is that the army is attracting the best men in the profession. The present field equipment, Sir Frederick thinks, is the best in the world. It leaves little to be desired; it is light, compact and elastic. The general result is that the army medical service is second to none in the world, possessing a corps of highly competent and most efficient medical officers, an up-to-date equipment, and a most carefully elaborated organization; but there are anomalies in the war office—the army medical department is under the control of an adjutant-general who is not a physician. In the Boer war the admissions to hospital were 746 per 1,000 for disease and only 34 for wounds. This meant that the great bulk of casualties were due to preventable disease. But the army doctor had practically no power in that direction. The casualties at the battle of Colenso were nothing to those caused by the men drinking the contaminated water of the Modder River when peaceably crossing it on a perfectly calm day. The army surgeon should have a much freer hand than he has at present. Sir Frederick concluded by pointing out what appeared to him to be needed to make the army medical service as perfect as possible: 1, The director general should be the head of his department and be responsible for its efficiency and economical administration; 2, he should have direct access to the army council and to the secretary of state; 3, he should have control of the money voted for the medical service; 4, the service should remain as at present, under the supervision of the advisory board; 5, an efficient army medical reserve should be formed; 6, the combatant officer should have some knowledge of hygiene as applied to campaigning and barrack life, and a like knowledge of a still more elementary character should be possessed by the private soldier; 7, the army medical officer should be vested with such authority and provided with such personnel as would enable him to carry out those sanitary arrangements in the field which experience had proved to be essential to secure the minimum loss of life from disease.

##### The Evil of Street Noises: Town Clock Nuisance Abolished in Birmingham.

The unnecessary evil of some city noises is well illustrated by a letter written by a man who underwent an abdominal operation in Birmingham. He wrote to the lord mayor, asking him if the quarter-hours of the town clock could not be stopped every day from 10 p. m. to 8 a. m., and the hours muffled to half-tones, as the ear-splitting stridency of the notes greatly disturbed him during the night. The lord mayor declined to interfere on "the grounds that the clock is a public one and its consistent working is of the first importance to the inhabitants of the city." The *Lancet* discussed the question and thought that both from a humanitarian and a business standpoint the decision was wrong. A clock which clangs noisily at quarter-hour intervals throughout the night must be a serious drawback to the recovery of the sick within hearing of its sounds. Nor is the loud chiming of a clock by day and night necessary for business. Much of the din which prevails in large towns by day and by night is avoidable. This protest by the *Lancet* has been followed by the decision of the city council of Birmingham to adjust the automatic apparatus of the town clock so as to cut off the chiming mechanism between 7:30 p. m. and 5 a. m.



## Professor Osler at Guy's Hospital.

A very enthusiastic welcome was given Professor Osler at Guy's Hospital, where he delivered an address to the Pupils' Physical Society on "The Life and Work of Sir Thomas Browne." He was welcomed by the venerable president of the society, Sir Samuel Wilks, and the members of the staff of the hospital. In commencing his address Professor Osler claimed from the audience the "customary indulgence which is always extended to the bibliomaniac." He said that he had long studied the works of Sir Thomas Browne and in proof of this he pointed to a large table in front of him covered with editions of that author's works in Latin, German, Dutch and French. Among these was a copy of "Urne Burial," which was stated to have belonged to one of the sons of Sir Thomas Browne. Of the "Religio Medici" Professor Osler said with some slight emphasis that it was given to the world by Browne before he was 30, and quoted the author's contention that the magnetic force of a man began to fail after that age. This, Professor Osler said, was a sufficiently serious reflection for certain advanced thinkers who at the present day considered that a man was fit to work up to 40. He was proceeding to say what would happen to a man after 40 when he was interrupted by loud cheers and laughter. He treated with sarcasm the statement attributed to him by the Canadian press that men past work should be anesthetized out of existence, and whenever he alluded to this topic he drew sympathetic cheers from his audience. The address was illustrated by lantern slides thrown on a screen. Great appreciation was evinced by the students when it was announced that Professor Osler had presented a complete edition of the works of Sir Thomas Browne to their society. The chairman, Dr. Frederick Taylor, in proposing a vote of thanks to Professor Osler, said that to all intents and purposes he was an Englishman and commented on the charm with which he had communicated the fruits of his own recreation, bibliography. In replying Dr. Osler spoke of the veneration he had always entertained for Guy's men and of the great debt he owed to his "revered teacher," Sir Samuel Wilks.

## Increase of Lunacy in London.

The number of pauper lunatics in asylums, licensed houses, workhouses, and with relatives and friends, on Jan. 1, 1905, was 24,652, an increase of 704 on the figures for the corresponding date of 1904. The increase on the latter date on the number for 1903 was 996—the highest on record. The superintendents of the different asylums, in their reports, assign various causes for the amount of insanity which exists. Intemperance, worry and heredity are specified by the superintendent of the Banstead asylum. The medical superintendent of the Claybury asylum finds that alcohol is the exciting or predisposing cause of insanity in 33 per cent. of the males admitted, and in 18 per cent. of the females. At Colney Hatch hereditary influences were found in 23 per cent. of the cases and congenital defects in 7 per cent. In Hanwell 24 per cent. of the admissions were due to alcohol and 48 per cent. to heredity. Possibly the increase of insanity shown by the figures is more apparent than real, for there has been an increasing tendency of recent years to certify for asylum treatment cases of senile decay. The recoveries for the year 1904 show the following percentages: On the total admissions, 33.5; on the average number of patients resident, 7.6; on the total number under treatment, 6.25.

## The Study of Tropical Medicine.

The winter session at the London School of Tropical Medicine was inaugurated by an address on "Scientific Research in Medicine," by Professor Nuttall. Since its opening, in October, 1889, the school has received 554 students, including 40 women graduates. For the present session 39 students have entered, the largest number on record. Professor Nuttall traced the great development of tropical medicine in recent years for which Lazear, Myers, Durrion and Plehn and others had laid down their lives. He pointed out that medical research requires endowment and said that it is a grievous thing that in this country, where so much is done for charity, so pitifully little is done for the advancement of learning. The wealthy classes in this country ought, he thought, to imitate their brethren in America. In many institutions one man is expected to perform duties which in more enlightened Germany are allotted to two, three or more teachers, each provided with a living wage. Most teachers of science in Great Britain receive pittance of which few are sufficient and many totally inadequate.

## Pharmacology

## REPORT ON NOSTRUMS IN GERMANY.

Translated by Dr. Henry Leffmann, Philadelphia.

In a recent issue of the proceedings of the Dresden scientific society, "Isis," Dr. A. Beytheim, director of the Dresden municipal laboratory, gives the results of examinations of some secret remedies sold in that neighborhood. The data are of value, because they are from trustworthy sources, and interesting as throwing light on the conditions in Germany. Some of the remedies are for domestic animals, but it seems not amiss to include these. As a positive identification, the German title is given with a free translation.

*Einreibungsmittel fuer Staerken der Hautnerven.*<sup>1</sup> Inunction for strengthening the cutaneous nerves. The advertisement stated that the preparation contained Iceland moss. None was found. The following ingredients were found in 100 c.c.: Alcohol, 22.24 grams; ammonia, 1.10 grams; fixed solids containing a carbonate, 1.55 grams. It was a solution of ammonia in dilute alcohol, with a little potassium carbonate and opodeldoo.

*Spezial-Ambrosia.* Special Ambrosia. This a greenish-yellow salve sold by a quack for aiding parturition. The price is 3.75 marks for a package weighing 125 grams (about \$1.00 for 4 ounces). It was found to consist of lard, flavored with caraway oil.

*Wurmkrautpulver.* Wormwort powder. This was found to be composed of powdered tansy flowers.

*Dr. Tschernich's Universal-Lungenkraut.* Dr. Tschernich's Universal Lungwort. This was found to be a powder of the entire plant of *Galeopsis oehroleuca* (a member of the Labiatae).

*Brandwunden-Crème.* Emulsion for Burns. This contained starch, glycerin, mineral oil, a plant-extract of undetermined source and a red coloring matter.

*Salbe gegen Syphilis.* Antisyphilitic Salve. This contained tallow, lard and beeswax.

*Coza-pulver.* Coza Powder. Coza is possibly a proprietary name. The preparation is extensively advertised as a remedy for the drink habit. It was found to contain baking soda, a small amount of some umbelliferous fruit and calamus.

*Rippsehe Heilsalbe.* Ripp's healing salve. This was recommended for many skin diseases. It was found to contain turpentine, egg yolk, paraffin, beeswax, aluminum acetate, balsam of Peru, boric acid, salicylic acid, and an undetermined perfuming material.

*Mittel gegen Fusssehweiss.* Remedy for sweating feet. This was found to be a 12 per cent. solution of formaldehyd.

*Hygiensehe Brilliantine Heliosa.* This is the high-sounding title of a hair dye containing an ammoniacal solution of silver nitrate.

*Bickmore's Wundkur fuer Pferde und Vieh.* Bickmore's Gall Cure. This was found to be a mixture of vaselin, boric acid and alum, colored with ultramarine blue.

*Heusehkel's Kolkodin.* Kolkodin is probably a proprietary name. It is advertised as a cure for colic in horses. It is sold in two parts: one a white powder, the other a brownish liquid. The powder is a mixture of white arsenic (60 per cent.) and white sugar (40 per cent.). The liquid was a carminative tincture. (No dosage is mentioned in the report, but it is probable that the white powder is directed to be given in very small doses, a practice followed by some stablemen.)

*Makrobion.* This is a proprietary name of obvious derivation. It is sold as a promoter of longevity. It was found to contain common salt, diatomaceous earth, baking soda, Glauber's salt, and sodium phosphate.

## Creating a Nostrum.

Advertisement is an inseparable part of the nostrum business. The demand for a nostrum is created by the shrewdly prepared and widely published declarations of the wily promoter. This is true whether one refers to the nostrum exploited to the laity or to the one which is so-called "strictly

1. The original text reads "Hauptnerven" (chief or head nerves), but I think this is a misprint for "Hautnerven" and have so translated.



ethical," "for physicians' use only," or to the remedy which tries to exploit both the profession and the public. A piquant and spicy series of articles is now running in *Printers' Ink*, entitled "Forty Years an Advertising Agent," by Mr. George P. Rowell. At one time he did business with an advertiser in Halifax, N. S., who sold a medicine known as "Fellows' Hypophosphites." The success of this remedy was such that some shrewd business men bought the trademark, incorporated a company, retained the original owner as manager, stopped all advertising except in medical journals, and thereafter pushed the sale only among the medical profession. Mr. Rowell relates how the stock increased in value, and our readers are, of course, aware of the quantities of this preparation which are now sold because of the systematic pushing of the remedy through the medical press. Mr. Rowell goes on to relate how he began to realize the value of a trademark, and how much money there might be in the shrewd launching of a simple remedy for common ailments when well advertised and marketed under an attractive trademark name. Accordingly he sought some preparation of this kind and even advertised for a trademark which he might buy for this purpose. He received offers of remedies for moths, for ague, for spavin, etc., but none of them seemed to be what he wanted. He nearly bought Dr. Lyon's rights in his tooth preparations, but, at the last moment, Dr. Lyon begged off and the deal was not closed. While still searching for something which he could thus exploit, a medical student asked him why he did not use the rhubarb and soda compound which was a stock prescription at a certain hospital in New York City where the student was an interne. This, however, was a liquid, which made it unsuitable for the purpose. It was not for some time that Mr. Rowell learned from the student that it could be made in the form of tablets. He was much delighted to hear of this and felt that he had found the remedy which he wanted. Taking an attractive name was, of course, necessary for the preparation. It seems that the prescription contained rhubarb, ipecac, peppermint, aloes, nux vomica and strychnin. By taking the initial letters of these ingredients the name "Ripans" was made. This preparation was put on the market and vigorously pushed. The packages were gotten up in a convenient and attractive way for sale by the druggist. Mr. Rowell relates the careful way in which all details of advertisement and sale were worked out. His narrative may be taken as an illustration of the method by which many nostrums are originated. Some article which may be of more or less benefit when indicated is exploited as a cure-all, and by means of a catching name, meets a ready sale through the willingness of the public to accept the medical advice of one of whom they know nothing. In other words, if the shrewd promoter will provide the humbug and press the magic button of publicity, the people will do the rest.

#### Alcohol Percentage in Patent Medicine.

Among the many articles that are appearing in the newspapers, and which evidently emanate from the Press Bureau of the Proprietary Association, is an article bearing the superscription, "Alcoholic Percentage of the Tincture and Drug Compounds of the Dispensary of the U. S. Pharmacopeia." It appears as a double column table, and purports to show that the preparations of the Pharmacopeia contain as much alcohol, or more, than do patent medicines. Here are some of the shining examples:

	Alcohol. per cent.	Dose.
Tincture aloes and myrrh.....	70.5	1/2 teaspoonful.
Tincture asafetida.....	94	30 drops—1 teasp'ful.
Tincture nutgall.....	84.6	1 to 3 teaspoonfuls.
Tincture jalap.....	62.6	1 to 2 teaspoonfuls.
Tincture guaiac.....	94	1 to 3 teaspoonfuls.
Tincture myrrh.....	94	15 to 30 drops.
Tincture squill.....	70.5	10 to 40 drops.
Tincture sanguinaria.....	56.4	30 to 60 drops.
Tincture podophyllum.....	84.6	5 to 15 drops.
Tincture quassia.....	32.9	1 teaspoonful.

Admitting that doses given are correct, what is the inference? That any of these tinctures might be given in doses of half-wineglassful, which is the average of the ordinary patent medicine bitters of the peruna or Hostetter type?

A tippler may tickle his palate with any alcoholic liquor from Peoria "rot-gut," Kansas "boot-jack," "Jersey lightning" or "Mexican pulque," but how long would his gustatory nerves

appreciate the tincture of asafetida or of guaiac, or his digestive system recuperate under the tincture of jalap, of podophyllum or of blood root?

To show the care taken in compiling the list, the following examples are taken at random:

Ammoniated tincture of ergot alc.....	56.4	per cent.
Tincture ferric chlorid.....	94	per cent.
Camphorated tincture of opium.....	90.24	per cent.
Tincture serpentaria.....	61.1	per cent.
Tincture serpentaria rhizome.....	84.6	per cent.
Tincture sumbul.....	61.1	per cent.
Tincture sumbul root.....	84.6	per cent.

The alcoholic percentage in tincture ferric chlorid and camphorated tincture of opium is given as nearly double what it really is. Note also the distinction in serpentaria and its rhizome and sumbul and its root and the great difference in the alcoholic strength of the respective tinctures. The fact that the rhizome and root, respectively, constitute the drugs proves that the alcohol percentages accredited the two tinctures for each of the two drugs are purely fictitious and suggests that the whole exhibit is faked up from some old family medicine or receipt book. Most of the alleged preparations are of British origin not used in this country. The entire production is of a most illiterate character and suggests that the Proprietary Association Press Bureau has been victimized by some one.

#### The Abolition of Secret Remedies.

When the American Medical Association undertook its proper duty of enlightening physicians as to the true composition of proprietary medicines, the step was hailed with delight by the profession, while, of course, there arose mutterings of anger from the camp of the unscrupulous manufacturers. Gradually the opposition is getting out into the light, so that it becomes possible to see who feels pinched by this great forward movement of the organized medical profession. Pharmaceutical manufacturers who have nothing to conceal welcome the advent of the Council on Pharmacy and Chemistry; but, unfortunately, in the last few years manufacturing and even retail pharmacy has become permeated with a spirit of deceit. For this state of affairs the ready gullibility of many thoughtless physicians is much to blame. To give the profession the actual facts is the task allotted to the Council on Pharmacy and Chemistry. Already physicians have been informed in regard to the acetanilid compounds, and seldom has a more important piece of work been laid before the profession. It is interesting to note that few, indeed, of the medical journals have mentioned the report of the Council on Pharmacy and Chemistry on the acetanilid compounds, though it appeared in *THE JOURNAL* of the American Medical Association over three months ago. This state of affairs is deplorable, but it is drawing to its close. Through its own state journals and through *THE JOURNAL* of the A. M. A., the profession now has control of its means of publicity. The Council on Pharmacy and Chemistry will ascertain the truth about our drugs, and the profession's press will disseminate the knowledge. One of the greatest reform movements of our time is thus well under way. Every physician will eagerly watch the march of coming events.—*Ohio State Medical Journal*.

#### War Against Quackery.

According to the *British Medical Journal*, an Austrian society for the repression of quackery will be formally constituted at a meeting to be held in the rooms of the Medical Society of Vienna on November 11. The French Congress for the Prevention of Unqualified Practice of Medicine, which was postponed last year, will be held in Paris from April 30 to May 3, 1906, under the presidency of Professor Brouardel. All communications relative to the congress should be addressed to M. Levasort, 2, Place des Vosges, Paris.

#### Prohibition of Advertising of Certain Secret Remedies in Germany.

In 1903 the confederated states of Germany formulated a short list of secret medicines, advertisement of which was prohibited. Some manufacturers evaded the law by changing the names of their products. On this account suit was recently brought against two manufacturers, one in Prussia and one in Baden. The Prussian court decided that the prohibition ap-



plied to the advertised name, and, the name having been changed, the article could be advertised without conflicting with the regulations. The Baden court decided the contrary, claiming that the product, not the name, was prohibited, and that it was forbidden to advertise it under any name.

#### Clergymen and Testimonials.

A very prominent anti-saloon worker, a clergyman, lately said that in shame he was compelled to admit that he had run across indubitable proof that there are ministers of the gospel who receive pecuniary commissions from the makers of alcoholic nostrums whose wares they recommend!—*Journal of the Medical Society of New Jersey.*

### Correspondence

#### Laws Regulating Practice—American Academy of Medicine.

EASTON, PA., Nov. 18, 1905.

*To the Editor:*—I regret that an error of statement has crept in the otherwise most excellent synopsis of the report on the Laws Regulating the Practice of Medicine, read by the undersigned at the meeting of the American Academy of Medicine, as found in your issue of Nov. 18, p. 1596. The last sentence, reading: "The report favored having osteopaths represented on state medical examining boards," has its foundation in the discussion of the report. The report made no reference to the personality of a board of examiners. Its contention was that the general law should provide a test for all who wish to practice medicine, under this or that vagary, whether osteopathy, psychopathy, or what not, instead of, as at present, permitting special legislation, or special exemption; that this test should be on certain foundation subjects, and a special and limited license be given, which fact must be noted in every public announcement of the licensee. Who should conduct the examinations was not mentioned. One would rather infer that they were to be under the care of the board of examiners of the state, who should possess a full license to practice medicine, and thus exclude all partially fitted persons.

CHARLES MCINTIRE.

#### Pathology of Amebiasis—An Acknowledgement.

MANILA, P. I., October, 1905.

*To the Editor:*—In the hurry of completing our article on the "Pathology of Intestinal Amebiasis," Dr. Musgrave and I omitted to give credit to whom credit was due. A certain number of the cases on which our statistics were based were cases at the First Reserve Hospital, in which Dr. R. P. Strong had done the autopsies either alone or assisted by Dr. Musgrave. The omission of this recognition was entirely unpremeditated, and we wish to express our sincerest apologies. In case the paper has gone to print<sup>1</sup> will you please give our acknowledgement space on another page? PAUL G. WOOLLEY.

#### Priority in Splenic Blood Research.

OMAHA, Nov. 16, 1905.

*To the Editor:*—My attention has just been called to an error made in my paper, "Indications for the Removal of the Pathologic Spleen," in THE JOURNAL, Sept. 2, 1905. Through some inadvertence I stated that Arteaga preceded Dr. Edward T. Williams (not Williamson), of Boston, in the demonstration of nucleated red blood corpuscles in animal spleens. I find that this was an error and that Dr. Williams deserves priority in this matter, having published articles in *American Medicine*, April 26, 1902, and Nov. 28, 1903, on this subject.

B. B. DAVIS.

1. See JOURNAL A. M. A., Nov. 4, 1905, p. 1371.

**A Hint for the Anesthetist.**—When it is necessary for the anesthetist to hold the patient's jaw forward, he will obviate much subsequent soreness by exerting the pressure on only one side at a time.—*Medical Standard.*

### Marriages

ISAAC LEDERMAN, M.D., to Miss Hallie Streng, both of Louisville, Ky., November 22.

JAMES A. DIBRELL, M.D., to Miss Lula Beal, both of Little Rock, Ark., November 22.

CHARLES FAY AMOS, M.D., to Miss Susie Wanzer of Mesopotamia, Ohio, November 8.

JACOB DANIEL BROOK, M.D., Grandville, Mich., to Miss Mary Vander Velde, September 20.

METHE E. TRACY, M.D., Spickards, Mo., and E. W. EWING, M.D., Modena, Mo., October 25.

JOSEPH H. HINES, M.D., Atlanta, Ga., to Miss Cecelia Lopez of Charleston, S. C., November 15.

MURRAY A. STURM, M.D., New York City, to Miss Flora Riee, at Philadelphia, November 15.

JOSEPH C. ROTH, M.D., Upper Sandusky, Ohio, to Miss Lillian Ley of Tiffin, Ohio, November 22.

FRANK E. CLOUGH, M.D., Alliance, Neb., to Miss Louise Handke of Evanston, Ill., November 14.

CHARLES W. FALL, M.D., Fowler, Ind., to Miss Jeannette Barnhart of Frankfort, Ind., November 1.

ELISHA LEWIS SENCINDIVER, M.D., to Miss Mary Flicke Stewart, at Martinsburg, W. Va., November 15.

L. L. BANKSTON, M.D., Tunica, Miss., to Miss Mai Leslie of Alligator, Miss., at Memphis, Tenn., November 8.

HENRY HAROLD BROWN, M.D., Philadelphia, to Miss Antoinette Fay Zimmerman, at Baltimore, November 15.

WILLIAM LEE GANNAWAY, M.D., Greendale, Va., to Miss Willie Belle Pierce, at Roanoke, Va., November 16.

J. PRESTON SENCINDIVER, M.D., to Miss Mollie Blanche Macgill of Catonsville, Md., at Baltimore, November 15.

C. FONTAINE-MAURY LEIDY, M.D., Philadelphia, to Miss Margaret Howard Ridgley of Towson, Md., November 25.

NORMAN ELLIS SARTORIUS, M.D., Tangier, Va., to Miss Ella Frances Schoolfield, at Pocomoke City, Md., November 15.

### Deaths

James Montgomery Holloway, M.D. Tulane University Medical Department, New Orleans, 1857, professor of surgery and clinical surgery, Kentucky University Medical Department; surgeon for the Broadway Infirmary and the City Hospital of Louisville; member and president of the Mississippi Valley Medical Association in 1882; member of the Kentucky State Medical Society, died at his home in Louisville, November 13, from interstitial nephritis after a long illness, aged 71. Dr. Holloway began the study of medicine in Mississippi under the preceptorship of Dr. Harwood of Claiborne County. His first hospital appointment was at Touro Infirmary, New Orleans. In 1860 he settled in Madison County, Miss., and practiced there until the outbreak of the Civil War, when he enlisted as a private in the Eighteenth Mississippi Infantry, C. S. A. Soon afterward he was appointed regimental surgeon and was then placed in charge of the hospital service at Richmond until the close of the war. He was in active practice in Louisville continuously from that time until his final illness. He held chairs in several of the medical colleges, the first being that of anatomy in the University of Louisville; later he became professor of physiology and medical jurisprudence in the same institution, and afterward professor of clinical and operative surgery in the Kentucky School of Medicine and in the Louisville Medical College. He was one of the organizers of the Hospital College of Medicine in 1874, resigning his position in the Louisville Medical College at this time. He was professor of surgery in this institution for eight years, resigning again to take up the same work in Louisville Medical College. In 1898 he resigned from both of these college positions, when he became one of the founders of the Kentucky University Medical Department and was made emeritus professor of surgery, a position which he held until his death. In 1885 the degree of M.A. was conferred on him by Center College. In 1902 he served as president of the Association of Surgeons of the Army and Navy of the Confederacy.

Daniel E. Nelson, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1882, of Chattanooga, Tenn., member and ex-president of the Chattanooga and Hamilton County Medical Society; member and ex-president of the Tennessee



State Medical Association; member of the American Medical Association and member of the House of Delegates of the same; a consistent and faithful attendant at all medical meetings; member of the staff of Erlanger Hospital, died at that institution November 9, two days after a fracture of the base of the skull, the result of a fall from his horse, aged 46. The local medical society, at a special meeting, adopted resolutions of regret, respect and appreciation.

**Henry Hobart Maynard, M.D.** Rush Medical College, Chicago, 1861, of Los Angeles, Cal.; assistant surgeon of the Eighteenth Iowa Volunteer Infantry, later surgeon of the Second Arkansas Volunteer Cavalry, and then chief surgeon of division during the Civil War; a member of the Medical Society of the State of California and the Los Angeles County Medical Society; superintendent of the Los Angeles County Hospital in 1886 and 1887, and professor of surgery in the College of Medicine of the University of Southern California until 1901, when he was made emeritus professor, died at Pacific Hospital, Los Angeles, November 4, from uremia, after an illness of a month, aged 69.

**George Reed Morehouse, M.D.** Jefferson Medical College, Philadelphia, 1850; a member of the American Medical Association, Philadelphia Philosophical Society and Philadelphia College of Physicians; a prolific medical writer and collaborator with Dr. S. Weir Mitchell, died at his home in Philadelphia, November 12, from nephritis, after an illness of two days, aged 76. At his funeral the following personal friends acted as pallbearers: Drs. S. Weir Mitchell, William W. Keen, Charles P. Turner, Henry C. Chapman, John H. Musser, J. Chalmers Da Costa, J. Coles Brick, and Persifor Frazer.

**George N. Munsell, M.D.** Harvard University Medical School, Boston, 1860, assistant surgeon of the Thirty-fifth Massachusetts Volunteer Infantry in the Civil War; in 1889 representative from the second district of his county; thirty-seven years a school committeeman; twenty-five years medical examiner of Barnstable County; some-time president of the county medical society; vice-president of the Massachusetts Medical Society, etc., died at his daughter's home in Hyannis, Mass., November 2, aged 69.

**Alexander Tunstall, M.D.** Bellevue Hospital Medical College, New York City, 1868, a veteran of the Civil War, in which he served as adjutant of the Sixth Virginia Infantry, Mahone's Brigade, C. S. A., died at his home in Norfolk, Va., November 10, after a lingering illness, aged 62. The Norfolk Medical Society, at a special meeting, adopted suitable resolutions and decided to attend the funeral in a body.

**Rufus H. Bartlett, M.D.** Rush Medical College, Chicago, 1879, a member of the American Medical Association; chief medical examiner of the Aetna Life Insurance Company in Chicago; a member of the Chicago Medical Society, Chicago Medical Society, Chicago Pathological Society and Chicago Medical Examiners' Association, died at his home in Chicago, November 21, from typhoid fever, aged 50.

**George William Larrick, M.D.** University of Maryland School of Medicine, Baltimore, 1878, local surgeon of the Baltimore & Ohio Railroad; for many years a member of the Frederick County Board of Health and of the board of visitors to the Western State Hospital for the Insane at Staunton, died at his home in Middletown, Va., November 6, after two years of invalidism, aged 53.

**Edwin Curtis Bidwell, M.D.** Medical Institution of Yale College, New Haven, Conn., 1844; surgeon in the Union Army during the Civil War; for nearly forty years a practitioner of Vineland, N. J.; discoverer of the black-rot fungus which threatened to destroy the grape growing industry in 1879, died at his home in Vineland November 14, aged 84.

**William C. Voight, M.D.** University of California Medical Department, San Francisco, 1879, a member of the American Medical Association and of the Washington County (Minn.) Medical Society, one of the leading physicians of Stillwater, died at his home in that city, November 3, from cerebral hemorrhage, after an illness of one week, aged 58.

**Charles Henry Langdon, M.D.** College of Physicians and Surgeons in the City of New York, 1874, for twenty-eight years a member of the medical staff of the Hudson River State Hospital, a member of the American Medico-Psychological Society, County Society, died from exhaustion following a second operation for appendicitis, November 15, aged 47.

**Eli M. Whitson, M.D.** Cincinnati, 1873, a veteran of the Civil War; a member of the American Medical Association; a member and once president of the Grant County (Ind.) Medical Society, died from dysentery at his home in Jonesboro, Ind., November 7, after an illness of two days, aged 62.

**Thomas W. Jones, M.D.** Medical College of Ohio, Cincinnati, 1847, one of the organizers of the Ohio State Medical Society and for fourteen years treasurer and librarian of the organization; for twenty-eight years a resident of Columbus, Ohio, died at the home of his son in that city November 6, after a long illness, from senile debility, aged 83.

**Frederick L. Meagley, M.D.** Toledo (Ohio) Medical College, 1890, a member of the American Medical Association, formerly a practitioner of Findlay and Toledo, Ohio, but for two years past in charge of a hospital at Daytona, Fla., died at his home in that place, November 5, from tuberculosis, after a long illness, aged 35.

**Fred Stewart Blachly, M.D.** St. Louis College of Physicians and Surgeons, 1899, of Modena, Mo.; a member of the Medical Association of the State of Missouri and the Mercer County Medical Society, died at the Missouri Baptist Sanatorium, St. Louis, November 9, after an illness of three years, from paralysis, aged 38.

**Joseph Veazey Wallace, M.D.** University of Maryland School of Medicine, Baltimore, 1853, of Chesapeake City, Md.; a member of the Medical and Chirurgical Faculty of Maryland; some-time president of the Cecil County Medical Society, died at the home of his daughter, in Lewes, Del., November 16, aged 76.

**Charles V. Bogue, M.D.** Rush Medical College, Chicago, 1885, for several years a practitioner of Chicago and instructor in the Chicago Polyclinic, who afterward, on account of ill-health, removed to Los Angeles, Cal., and later to Newport, Vt., died at his home in that place from meningitis, November 9, aged 51.

**Thomas Camille Giroux, M.D.** New York University, New York City, 1869, a veteran of the Civil War, attending surgeon to the Eastern District Hospital, Brooklyn, for many years, died at his home in that city, November 3, from heart disease, after a long illness, aged 64.

**John Hauenstein, M.D.** Geneva (N. Y.) Medical College, 1844, for more than half a century a practitioner of Buffalo, N. Y.; in 1882 president of the Erie County Medical Society, died at his home in Buffalo, November 10, from senile debility, after an illness of two years, aged 84.

**D. R. Bookwalter, M.D.** Medical College of Ohio, Cincinnati, 1897, died at his home in Dayton, Ohio, November 14, from laryngeal tuberculosis, after an illness of several months. He was a member of the Montgomery County Medical Society and the Ohio State Medical Society.

**Friedrich Karl Castelhun, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1852, a prominent German-American poet and practitioner of San Francisco, died at his home in that city, November 1, after an illness of almost eight months, aged 77.

**Christopher Fawcett, M.D.** University of Maryland School of Medicine, Baltimore, 1864, resident physician to the Union Protestant Infirmary for twenty-seven years; assistant surgeon United States Army 1864-1865, died at his home in Baltimore, November 11, aged 81.

**Frank S. Hamlet, M.D.** University of Vermont Medical Department, Burlington, 1892, a member of the American Medical Association, and a prominent practitioner of Gorham, Maine, was instantly killed by a fall from the roof of his house November 6, aged 41.

**Michelborough Y. Cheatham, M.D.** Medical College of Virginia, Richmond, 1872, superintendent of schools of Amelia County, Va., and for several years chairman of the county board of supervisors, died at his home in Amelia Courthouse, Va., November 9, aged 54.

**Anthony M. Oldfield, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, committed suicide by shooting himself through the head while despondent on account of ill-health, at his office in Harbor Beach, Mich., November 3, aged 65.

**Harry L. Hall, M.D.** Medical Department of the Western Reserve University, Cleveland, 1882, for a long time township physician, died at his home in Mansfield, Ohio, from cerebral hemorrhage, October 29, after an illness of only a few hours, aged 69.

**Isaac S. Herbein, M.D.** Jefferson Medical College, Philadelphia, 1865, twelve years a justice of the peace, died at his home in Strausstown, Pa., November 14, after a prolonged illness, from nervous exhaustion, aged 69.

**Louis Henry Dorwin, M.D.** Miami Medical College, Cincinnati, 1872, a member of the Darke County Medical Society,



died at his home in Gettysburg, Ohio, from diabetes, November 5, after an illness of two years, aged 57.

George F. Kalb, M.D. University of Maryland School of Medicine, Baltimore, 1902, of Cardiff, Md., died at the home of his parents in Catonsville, Md., November 3, from tuberculosis, after a long illness, aged 24.

Swan Hanson, M.D. (Years of Practice, Illinois), 1888, for several years trustee and alderman of Moline, Ill., died at his home in that city, October 30, from cerebral hemorrhage, after an illness of three days, aged 84.

James G. Boardman, M.D. Rush Medical College, Chicago, 1865, coroner of Stark County, Ill., for many years, died at his home in Bradford, Ill., from pneumonia, October 29, after a short illness, aged 65.

William E. Smith, M.D. Toronto University Medical Faculty, 1863, for twenty-eight years surgeon of the Michigan Central Railroad at St. Thomas, Ont., died at his home in that place, November 8, aged 68.

Andrew Lindsay, M.D. Jefferson Medical College, Philadelphia, 1855, of Bryn Mawr, Pa., died suddenly from heart disease in the railway station at Ardmore, Pa., November 9, aged 76.

Warren C. McManus, M.D. Howard University Medical Department, Washington, D. C., 1889, died at his home in Edgerton, Wis., November 8, from pneumonia, after a short illness, aged 44.

Phineas Sanborn Conner, M.D. Medical College of Ohio, Cincinnati, 1902, of Cincinnati, died at the Seton Hospital in that city, from pneumonia, November 11, after a short illness, aged 28.

Paul Grossman, M.D. University of Breslau, Germany, 1870, of Omaha, formerly a surgeon in the German army, died at Dobbrikow, Germany, October 13, from diabetes, after a long illness.

Thomas Clarke, M.D. College of Physicians and Surgeons of Ontario, Toronto, 1860, died suddenly at his home in St. Catharines, Ont., November 5, from cerebral hemorrhage, aged 75.

George W. Lupfer, M.D. College of Physicians and Surgeons, Baltimore, 1881, of Neff's Mills, Pa., died suddenly from cerebral hemorrhage near Petersburg, Pa., November 2, aged 49.

G. F. Theodore Hoffmann, M.D. Rush Medical College, Chicago, 1861, died at his home in Niles, Ill., November 2, from bronchial pneumonia, after an illness of six days, aged 85.

Charles F. Cookes, M.D. Starling Medical College, Columbus, Ohio, 1882, died at his home in Columbus, November 1, from nephritis, after an illness of more than a year, aged 55.

Denis Collins, M.D. New York University, New York City, 1880, died at his home in Chicago, November 10, from cerebral hemorrhage, after an illness of seven weeks, aged 49.

William Dederick, M.D. County License, Indiana, 1897, died at his home in Warsaw, Ind., October 28, from carcinoma of the liver, after an illness of two months, aged 64.

Charles Carroll Shippen, M.D. University of Maryland School of Medicine, Baltimore, 1879, died at his home in Baltimore, November 6, after a long illness, aged 49.

Benjamin Genung, M.D. Brooklyn, 1869, of Brewerton, N. Y., died at his home in Baltimore, November 7, after an illness of six months, aged 34.

William F. Forien, M.D. Baltimore Medical College, 1899, died at his home in Baltimore, after an illness of six months, aged 34.

Henry C. Wohlgemuth, M.D. Cincinnati, 1854, died at his home in Springfield, Ill., November 11, aged 83.

Mark F. Hamilton, M.D. Philadelphia, 1878, died at his home in Cambridge, Maine, November 5.

#### Death Abroad.

R. A. Koelliker, M.D., formerly professor of comparative anatomy, physiology and embryology at Würzburg, died November 3, aged 88. His great manual of histology was published in 1852, and has appeared in many editions and been translated into several languages. He issued a volume of reminiscences in 1899 which contained a list of 245 articles which he has published on anatomy, physiology and similar allied sciences, and to this might be added 43 theses written under his supervision by his pupils. Since then he has contributed other important works to science. He is called the "father of cellular physiology," and to him we owe much of our knowledge of the nucleus of the cell and of normal histology, and of physiology in general.

## Book Notices

TECHNIQUE DU TRAITEMENT DE LA LUXATION CONGÉNITALE DE LA HANCHE. By Dr. F. Calot. Avec 206 figures dans la Texte et 5 Planches. Paper. Pp. 293. Paris: Libraires de l'Académie de Médecine, 1905.

Calot's work of 294 pages on the technic of treatment of congenital hip dislocation is profusely illustrated. It aims to present the technic in such a way that any practitioner can treat congenital dislocation of the hip joint without the necessity for referring the child to a specialist, if the child is seen between the ages of 2 and 5. Calot first describes the differentiation of the condition as the child begins to walk, and then tells how to prepare the joint as a preliminary to reduction, and then the various steps of the reduction. He then describes the various types of cases that are liable to be encountered, and the modifications of the technic for older children, bilateral luxation, etc., with histories of cases belonging to each type, profusely illustrated before, during and after treatment.

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By H. Sahli. Edited with additions by F. P. Kinnicutt, M.D., and N. B. Potter, M.D. Authorized Translation from the Fourth Revised and Enlarged German Edition. Cloth. Pp. 1008. Price, \$6.50 net. Philadelphia: W. B. Saunders & Co., 1905.

Sahli's work on clinical diagnosis has long been known in Germany as an authoritative one. This excellent translation will surely be appreciated by English readers, for it is in every sense worthy and even of superior merit. Every topic is discussed from a broad point of view and the close relations of anatomy, physiology and pathology to clinical phenomena are clearly set forth. It is in no sense a mere compilation; it is permeated everywhere with the spirit of the clinical and laboratory expert who describes methods, technic and results that have been tested by his own ripe experience and his original investigations.

The plan of the work includes the examination of the various organs and systems of the body by the methods of inspection, palpation, percussion, auscultation, etc., with full descriptions of the aids to be derived from instruments of precision, from bacteriology, chemistry and physics. Special methods of examination as in neurology are given in detail. All the chapters are excellent, though it seems to us that those on the examination of the heart, the stomach contents, the urine and the nervous system are exceptionally fine. The value of exploratory puncture as a diagnostic aid and its technic is admirably set forth; the chapter on cryoscopy is an up-to-date monograph; the description of the butyrometric method of examining the functions of the stomach by the method of Sahli and Seiler is a condensed statement of the results of valuable original research. Several tables are found that will prove of great service for reference; we may mention the one showing the substances that respond to the copper and the bismuth tests for sugar in the urine, the one showing the reactions of proteid bodies in the urine, and several in the chapter on the nervous system, as well as the outlines in the appendix, for the examination of the blood, nervous system, digestion, angina, etc.

We are somewhat surprised to find that the dimethylamidoazobenzol test for free HCl in the stomach had to be inserted by the editors. We feel that the so-called Hay's test (with sulphur) for bile in the urine deserves mention, as does peroxid of hydrogen as an oxidizing agent that may be used in some of the tests for indican or for blood in the urine. Bradycardia might perhaps be discussed more fully and esophagoscopy is not given the attention it merits. Only rarely do we find directions loosely given, e. g., those for making Lieben's iodoform test for acetone in the urine. "Some potassium hydrate and Lugol's solution are added to the urine, or better to its distillate" (p. 495). "Some" is altogether too inexact here. Pavy's method for the quantitative examination for sugar in the urine is rather severely condemned. We are pleased to note, however, that Sahli has recently (*Deutsche med. Woch.*, Sept. 7, 1905), reversed this decision and advocates Pavy's method with some slight modification. The value of the Roentgen rays in diagnosis is, we believe, underestimated by Sahli. He omits their consideration, he tells us in the preface, for the reason that he does not consider himself a competent radiologist capable of teaching others, and also be-



cause the *x*-ray examination can only be made by a limited number of practitioners who, in order to be able to do so, must go through a special training; his book is intended for the general education of the physician. The editors have aimed to supply this lack in the book by a few illustrations showing the results of *x*-ray examinations. Most of them are so poorly executed as to be of little value. Occasionally there is a figure that illustrates something to which no reference is made in the text. This is true of Plate 12—or else we have overlooked in the text and index the reference to Kernig's sign. In general the insertions by the editors are timely and appropriate, e. g., the notes concerning uncinariasis, blood-pressure instruments, etc. Not a few typographical errors are to be found. Thus a boric acid stone in the kidney is spoken of on p. 732, where evidently uric acid is meant.

While these few minor criticisms seem to us justified as we have glanced through the volume, we have no hesitation in recommending Sahli's work on diagnosis to student or practitioner. We believe it has no superior in any language.

THE ACCESSORY SINUSES OF THE NOSE and Their Relations to Neighboring Parts. Illustrated by Fifteen Colored Plates by G. Killian. Translated by R. Patterson, M.D., M.R.C.P., Atlas. Price, \$7.50 net. Chicago: W. T. Keener & Co.

The superb drawings of this magnificent atlas enable one to acquire clear and definite mental images of the parts considered, whose labyrinthine intricacy is confusing even to the expert anatomist. In making the objects for the illustrations the mucous membrane lining the sinuses was hardened and stiffened by a formalin process, so that the soft parts formed a perfect cast of the cavities to which they adhered. This enabled Killian to show the accessory sinuses in an entirely new and striking way, that is, not as hollows in the ethmoid, sphenoid, frontal and superior maxillary bones, but as a cast of these hollows, a manner of display that produces singularly lucid mental pictures of the shape and location of the accessory sinuses of the nose. A great many fresh bodies were needed to complete the work, which extended over three years.

The artistic finish of the drawings is perfect and their clearness makes them readily understood. The anatomic relations of the sinuses to the orbit, the cranial cavity and the brain are made plain by fenestra made in the bones of the face, nasal fossæ and skull after removal of the outer soft parts. In this way, views of the sinuses through the outer nasal wall, and of the brain as it lies above the frontal sinuses, the ethmoidal cells and the sphenoidal sinuses are portrayed in a manner that is a revelation to those who have long wished to have a clear picture of these parts in their minds. Dissections of those parts of the brain liable to be involved in cerebral abscess due to sinus disease are also shown with their relations to the accessory cavities of the nose, and the optic nerves, the internal carotid arteries, the cavernous sinuses and the nerves of ocular motion are shown as they lie above the sphenoidal sinuses. The intricate grouping of the ethmoidal cells and Killian's new nomenclature of these cavities are made plain.

The text is full and clearly explains the plates, with the lessons to be drawn from their study; a great advantage over most atlases where the beholder is left to hunt out for himself the nature of the structures displayed in scantily lettered drawings without explanatory text; in fact, even without the plates the reading matter of Killian's atlas would give a very good conception of the subject and make an important monograph.

The practical side of the subject is dwelt on, especially in reference to Killian's great work in the surgery of the sinuses and to those wishing to perform his classic radical operation for empyema of the frontal sinuses this atlas will be a great aid. The accessibility of cerebral abscess resulting from sinusitis is also thoroughly gone into. The neurologist, oculist and general surgeon will find the book of great value in the study of diagnostic problems, for it explains the difficult relations of the brain, cranial nerves and orbit to the air-containing cavities grouped about the nasal fossæ with a thoroughness and clearness that will save much time and study. The drawings are made from individual cadavers and, therefore, unavoidably contain special features pertaining to the indi-

vidual body used. These moderate variations from what is typical, however, do not materially take from the value of the work, and it is preferable to have an exact picture of the parts as seen in nature in one subject than to have a composite drawing attempting to show a combination of the usual features in a number, for such drawings are apt to be schematic.

The translation has been done with great care and the difficult problem has been solved of selecting customary anatomic terms in use in Great Britain and America to correspond with the many different ones employed in Germany.

BIOGRAPHIC CLINICS. Vol. iii. Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, on the Health of Patients. By G. M. Gould, M.D. Cloth. Pp. 516. Price, \$1.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

In the third volume of "Biographic Clinics" Dr. Gould continues in a characteristically vigorous manner his striking essays on the influence of the visual function on health. He discusses minutely the long invalidism of John Addington Symonds, and Taine, the celebrated French philosopher, historian and critic. As in his previous volumes, Dr. Gould sets forth the prominent rôle of uncorrected eyestrain in their life-tragedies of persistent and seemingly inexplicable physical and mental suffering. There is an extensive chapter on the relation of the newer ophthalmology to general medicine, biology and sociology, being an address read last year at the International Congress of Arts and Science in St. Louis. In Chapter VI the history and etiology of migraine is exhaustively considered, and numerous instances quoted to prove that very many cases of this *bête noir* of neurologists are due to ametropia. The optical and ocular influence in the etiology of spinal curvature and myopia of school children are given careful consideration and many original inferences are drawn and substantiated by striking illustrations. Dr. Gould claims that improper school desks and seats are neither the primary nor chief factors in the production of the faulty postures of school children, and that slanted handwriting, rather than a result of malposture, is in reality a method of lessening its pernicious consequences. Dextrality and sinistrality and their intimate relations with dextrocularity and sinistrocularity afford a wide field for investigation and reason. In a way, it may be said that by his forcible and original arguments Dr. Gould has pre-empted this subject as his own.

While appreciating the valuable and untiring work of the pathologists in the last two decades, Dr. Gould protests against the neglect to inquire with the same enthusiasm into the nature and methods of production of the morbid function which caused the special organic diseases, so capable of plain demonstration in the dead house and pathologic laboratory. After all our rapid advances in the domain of pathology the question recurs as to any explanation of structure except by precedent function. The essayist contends strenuously that in biology the visual function and its perversions have been an important conditioning factor of organic evolution and that the same factor is increasingly a source of evil and failure in all our sociology and pathology. Dr. Gould protests that a continuance of the past indifferent attitude of the medical profession to the importance of eyestrain is "illiberal, unscientific and self-stultifying." He urges that even in Great Britain and Germany the contemptuous appellation "American humbug" is no longer a satisfying corollary to the answer that there is no accurate or scientific demonstration of the relation of extraocular disease with eyestrain. Declaring that there is already a wealth of American articles in confirmation, Dr. Gould reproduces in his book two articles from Great Britain that he calls quite American, and almost Philadelphian, in their context and import. Mr. Simeon Snell, of Sheffield, writes exhaustively on eyestrain as a cause of headache and other reflex neuroses, and Mr. C. Ernest Pronger discourses entertainingly on the influences on the nervous system of slight errors of refraction.

The three volumes of "Biographic Clinics" have called forth much discussion, ranging from an enthusiastic praise to condemnation and contempt. That the author has been over-enthusiastic, dogmatic and emphatic has been frequently charged, perhaps with some justice. But to awaken a proper interest in such an important subject vigorous emphasis is needed. An



ambiguous, timorous or apologetic brief would have fallen flat. On the other hand we fail to see what harm may follow the perusal of such entertaining and illustrative essays. Briefly the author's object is to prove by prominent biographic studies, periodical medical literature and individual experiences that, when not dependent on demonstrable organic disease, "symptoms and affections like headache, sick headache, loss of appetite, paroxysmal neuroses, cardiac palpitation or irregularity, chorea, epilepsy, neuralgia, insomnia and neurasthenia, which exhibit such waves of exacerbations and depression, may be due to ocular irritation." He makes a fervent plea for a careful examination of the refraction and musculature of the eyes in such cases, and contends that in many instances frequent re-examinations under artificial cycloplegia are necessary for the best results, even in patients past middle life. He insists that in all cases the examination should be made by a skilled ophthalmologist who has a proper belief in the importance of the careful correction of even the slightest refractive errors in cases of reflex disturbance.

**GRAY'S ANATOMY.** Descriptive and Surgical. New American from the 15th English edition. Revised, enlarged and rewritten by J. Chalmers Da Costa, M.D., Professor of Surgery in the Jefferson Medical College. In collaboration with a corps of specially selected assistants. In one very handsome imperial octavo volume of 1,600 pages, with 1,132 illustrations, 500 of which are new in this edition. Price, with illustrations in black and many colors: cloth, \$6.00 net; leather, \$7.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

All the features which made the former editions of this standard work valuable are retained, while a number of new ones have been added. A profusion of colored illustrations much facilitate the study of the lymphatics, veins, arteries, etc. Fully 500 new illustrations have been inserted, bringing the number to 1,132, and presenting the various subjects from new standpoints. Both the old and the new nomenclature are given, the latter in brackets, and much of the text has been rewritten to introduce the new data. The revision by Da Costa has been thorough and able, and the sections on the Lymphatic System, Abdomen, Brain, Spinal Cord and Nervous System have evidently been entirely rewritten and much enlarged, although the general plan of the book remains unchanged. This brings the number of pages to 1,600, while the index has grown to 52 pages. The edition issued in 1901 had only 1,257 pages and 41 pages of index. The arrangement of the type is an improvement, the subject of the paragraph and the catch words being in larger black type instead of in italics, as in the older editions. The book is a fine specimen of typographical work, retaining the familiar features which make it so convenient for reference and study, and which established it as the standard Anatomy half a century ago, now brought down to date.

**A LABORATORY GUIDE IN BACTERIOLOGY** for the Use of Students, Teachers and Practitioners. By P. G. Heineman, Sc.B. Cloth. Pp. 143. Price, \$1.50 net. Chicago: The University of Chicago Press, 1905.

The principal purpose in writing this manual, the author states, was to provide a guide for the medical student through an elementary course in bacteriology. No fault can be found with the result achieved. Special stress is laid on the proper instruction of a student inadequately prepared to comprehend the all-important methods of this comparatively new and rapidly advancing branch of biology. Technical proceedings have been described at the stage of application only. The course as outlined includes all well-known pathogenic bacteria, and acquaints the student with their biologic characteristics in such a way as to enable him to recognize them by the prescribed methods. All directions are given in a clear and concise form and cover the ground of bacteriologic technic. Methods for routine examination of air, water, and milk are also described, with practical dilution tables, applicable to serum work. The chapter treating of yeasts, molds and torulæ enables the instructor to select such material as he may deem proper for courses in non-medical bacteriology. The book is profusely illustrated, and a list of recipes for making up special culture media adds greatly to its usefulness.

**RADIUM AND RADIO-ACTIVITY SUBSTANCES.** By C. Baskerville, Ph.D. Cloth. Pp. 164. Price, \$1.00. Philadelphia: Williams, Brown & Earle.

This work is a full account of the latest and most important development in the field of radio-active substances. Special

consideration is given to the best methods to be employed for demonstrating radio-activity, with a description of the apparatus to be employed. One chapter is devoted to the application of radium and radio-active substances in medicine. The book is well illustrated. We wish particularly to commend the index, which is full and complete.

**AMERIKANISCHE STREIFLICHTER** von Carl Beck. Cloth. Pp. 246. Berlin, SW., 48; Verlag von Leonhard Simon NF., 1905.

Beck's "Side Lights on America" is a reprint of articles which were written for the edification and entertainment of the readers of various German medical journals. They are bright and clever sketches in lighter vein of the sessions of the American Medical Association and of the different congresses in this country and various American institutions and happenings. He waves aloft the banner of loyalty to his fatherland through all his remarks, and never misses an opportunity to expatiate on the influence of German science and instruction on the development of American medicine. The book can be heartily recommended to all physicians who wish to perfect themselves in the most modern "student" German while seeing the profession in America and our institutions "as others see us," and especially "ithers" with a strong sense of humor. His genuine admiration and appreciation of America is gratifying to one's patriotism. These nineteen articles by Beck have undoubtedly contributed toward the present good understanding between scientists on both sides of the water.

**A TEXT BOOK OF CLINICAL DIAGNOSIS** by Laboratory Methods. For the Use of Students, Practitioners and Laboratory Workers. By L. N. Boston, A.M., M.D. Second Edition. 330 illustrations. Cloth. Pp. 563. Price, \$4 net. Philadelphia: W. B. Saunders & Co., 1905.

It is a just compliment to Dr. Boston's work that in a year a second edition should be demanded. This book contains most compactly and yet fully stated information on clinical diagnosis. Especially is it to be commended because of its clear description of laboratory technic, but the interpretation of clinical findings, which is the purpose of such a treatise, is quite as commendable. One hundred and thirty-seven pages are devoted to the blood, its morphology, bacteriology and parasitology. As many more to urine, its chemistry and microscopy. Succeeding sections are devoted to gastric contents, feces, sputum and buccal and nasal secretions; discharges from ears, eyes and genitalia; transudates, exudates, cerebrospinal and synovial fluids, milk and diseases of the skin. Much new material has been added in this second edition.

**PATHOLOGY AND MORBID ANATOMY.** T. H. Green, M.D., F.R.C.P. Tenth American Revised from the English Edition, Revised and Enlarged by W. C. Bosanquet, M.A., M.D. One colored plate and 348 illustrations. Cloth. Pp. 610. Price, \$2.75 net. Philadelphia: Lea Brothers & Co., 1905.

A book which has reached its tenth edition stands in no need of introduction. Pathology has undergone a most astonishing transforming growth, and each year there appears much that is new and that replaces entirely, in many instances, the older conceptions and theories. This has been most notable in the fields of animal parasitology and of immunity to infectious diseases. These subjects are dealt with fully in the present edition of this work. A most excellent chapter has been added dealing with autointoxication and nutritional diseases. Many new illustrations have also been added. The standard of excellence of former editions has been maintained by the present one.

**DISSECTING MANUAL,** Based on Cunningham's Anatomy. By W. H. Rockwell, Jr., M.D. Flexible Cover. Pp. 306. Price, \$2.00 net. New York: William Wood & Co.

This book is divided into five parts, corresponding to those usually assigned to the student, and in each of these the bones, articulations, muscles, vessels and nerves are grouped together. The descriptions are brief, evidently based on the supposition that the dissector is thoroughly familiar with the anatomy of the part, and that the dissection is intended merely to confirm the correctness of the student's knowledge of anatomy. It is incumbent on him to recognize the structure encountered without the assistance of a descriptive guide or illustration—a very serious objection to a dissecting manual. In fact, the book is little more than an epitome. It is not illustrated.



PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M.D. Leather. Pp. 216. Price, \$1.00. Philadelphia: The Medical Council.

This is a neat, compact book for keeping the accounts of patients individually. Entries are made but once, thus effecting a saving in time. The book, it is claimed, will be admitted as evidence in court, as it is a book of "original record." There are index pages, allowing quick reference to the numbered account pages.

STATIC, HIGH FREQUENCY, RADIO, PHOTO AND RADIUM THERAPY. By W. H. King, M.D., LL.D. Cloth. Pp. 291. Price, \$2.50. New York: Boericke & Runyon. 1905.

Evidently this book is intended for the tyro in electrotherapy for the purpose of presenting to him, in concise form, a description of the apparatus needed, and what it can be expected to achieve in the way of results. The work covers only the subjects embraced in the title and does not pretend to be a complete treatise on electrotherapy. It fills the purpose for which it is intended admirably. It is well illustrated.

## Miscellany

"Bile Beans."—A curious and not uninteresting light was thrown on the nature of this much advertised and vaunted nostrum in the Court of Session the other day in Lord Ardwall's judgment in an action brought by the manufacturers of the remedy against an Edinburgh chemist to interdict him from using the name "bile beans" for any pills other than those manufactured by them. The history of "bile beans," as set forth in the judgment, is as follows: In 1896 the complainer, then 21 years of age, was in business in Australia in connection with a stationery or printing business. He had no knowledge whatever of chemistry or medicine, but happened to get introduced to the other complainer, Charles Fulford, who, though not a qualified chemist, had served five years in a chemist's shop, and had been connected with the business of a medicine company. The two complainers went into partnership to carry on business as pill manufacturers, and first started the preparation of "Gould's tiny tonic pills," which, however, did not meet with the success anticipated. In the early part of November, 1899, Fulford told his partner that at 4 o'clock in the morning he had hit on a title for a new pill, namely, "bile beans for biliousness," and he prescribed a formula for it. The pill took in Australia, and Fulford proceeded to put it on the English market. Neither the company nor the partners manufactured the pills. Even their name was misleading. They merely sent the formula to manufacturing chemists to make the pill in millions. They advertised on an extensive scale, spending £300,000 in building up the business in the United Kingdom, and issuing 83,000,000 of small illustrated pamphlets for house-to-house distribution, as well as a large number of musical advertisements. If one might judge from the way in which it was perpetually set forth in the forefront of their advertisements, the foundation-stone of their success was the false and fraudulent statement that bile beans were for the most part composed of a natural vegetable substance which Fulford discovered in Australia, which for ages had brought health and vigor to the natives of that island continent, and which was now being introduced for the benefit of civilized nations. One of the latest advertisements was entitled "Strange Japanese Customs," in which it was said, "Some years back Charles Forde, an eminent scientist, thoroughly investigated the healing extracts and essences of Australian roots and herbs, and after long research he found himself the discoverer of a natural vegetable substance which had the power of acting in the human system in the same way as Nature's own animal substance bile, and which was beyond all doubt the finest remedy yet discovered for all liver and digestive disorders." This statement, said the judge, was both false and fraudulent. There was no such person as Charles Forde, his true name being Fulford; he was not an eminent scientist, having had no scientific training and no standing whatever as a chemist or anything else; he never investigated the healing extracts and essences of Australian roots and herbs; he never made any research; he never was the discoverer of a natural vegetable substance which acted

like animal bile. In fact, no such substance existed, and no such substance formed the part of bile beans, which were compounded by wholesale chemists in America out of drugs which they had in stock, no one of which had anything specially to do with Australia. The changes were rung on this wonderful discovery in every pamphlet and advertisement of the complainers. The judge had no doubt that their business was founded entirely on fraud, impudence and advertisement, though it might be that the pill was as effective as any ordinary pill so compounded to act as a cholagogue or ordinary laxative medicine; but it seemed certain that these beans would never have taken hold of the public as they had done except for "the foundation fiction of their being the product of a Great Discovery of an Ancient Australian Medicine by an Eminent Scientist using the most Advanced Scientific Methods and Apparatus."—*Medical Press* (London), Sept. 20, 1905. [Bile beans was a much advertised "patent" medicine in this country a few years ago, but it seems to have had its day.]

**Asepsis in Obstetrics.**—Cox, in the *Wisconsin Medical Journal*, discusses this subject with a special reference to asepsis in obstetrics in private practice. He states that we can keep as aseptic in a clean room in a well-appointed house as we can in the maternity wards of a crowded hospital, where the danger of infection is tenfold greater than it is in the ordinary American village or town home. The great trouble with many of us is that we hesitate in enforcing our own ideas of cleanliness. When called on to attend a case of confinement, if time and circumstances permit, we should see to it that the obstetric room is made as aseptic as possible. All carpets and heavy draperies should be removed, and all furniture washed in a strong solution of bichlorid of mercury or lysol. If possible insist on new mattresses and bedding. Strong lye or formaldehyd will very effectively sterilize the ordinary house floor. A common potato sprayer will carry the same solution to the walls and ceilings. If possible, the spraying should be done daily for several days prior to the accouchement. The use of the powerful antiseptic has almost entirely annihilated puerperal fever, which, we know, is frequently caused by the entrance, through some wound or abrasion, of some poisonous material into the blood. In the simplest and most natural labors slight tears are apt to exist, involving either the cervix uteri or perineum. Dirty hands, dirty finger nails, unclean napkins, soiled clothing or bedding, may be the cause of grave trouble.

A nurse should not be allowed to touch the genitalia of a patient without first thoroughly disinfecting her hands in a strong solution of formaldehyd or alcohol. Finger nails should be trimmed closely, and the stumps soaked in some strong germicidal solution. It seems hard to make the ordinary nurse understand that antiseptic means against sepsis, or putrefaction. The genital organs of the patient should be made aseptic, or as clean as possible, at the commencement of labor. Shaving the genitals is a good but not imperative practice. Any clothing that may come in contact with her should at least be washed in boiling water and ironed. The complete sterilization of all clothing is practical even outside of hospital life. The hands of the obstetrician must be thoroughly cleansed. It is not at all impracticable for us to carry in our obstetric outfits carbolic acid, lysol, permanganate of potassium and bichlorid of mercury. These, with formaldehyd and absolute alcohol, should be sufficient to make safe sterilization and disinfection in every case possible.

The use of the vaginal douche, the author believes, should be judged for the individual case. In those cases in which there is an offensive lochial discharge, an antiseptic douche should be used. Great care should be exercised, however, that this douche be given aseptically; that all apparatus necessary for giving such douche should be properly sterilized. If the nurse in attendance does not understand asepsis, it is best for the physician either to give the douche or to give definite instructions as to the method of procedure. The same rigid supervision must obtain in the use of the catheter. The great majority of nurses in attendance on obstetrical cases in small villages and rural districts know nothing of the aseptic precautions necessary in catheterization. The author believes that no patient is so deeply buried in septic filth but that



asepsis or antisepsis may be carried out to a certain degree. He urges the use of one's wits to secure clean material for a bed in even the most isolated cases. He summarizes the treatment as follows: "Observe in every case absolute cleanliness, surgical cleanliness. It pays. When there exists the slightest possibility that the hands of the obstetrician may be infected or that the genital organs of the woman may conceal local germs of infection, then redouble all efforts at sterilization. The healthy, ordinary secretions of the vagina are in their effects antiseptic. Nature has here, as in many other places, interposed conservatively for the welfare of the patient. It is only when, in our bungling insanitary ministrations, we overwhelm the guardian of the citadel with hostile germs that danger results. With this natural safeguard, if we allow the parturient woman to become infected through our neglect, it is little short of a crime.

**Newspaper Notoriety in Germany.**—Judging from an editorial in the *Deutsche med. Wochft.*, October 12, some of our brethren in Germany have the same itching for newspaper advertising which is too much in evidence with us. We quote: "A form of advertising practiced by certain physicians is too intangible to be made the subject of a complaint before the Medical Court of Honor, and yet is unworthy of the profession and detracts from the prestige of its members. The ever-increasing tendency to strive to be talked about on every opportunity is not becoming to members of a dignified profession. Scarcely any other academic profession supplies so much purely personal material to the daily papers. Professor So-and-So is celebrating his fiftieth, sixtieth, seventieth birthday or his thirtieth, fortieth, fiftieth anniversary as physician, docent, professor or member of the privy council. In the illustrated papers appears the picture of Professor X at the bedside, surrounded by a staff of assistants, nurses and grateful patients, or of Professor Y in the office, in the laboratory, at an operation, or perhaps in his automobile. Among the 'Local Happenings' appears the item that Prince A has entered the private hospital of Dr. B; that Dr. C has been summoned to D for a consultation, or that Professor E has been made corresponding or associate member of some medical association in southern Russia, and so on. Still more regrettable is the publication in the lay press of purely scientific observations, especially when they lay before the public questions which are still unsolved and on which there are still differences of opinion. Their presentation to the public in this way has a tendency to cause the public to distrust the whole of medical science. In a recent debate von Hansemann referred to the good old days 'when it was still the custom to present scientific matters only to the scientific public. Unfortunately things are different now, and when any one thinks he has made a discovery he goes at once to one of the weeklies or dailies or to congress, and, of course, the public learns more about it than if it had been published in Virchow's *Archiv* or any other exclusively medical publication.' Recently another mode of obtaining publicity has come into vogue. We read in the papers, a few months ago, that a certain surgeon had just performed his thousandth operation in a special field, and that his fellow-citizens celebrated this unusual event with a reception and congratulations. Not long ago we noticed in a daily paper from a neighboring country that a clinician there had just performed his two-thousandth herniotomy, and that on this joyful occasion he had received an ovation in his clinic." The editorial concludes: "We gladly acknowledge that many items of this nature appear without the knowledge of the celebratee and are sincerely distasteful to him, but there is no doubt that in a large number they are directly inspired or at least favored or tolerated by the one whose name is mentioned. All the members of the medical profession must unanimously strive to change this state of affairs. Especially should the 'upper ten thousand' scorn and set their faces against these newspaper notices."

**Physicians and Public Hygiene.**—We hear now and then of the force of awakened public sentiment. The very phrase implies that public sentiment sometimes sleeps, and while awakening and rubbing its eyes and getting its bearings, your practical politician, who never sleeps, will snatch the prize for which he is scheming—the control of public affairs, the key of the public treasury. What is needed in this land and in this

day is a live, active, wideawake, always vigilant public sentiment, not one which needs awakening or is only aroused into action by some public or official scandal. In this respect no class can set a better example than the members of the profession to which we belong; none, I fear, is more apt to feel that these matters need not engage their attention. We are, I take it, united as to the necessity of clean and well-paved streets, of a pure water supply, of an efficient system of sewage for our cities and towns, and yet of the hundreds of doctors who realize the importance of these matters, how many personally take the pains to help secure the best men and the most efficient means to accomplish these things?—Hurd, in *Buffalo Medical Journal*.

**Wisdom of Belgian Judges.**—A Belgian neurologist, Dr. Famenne of Florenville, conducts a family sanitarium for nervous diseases, and among his patients last year was a man of 32 who seemed to have lost all interest in life. For more than a year he had done nothing but eat, drink, sleep and wander around. He was not neurasthenic, but slightly paranoid, and was sent to the sanitarium by a physician at Charleroi. Treatment included psychic re-education, manual labor and hydrotherapy. Among the tasks imposed by Dr. Famenne to interest, encourage and train the young man was the translation of an English work describing cures of cases of neurasthenia. He translated 40 out of the 170 pages of the book, under the doctor's supervision and encouragement. After leaving the sanitarium the young man sued the physician for \$60 in payment for the translation of this work. The first court condemned the physician to pay this amount, with costs. Appeal to a second court confirmed this sentence, but reduced the remuneration for the translation to \$30. The final court of appeals, however, reversed the decision and imposed the costs of the suit on the plaintiff.

**Minor Points in Obstetrics.**—A German confrère states that the degree of relaxation of the soft parts during a delivery may be estimated from the behavior of the lower eyelid. The floor of the pelvis yields parallel to the facility with which the lower lid can be everted. His communication was published in the *Med. Klinik*, No. 26. Winkler has also recently called attention to the necessity for warmth as a means of promoting delivery. It is a physical process, and as such is attended by expenditure of heat. If the organism is weak from anemia, fatigue or chilliness, the physical process proceeds with less energy, and it may prove necessary to resort to forceps. Before doing so, however, the patient should be thoroughly warmed, which may restore sufficient energy for delivery to terminate spontaneously. His experience has been that a warm tub bath or a sitz bath with cloths wrung out of hot water applied to the thighs and a hot foot bath are liable to start vigorous contractions. Hot drinks are valuable adjuvants. The position in the sitz bath also favors expulsion, the weight of the child and the heat irritating the lower segment of the uterus. The *Gaz. Méd. Belge* for September 28 summarizes both the above communications.

**Resuscitation by Direct Massage of the Heart.**—Another instance is related by Seneert, of Nancy, France. The patient was a man of 51, who had undergone an operation for gallstones, under chloroform, in 1904, without mishap. During a second laparotomy, last April, he took the chloroform well, but during the search for the obstruction in the biliary passages the rectus muscles contracted and respiration stopped abruptly. The usual measures not bringing relief in seven minutes, Seneert inserted his hand through the laparotomy wound and was able to grasp the lower part of the heart in his hand, notwithstanding the interposition of the diaphragm. He then stroked it rhythmically with his thumb in front and his fingers at the back of the organ. In five minutes after this had been commenced the heart began to grow hard and larger, and in a few moments he felt a spontaneous contraction. The contractions grew gradually stronger and stronger, the pulse returned, and the patient began to breathe. The surgeon sutured the abdomen at once, and the patient recovered without further trouble except for slight transient intercostal pains. A detailed description of the case is given in the *Jour. de Méd. de Paris*, Sept. 24, 1905.



## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

### BOOK ON MEDICINE FOR LAITY.

ADRIAN, MINN., Nov. 14, 1905.

To the Editor:—Will you kindly give me the name of a good safe work on popular medicine that a self-respecting physician can recommend to the laity?

M. SULLIVAN.

ANSWER: "Personal Hygiene," by W. L. Pyle, M.D., is a good one, published by W. B. Saunders & Co., Philadelphia, \$1.50. Another good work, by Lyman, Fenger and Belfield, \$2.50, may be had of the W. T. Keener Co., Chicago.

### RESTORATION OF FLABBY BREASTS TO NORMAL.

—, ILL.

To the Editor:—Is there anything you can recommend for the treatment of flabby breasts resulting from pregnancy and parturition? I shall be pleased to know of anything that will help to restore them to their normal condition, as I am frequently consulted in this condition.

A. C., M.D.

ANSWER: The normal rotundity and plumpness of the breasts are due largely to the deposit of adipose tissue. During pregnancy, the glands develop and during lactation become more active, and the fatty deposits are somewhat absorbed. With the cessation of lactation there is a decline in size of the glandular elements, and this, at times, without a corresponding increase in adipose tissue. Especially is this apt to be the case if the patient is poorly nourished. At times there is seen a general atrophic process in the breast structures.

The patient should be in the best possible physical condition, by proper diet, exercise, baths, massage, etc. Constitutional diseases such as syphilis, tuberculosis or anemia, should receive proper attention. Locally, massage with oil is used with good effect in many of the "rest cure" establishments.

### "IN VITRO."

—, ILL., Nov. 18, 1905.

To the Editor:—I see in many articles the phrase "in vitro," which I suppose means "during life." If English is superior to another language when the same meaning is conveyed, why is the Latin used?

E.

ANSWER.—This amusing confusion of terms by our correspondent was duplicated by several well-educated and well-read physicians of whom we asked the meaning of "in vitro." It is, therefore, of sufficient interest to receive explanation here: *Vitro* evidently comes from the Latin *vitrum* (glass), and the phrase means "in glass," i. e., "in the test tube" or "in test tube experiment." Our correspondent was probably thinking of "intra vitam" or "in vivo" (Latin *vivo*—to live; be alive; or *vivus*—having life), either of which may stand for "during life." We agree that it is better to use English than Latin phrases when the meaning is the same. In this case, however, the English "in the test tube" is a little more cumbersome.

### KOPP'S BABY'S FRIEND.

OMAHA, Aug. 22, 1905.

To the Editor:—What is the composition of the compound prepared by Mrs. J. A. and C. Robert Kopp, at York, Pa., and sold under the shop name of "Baby's Friend"? A patient of mine gave her three days' old baby four drops of the stuff and the child went into a stupor at once. The pupils were pin-pointed, skin cool, and the heart beat and the respirations were slow. I treated this case as one of opium poisoning, but it was twelve hours before my little patient was out of danger.

R. E. ESKILDSON, M.D.

ANSWER.—A bottle of this preparation was purchased and the contents analyzed. According to the analysis, "Kopp's Baby's Friend" contains, in 100 c.c., 0.0719 gm. morphin sulphate; approximately 1/3 of a grain in one fluid ounce.

### BULL'S COUGH SYRUP.

MORRICO, Ind., Sept. 6, 1905.

To the Editor:—Can you give me the formula for "Dr. Bull's Cough Syrup"? Recently I was called to see a child twenty-three months' old who had drunk about an ounce of it. In an hour, when first seen, the symptoms were those of opium poisoning. In about twelve hours the child had several convulsions and spasms followed at intervals for twelve hours longer. The child then sank into a coma and died in the seventy-second hour with cardiac failure. Respirations were labored. The dose of the mixture as labeled is five drops for a child of two years.

J. W. SHAFER, M.D.

ANSWER.—A bottle of this preparation was purchased in the open market and the contents analyzed. According to this analysis, "Bull's Cough Syrup" contains, in 100 c.c., 0.0534 gm. morphin sulphate; approximately 1/4 of a grain in one fluid ounce.

## State Boards of Registration

### COMING EXAMINATIONS.

Wyoming Board of Medical Examiners, Cheyenne, December 6. Secretary, S. B. Miller, Laramie.

Examining Board representing the President and Fellows of the Medical Society of Delaware at Dover, and the Homeopathic Board, Wilmington, December 12. Secretary, P. W. Tomlinson, Wilmington.

Ohio State Board of Medical Registration and Examination, Columbus, December 12-14. Secretary, F. Winders, Columbus.

Medical Examining Board of Virginia, Richmond, December 12-15. Secretary, R. S. Martin, Stuart.

Board of Medical Examiners of Maryland, Baltimore, December 13-16. Secretary, J. McScott, Hagerstown.

State Board of Health of Missouri, Kansas City, December 19-21. Secretary, J. A. B. Adcock, Warrensburg.

Board of Medical Examiners State of California, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.

California July Report.—Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports the written examinations held at San Francisco and Los Angeles, July 19-21, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 93, of whom 48 passed and 45 failed. The following colleges were represented:

College.	PASSED.	Year.	Per Cent.
University of Minnesota.....	(1902)	75	
University of Pennsylvania.....	(1899)	76.7	
Rush Med. Coll.....	(1901) 78.7; (1903) 83.4; (1904)	76, 82	
Cooper Med. Coll.....	(1905) 75, 75, 75.4, 75.8, 76.3, 76.5, 77.1, 77.4, 77.4, 77.8, 77.8, 79.3, 79.8, 80.1, 80.5, 81.5, 84.3, 84.6, 85.5.		
University of California.....	(1905) 75, 77.4, 80.4, 83.3, 84.3		
Cornell University .....	(1905)	80.7	
University Southern California..	(1905) 75, 77.6, 78.8, 79.5, 79.6, 79.6, 79.7, 79.8, 80.7, 81.8.		
Johns Hopkins University.....	(1905)	79.4, 82.4	
Medical College of Indianapolis.....	(1898)	75, 79.1	
College of P. & S., Chicago.....	(1902)	75.8	
Northwestern University, Chicago.....	(1905)	76.2	

College.	FAILED.	Year.	Per Cent.
Denver & Gross College of Medicine..	(1903) 52.3, (1905)	72.2	
University of Louisville .....	(1882)	51.5	
Columbus Med. Coll. ....	(1891)	50.2	
Missouri Med. Coll. (1877) 67.8; (1887) 64.4; (1896) 56.5; (1898) 61.8.			
College of P. & S., Baltimore .....	(1904)	74	
Chicago Med. Coll. ....	(1880)	61.6	
College of P. & S., San Francisco .....	(1905) 69.4, 72.4		
University of Southern California..	(1905) 19.4,* 65.5, 67.2, 69.3, 69.4, 69.7, 70.5 71.8, 72.3.		
University of California .....	(1905)	71.6, 72.6	
Medical College of Indiana .....	(1903)	61.6	
American College of Med. and Surg.....	(1905)	56.3	
Cooper Med. Coll. ....	(1905) 18.3,* 58.8, 64.4, 71		
Hahnemann Med. Coll., San Francisco ..	(1901) 61.1; (1905)	73.2	
University of Maryland .....	(1904)	73.4	
Tulane University .....	(1905)	65.6	
Kansas City Med. Coll. ....	(1894)	55	
Washington University .....	(1903)	74	
Marion-Sims Med. Coll. ....	(1897)	65.2	
Marion-Sims-Beaumont Coll. of Med.....	(1903)	67.8	
Rush Med. Coll. ....	(1889) 64.2, (1901)	67.1	
Cleveland Med. Coll. ....	(1895)	60.4	
College of P. & S., Chicago.....	(1903)	71.6	
University of New York.....	(1884)	72	
University of Michigan .....	(1881) 72.1; (1889)	59.2	
Northwestern University Med. Coll.....	(1899)	66.4	

\* Took only 3 subjects.

Florida October Report.—Dr. J. D. Fernandez, secretary of the Regular Board of Medical Examiners of the State of Florida, reports the examination held at Jacksonville, Oct. 10-11, 1905. Ten questions were asked in each branch, and the percentage required to pass was 75. The total number of individuals examined was 28, of whom 3 failed and 1 withdrew from examination. The following colleges were represented:

College.	PASSED.	Year.	Per Cent.
Jefferson Med. Coll. ....	(1905)	92.8	
College of Medicine and Surgery, Detroit.....	(1904)	86.7	
Woman's Med. Coll., Baltimore.....	(1904)	84.8	
Baltimore Med. Coll.....	(1905)	95	
Baylor University, Texas.....	(1905)	82	
Howard University.....	(1905)	87.4	
University of Kentucky.....	(1903)	94.2	
Bellevue Hosp. Med. Coll. ....	(1890)	93.4	
Johns Hopkins University.....	(1901)	93.4	
Royal College of P. and S., Edinburgh.....	(1882)	84	
Meharry Med. Coll. ....	(1905)	75.1	
Tulane University.....	(1905)	90, 94.7	
University of Michigan..	(1900) 87; (1904) 94.7; (1905)	86.5, 90.2	
College of P. & S., Baltimore.....	(1903)	94	
University of Georgia.....	(1905)	94	
University of Maryland.....	(1905)	91.5	
Vanderbilt University.....	(1905)	92.2	



Western Reserve University.....	(1869)	75
Georgia Med. Coll., Augusta.....	(1905)	87.5
College of P. & S., New York.....	(1905)	92

## FAILED.

Meharry Med. Coll. ....	(1905)	53.2, 59.2
Jefferson Med. Coll. ....	(1866)	57

**Vermont October Report.**—Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the written examination held at Burlington, Oct. 10-12, 1905. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 11, all of whom passed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
University of Vermont..	(1888) 76.4; (1897) 78.4; (1904) 84, 89.9 (1905) 83.6, 84.6, 85.6, 88.1, 90.7..		
Jefferson Med. Coll.....	(1905)		79.1
Barnes Med. Coll.....	(1905)		83.1

The following questions were asked:

## OBSTETRICS.

1. Give symptoms of placenta prævia. 2. Give treatment of puerperal fever. 3. Treatment of nausea and vomiting of pregnancy. 4. Give symptoms of extrauterine pregnancy with rupture. 5. What are the indications for premature delivery? 6. What are the indications for use of forceps? 7. Describe the mechanism of breech presentation. 8. Give treatment of eclampsia. 9. Give indications for use of anesthetics. 10. What directions would you give the nurse regarding the care of the infant during the first week?

## GYNECOLOGY.

1. Give symptoms of prolapsus uteri. 2. Give treatment of dysmenorrhea. 3. Differentiate ovaritis and appendicitis. 4. Give treatment of chronic metritis. 5. Give treatment of menorrhagia.

## CHEMISTRY.

1. Briefly describe molecular attraction. 2. Briefly explain disinfectants, germicides, antiseptics, deodorizers. Give example of each. 3. (a) How are normal solutions made? (b) What are decinormal solutions? 4. Mention the chief constituents of blood and state those predominating in corpuscles and plasma, respectively. 5. (a) Describe method of obtaining urea from urine. (b) Name normal pigments of urine. (c) What conditions cause an increase in the quantity of ammonia in the body?

## PATHOLOGY.

1. What is the most important curative agent, not a drug, in all virulent infective diseases? 2. Describe the postmortem appearances usually found in acute pneumonia. 3. What pathological appearances would you expect to find in a fatal case of pleurisy? 4. In a prolonged case of dysentery from the tropics what changes would you expect to find postmortem? 5. How do the postmortem appearances in acute military tuberculosis differ from those of ordinary chronic phthisis?

## MATERIA MEDICA.

1. (a) How is opium obtained? (b) What percentage of morphine should it normally yield? (c) Name four alkaloids of opium and give doses. 2. Briefly give description and properties of ergot. 3. Name two arterial sedatives, and state in what condition they should be given. Give dose of same for a child one year old. 4. Give dose of Norwood's tincture of veratrum viride, digitalis, gelsemium, belladonna, sodium salicylate, potassium iodid, podophyllin, calomel, cimicifuga, muriatic acid, bichlorid of mercury. 5. Give composition and doses of the following: Fowler's solution, Lugol's solution, Donovan's solution, Basham's mixture.

## THERAPEUTICS.

1. Explain the principle governing the treatment of convulsions when due to toxic agents in the blood. Name two conditions and give treatment. 2. Name some conditions in which the bromids are indicated and state method of giving large doses. 3. Write a formula for the following: Coryza, laryngitis, gastralgia, acute articular rheumatism, delirium tremens. 4. Briefly give therapeutic indications for creosote and guaiacol. In what conditions would guaiacol be superior to creosote? 5. Name four diuretics. Give physiologic action and therapeutic indications for same.

## PRACTICE OF MEDICINE.

1. Describe the symptoms and course of a case of sthenic pneumonia, unmodified by drugs, in a robust young adult. 2. What are the indications for treatment in pneumonia? How much and under what circumstances may medicines be expected to influence results? 3. How would you diagnose a case of pleurisy with effusion? 4. How does nature proceed to cure a simple pleurisy? 5. What is the difference between simple diarrhea and dysentery? 6. Give the symptoms and the most common causes of acute gastritis. 7. What are the symptoms of cystitis and how is it to be distinguished from nervous irritability of the bladder? 8. Describe the course of a typical case of typhoid fever. 9. How do the symptoms and course of acute military tuberculosis differ from those of ordinary chronic phthisis? 10. What are the symptoms and most common causes of cirrhosis of the liver?

## LEGAL MEDICINE.

1. What is understood by cadaveric rigidity and putrefaction? 2. Describe the examination of a wound in a dead body. 3. Give causes of death in new-born children. 4. What is understood by legitimacy? 5. Give a definition of insanity.

## PHYSIOLOGY.

1. Give the general structure of the nervous system. 2. What is meant by reflex action, of the nervous system? 3. Name the branches of the fifth cranial nerve, and give the distribution of the same. 4. Give the name and source of the inorganic proximate principles. 5. Give the composition of the bile, organic and mineral salts. 6. What are the normal constituents of urine? 7. Describe rigor mortis, also tetanus. 8. Describe the process of digestion and absorption of food. 9. Describe the lymphatic system, and give its function. 10. Describe the different kinds of muscular tissue, and the mode of action of each.

## HYGIENE.

1. What evils arise from outside privy vaults? How may such evils be averted in cases in which these vaults can not be replaced by modern arrangements? 2. Mention the different methods of bathing and state the hygienic rules to be observed in each. 3. How would you build and furnish a school house, observing hygienic rules? 4. Give the rule for quarantine in yellow fever, also same for cholera. 5. Give the cause of diphtheria and the necessary precautions to prevent it.

## SURGERY.

1. Name the three chief forms of bacteria. 2. What is suppuration and how caused? 3. Name the varieties of tumors. 4. Give the differential diagnosis between fracture and dislocation. 5. Describe the operation for removal of the breast. 6. Describe the method of skin grafting. 7. Give symptoms, dangers and treatment of acute synovitis. 8. Describe the varieties of talipes. 9. Give the treatment for chancre. 10. What are the dangers in passing a catheter or steel sound?

## ANATOMY.

1. Name the bones of the face. 2. What essential structures enter into joint formation? 3. Describe the diaphragm. Name its openings and state what passes through each opening. 4. Beneath what points on the anterior surface of the chest walls are located the valves of the heart? 5. Give the origin, course and termination of the vertebral artery. 6. Give a general anatomic description of the lymphatic system. 7. Mention the coverings of the brain. Describe one of these coverings. 8. Give the gross anatomy of the eyeball. 9. What structures are found in the right inguinal region? 10. Mention from without inward the structures covering a femoral hernia.

## BACTERIOLOGY.

1. How do bacteria multiply? 2. What microbes are found in abscesses? 3. Name three germicides, and five antiseptics. 4. What diagnostic point can be determined by a microscopic examination of the urine? 5. In order to prove conclusively that a certain micro-organism is the cause of a certain specific disease, what fundamental conditions must be satisfied?

**Oregon July Report.**—Dr. B. E. Miller, secretary of the Board of Medical Examiners of the State of Oregon, reports the written examination held at Portland, July 13, 1905. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 57, of whom 21 passed and 36 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Detroit College of Medicine.....	(1891) 75; (1904)		81.6
Northwestern University .....	(1897)		77.6
University of Minnesota.....	(1903) 75.7; (1904)		80
University of Pennsylvania .....	(1891) 76.8; (1902)		81.4
College of P. & S., Chicago.....	(1903)		82.8
Temple Med. Coll., Philadelphia.....	(1905)		76
American Med. Coll., Chicago.....	(1904)		78
Rush Med. Coll.....	(1902) 82; (1904)		80.7
University Med. Coll., Kansas City.....	(1898)		75.6
Cooper Med. Coll., San Francisco.....	(1904)		79.4
California Med. Coll. ....	(1900)		77
University of Michigan.....	(1902)		80.7
Imperial Alexander University, Finland.....	(1888)		75
Gross Med. Coll., Denver.....	(1900)		77.8
Medico-Chirurgical College, Philadelphia.....	(1905)		75
Hamline University, Minneapolis.....	(1897)		75
College of P. & S., San Francisco.....	(1905)		76.8

## FAILED.

College of P. & S., California.....	(1905)	70
Vanderbilt University .....	(1880) 49.6; (1887)	16.8
University of Oregon .....	(1905) 64, 64.3, 66.7, 68.6, 70, 71,	72
Bellevue Hosp. Med. Coll. of N. Y.....	(1890)	70.3
University of Buffalo .....	(1882)	59.8
Willamette University, Oregon.....	(1905) 65, 66.8,	67.6
Eclectic Med. Institute, Cincinnati .....	(1903)	73.9
College of P. & S., Chicago.....	(1902) 73.8; (1905)	74.4
Pulte Med. Coll., Ohio.....	(1894)	62
Chicago Med. Coll. ....	(1884)	72.4
Kansas City Med. Coll. ....	(1893) 70.4; (1904)	56
Rush Med. Coll. ....	(1903)	73.4
Cooper Med. Coll., San Francisco.....	(1897)	68.8
Southern Homeo. Med. Coll., Baltimore.....	(1897)	65
Marion-Sims-Beaumont Coll. of Med. ....	(1904)	66.6
Medico-Chirurgical College, Missouri.....	(1905)	73.7
Tulane University .....	(1901)	70.4
Dallas Med. Coll., Texas.....	(1903)	62
American College of Med. & Surg., Illinois.....	(1904)	9
College of P. & S., New York.....	(1904)	74.5
Bennett Med. Coll., Chicago.....	(1905)	70.8
Iowa College of P. & S.....	(1884)	74.6
Non-Graduates.....	38.9, 47.7,	59.5

## The Public Service

## Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, week ending November 18:

De Loffre, S. M., asst. surgeon, reported for temporary duty at Presidio of Monterey, Cal.

Kneedler, Wm. L., surgeon, relieved from duty at Fort Rosecrans, Cal., and ordered to proceed to Manila, January 25, where on arrival he will report to commanding general, Philippines Division, for duty.

Greenleaf, Harry S., asst.-surg., relieved from duty at Fort Montrie, S. C., and ordered to proceed to Manila on January 25, where, on arrival, he will report to the commanding general, Philippines Division, for assignment to duty.



Buck, C. D., asst.-surgeon, left Fort Leavenworth, Kansas, en route to accompany troops from Fort Riley, Kan., to Fort Sam Houston, Texas.

Ruffner, E. L., Brooks, Wm. H., asst.-surgeons, ordered to report in person, November 27, to Major Wm. H. Arthur, surgeon, president examining board, Army Medical Museum Building, Washington, D. C., to determine their fitness for advancement to the rank of captain.

Noble, R. E., asst.-surgeon, left depot, recruits and casuals, Fort McDowell, Cal., on 30 days' leave of absence.

Gibner, H. C., asst.-surgeon, assigned to duty as surgeon of the transport "Buford" during next voyage to Manila; on arrival at latter place will report in person to commanding general, Philippines Division for assignment to duty.

Bruns, E. H., asst.-surg., reported for temporary duty at depot, recruits and casuals, Fort McDowell, Cal.

Blanchard, R. M., Baker, Frank C., Woodbury, Frank T., asst.-surgeons, reported for temporary duty at Army General Hospital, Presidio of San Francisco, Cal.

Duncan, Louis C., asst.-surgeon, ordered to proceed from Manila, P. I., to San Francisco, Cal., on transport to sail April 15, 1906, instead of December 15, 1905.

Gapen, Nelson, asst.-surgeon, relieved from further duty in the Philippines Division, and ordered to depot of recruits and casuals, Angel Island, Cal., for duty.

Noble, R. E., asst.-surgeon, relieved from duty at depot of recruits and casuals, Angel Island, Cal., and ordered to Fort Casey, Wash., for duty.

Jones, George H., contract surgeon, left Fort Fremont, S. C., on sick leave for two months.

Rietz, Hugo C., dental surgeon, left Fort Wayne, Mich., and arrived at his proper station, Fort Sheridan, Ill.

Boak, S. Davis, dental surgeon, returned to Fort Washington, Md., from leave of absence.

Lowe, Thomas S., contract surgeon, granted an extension of one month to his leave of absence from the Philippines Division.

George, William R. S., contract surgeon, left Fort Monroe, Va., and arrived at Fort Greble, R. I., for temporary duty.

Branch, Frederick D., contract surgeon, ordered to Fort Jay, N. Y., for temporary duty.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending November 18:

Vickery, E. A., asst.-surgeon, detached from the *Franklin* and granted leave until December 1:

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 18:

Banks, C. E., surgeon, relieved from special temporary duty at Century, Fla., and directed to rejoin station at Key West, Fla.

McIntosh, W. P., surgeon, granted leave of absence for twenty-one days from November 15.

Blue, R., P. A., surgeon, relieved from special temporary duty at New Orleans, and directed to rejoin station at Norfolk, Va., and granted six days' leave of absence from November 15.

von Ezdorf, R. H., P. A. surgeon, directed to proceed to Biloxi, Miss., for special temporary duty.

von Ezdorf, R. H., P. A. surgeon, relieved from duty at Biloxi, Miss., and directed to proceed to Havana, Cuba, for duty.

Fricks, L. D., P. A. surgeon, directed to report to Surgeon G. W. Stoner at Ellis Island, N. Y., for duty.

Kerr, J. W., P. A. surgeon, directed to transfer inspection duty from Quebec to St. John, N. B., on or about November 17.

Richardson, T. F., P. A. surgeon, relieved from special temporary duty in New Orleans, and directed to rejoin station at Savannah, Ga.

Long, J. D., P. A. surgeon, directed to report to the Governor General of the Philippine Islands for duty as assistant director of health of said islands.

Long, J. D., P. A. surgeon, granted leave of absence for one month.

Rucker, W. C., assistant surgeon, relieved from special temporary duty at New Orleans, and directed to rejoin station at Boston.

Ward, W. K., asst.-surgeon, directed to report to Surgeon G. W. Stoner, Ellis Island, for duty.

Pettyjohn, Joseph, asst.-surgeon, relieved from duty at Fort Stanton, N. M., and directed to proceed to San Francisco, reporting to the medical officer in command for duty and assignment to quarters.

Spratt, R. D., asst.-surgeon, granted leave of absence for seven days from November 17.

Alexander, E., acting asst.-surgeon, six days' leave of absence granted from November 10, amended to read six days from November 17.

Ewing, J. T., acting asst.-surgeon, granted seven days' leave of absence from November 7, under paragraph 210 of the regulations.

Foster, S. B., acting asst.-surgeon, granted leave of absence for ten days from October 21.

Gregory, G. A., acting asst.-surgeon, granted leave of absence for fourteen days from November 11.

Stanton, J. G., acting asst.-surgeon, granted leave of absence for thirteen days from November 6.

Tappan, J. W., acting asst.-surgeon, granted leave of absence for twenty-three days from November 13.

Stearns, W. L., pharmacist, three days' leave of absence revoked.

Stearns, W. L., pharmacist, relieved from special temporary duty at Century, Fla., and directed to rejoin station at Santa Rosa Quarantine.

Gibson, F. L., pharmacist, granted one day's leave of absence, November 1, under paragraph 210 of the regulations.

## Medical Organization

### MEDICAL ORGANIZATION IN NORTH DAKOTA, MONTANA, IDAHO AND WASHINGTON.

By J. N. McCormack, M.D.

Chairman of the Committee on Organization of the American Medical Association.

BOWLING GREEN, KY.

For reasons which will appear later these four states group themselves together naturally for the purposes of this report. District meetings were arranged for me at Fargo and Bismarck, in North Dakota, and at Billings and Butte, in Montana. I missed connection for the appointment at Billings, but my place was ably filled by Dr. Campbell, president of the Montana State Association, and a good meeting was held. The other meetings were well attended by the local profession at each place and by such representative men from the respective states as enabled me (in the course of the free and frank discussion which always followed my talk) to get a very fair knowledge of almost everything relating to professional conditions.

I visited the state meetings in Washington and Idaho, the former at Tacoma and the latter at Boise. Both were well attended, and I have never participated in meetings in any part of the country where there was such an active and intelligent interest in every question bearing on the elevation of professional standards and the betterment of professional conditions. After every opening talk they insisted on a suspension of the regular program and devoted hour after hour to careful study of the detailed methods for building up and maintaining the interest in their county societies, by post-graduate work and otherwise, of weaving in and utilizing the district societies to the best advantage in the sparsely settled regions, of enlisting the support and co-operation of the laity, and especially of the learned professions—the lawyers, editors, teachers, clergymen and pharmacists—and of securing and enforcing medical and health legislation. In the course of these heart-to-heart talks I was able to make a study of their short, plain legislative history, and professional evolution, in a most instructive and profitable way, the more so now, because, in the light of my large experience in this work, such studies are naturally and almost insensibly comparative.

It was soon clearly developed that the Minnesota profession had builded wiser than it knew in securing advanced legislation and in fixing high standards in that state at an early day. Their laws had been copied almost literally in all four of the states, the same high standards were established under them, and in some respects with even better results. Thus North Dakota was the first state to secure an effective statute requiring that all patent and proprietary medicines containing alcohol and narcotics should show the exact amount of such substances on the label of each bottle or package. This state also has an almost ideal pure food and drug law, an excellent one for encouraging the study of anatomy, and a state bacteriologic and pathologic laboratory. The administration of the pure food, drug, nostrum and similar laws is in the hands of the chemist and director of the State Agricultural Experiment Station—a layman. He has the active co-operation of the organized profession, is executing these statutes without fear or favor, and can probably do so more effectively and with less opposition than he could if he were a medical man.

The same difficulties and opposition were encountered in securing the passage of this advanced legislation as would have to be met in the older states. Such unusual success was only possible through the able, tactful leadership of Dr. F. R. Smyth, chairman of the committee on public policy and legislation, aided by a few strong medical and lay members in both houses of the general assembly, and a united and high-grade profession, which deserved, and to a remarkable degree commanded, the respect and confidence of their representatives.

The other states included in this report have accomplished much in the same directions, more than in most of the older states, but none of them has been so successful as North Dakota, probably because they have not been so fortunate in selecting a leader.

Although the geographical and other difficulties incident to a new and sparsely settled country are more pronounced and formidable here than in many other sections of the country, and although the work is recognized here as being in its infancy, more has been really done, and there is more of the real spirit of organization, more of the unity of purpose, faith



and enthusiasm, necessary to secure results, than I have found anywhere else. Careful investigation soon convinced me that these highly desirable conditions were easily traceable to two principal causes: First, to their well devised and rigidly enforced laws, and high standard examinations under them, which at an early day turned the current of graduates from low grade commercial medical colleges into less favored states. Second, and only less important, to the fact that the profession in this section is usually so well supported financially that its members can and do constantly avail themselves of the benefits of postgraduate instruction in the great medical centers, supply themselves with high-class standard and periodical literature, and otherwise equip themselves for modern scientific work, in a way possible only to a fortunate few in many parts of the country. With the minimum office consultations and prescriptions fixed at \$2, day visits at \$2.50 to \$3, and night visits almost uniformly at \$5, visits in the country \$1 per mile, ordinary obstetric fees from \$20 to \$25, and surgical fees in the same proportion, as I found them established more firmly as my duties took me further west, it was easy to understand why higher qualifications and better equipment were within easy reach of the rank and file of the profession. It should also be said, for the benefit of those who might be tempted by this roseate picture of fees and conditions, that the climate over most of this section is very severe, that reciprocity with other states is not favored, for reasons which appear fairly satisfactory to an impartial observer, and that their examinations are such that none but well-qualified men need hope to be successful in passing them. In addition to the advantages already enumerated, made possible by the higher standards and better financial support, I was constantly impressed that there was a truer spirit of altruism pervading the profession. This has already been indicated in the greater interest taken in all affairs in regard to which medical men owe a public duty, but it was evident also in a broader and more discriminating charity for the poor. In these representative men from the mountains and plains, especially those in middle life and older, there seemed often the counterpart of Dr. William McClure, the general practitioner of the "Bonnie Briar Bush," whose story should be known, and whose noble charity should be emulated in a still higher and more discriminating way under modern methods and conditions. My constant observation is that young physicians do not do charity practice cheerfully or with good grace. I have repeatedly urged, and shall continue to do so until it is accomplished, that every medical school in this country should give a regular course of instruction in business methods, in professional conduct and in organization or co-operation, but this should always include such advice as to the obligations of the physician to the poor, to God's poor, as will guard against mistakes not creditable to such a profession as ours.

Finding that professional and public sentiment had crystallized and set in undesirable forms in most of the older states, I had long believed that it might be practicable to secure model organization and legislation in some of the new states, and hold these up as examples for their less fortunate, fad-ridden sisters. A careful study, made possible during this trip, has converted this belief into a conviction. Quackery has gained little foothold here, comparatively, and the profession has such a high place in the public esteem that if all of the forces at its command can be united, and a proper man selected in each state to lead the movement, there should be no doubt about the result. The urgent need here, and everywhere, is such an organization of the profession in each county where there are as many as four or five active physicians, as will enable them to hold meetings devoted to the discussion of questions of public policy, to which shall be invited their senators, representatives, judicial and other officers, lawyers, editors, teachers, clergymen and other leaders of thought, and educate them as no one but competent medical men can do, and which they will fully appreciate if it is properly done, not only as to the necessity for such legislation and work for the proper protection of the public, including them, their families and neighbors, but as to the duty and unselfishness of the profession in leading the reform movement. If this can be undertaken in a comprehensive, common-sense way, even in a third of the counties in each state, and after such a leaven has worked for a while, if a well selected, tactful representative of the profession can be found, who has the respect of legislators and other officials, who knows and has the confidence of their medical constituents, and who can bring these individuals and their interests into such relationship as will prove to the interest of all concerned, and if he can be kept at the capital during each session of the general assembly, the influence of the profession in promoting its own and the public welfare

would soon become irresistible. If medical colleges could only have realized and taught from the first that ours is a co-operative profession and not a competitive trade, that even as between those of the same locality there are nine good reasons for co-operation and harmony for every poor one for contention and discord, physicians would have been as harmonious as lawyers, and health and medical boards would have been just as much a part of the warp and woof of our system of government as the courts are. This is what the new plan of organization stands for, all it stands for, and if our medical schools can be induced to take up their part of the work, even at this late day, the difficulties will be greatly lessened in the states now under consideration and in the country at large.

The hospitality and cordiality of these western doctors was so warm and constant that this feature of the visit to each locality will always be with me a pleasant memory. Paraphrasing the invocation of Tiny Tim, I earnestly pray, "God bless them all; may they live long and prosper."

#### Illinois.

URBANA, CHAMPAIGN, AND CHAMPAIGN COUNTY MEDICAL SOCIETY.—A new medical organization was organized in Champaign, October 19, with Dr. William K. Newcomb, Champaign, president; Dr. William F. Burres, Urbana, vice-president, and Dr. W. E. Schowengerdt, Champaign, secretary.

#### Indiana.

FOURTH DISTRICT MEDICAL SOCIETY.—This society, composed of physicians belonging to the medical societies in the counties of the fourth congressional district, was organized, October 26, at North Vernon, with a charter membership of about 85. Dr. William H. Stemm, North Vernon, was elected president, and Dr. James K. Ritter, Seymour, secretary and treasurer, while the presidents of the various constituent county medical societies will act as vice-presidents.

#### Michigan.

FOURTH DISTRICT MEDICAL SOCIETY.—The first annual meeting of this society was held at Port Huron November 8. Dr. David Inglis, Detroit, president of the state medical society, delivered an address on "Medical Ideals." At the banquet, in the evening, Dr. Charles C. Clancy, Port Huron, served as toastmaster, and responses were made by leading members of the profession of Detroit and eastern Michigan.

#### Minnesota.

AITKIN COUNTY MEDICAL SOCIETY.—The organization of this society was perfected at Aitkin, October 2, by the adoption of the standard constitution and by-laws and the election of the following officers: President, Dr. Carlton Graves; vice-president, Dr. J. Fowler Avery; secretary, Dr. A. G. Belsheim, and treasurer, Dr. James W. George, all of Aitkin.

#### Missouri.

GENTRY COUNTY MEDICAL SOCIETY.—On October 31, six physicians of the county met in Albany and took preliminary step to effect a permanent organization of the practicing physicians of the county.

#### Ohio.

GEAUGA COUNTY MEDICAL SOCIETY.—A number of physicians of the county met in Burton, October 5, and organized this society, with the aid of Dr. William E. Lower, Cleveland, counselor of the fifth district, and Dr. Clyde E. Ford, of Cleveland. Dr. Frank S. Pomeroy, Chardon, was chosen president, and Dr. Albert D. Warner, Burton, secretary and treasurer. A committee, consisting of Drs. Albert D. Warner, Burton, Nicholas F. Schwartz, Auburn, and Ida B. Peffers, Middlefield, was appointed to draft a constitution and by-laws.

#### Oklahoma.

SOUTHWESTERN OKLAHOMA MEDICAL ASSOCIATION.—At a meeting of the Kiowa County Medical Association at Hobart, November 9, the question of forming a medical association for the southwestern Oklahoma county societies was taken up and favorably acted on. As a result, a temporary organization was formed, embracing Kiowa, Washita, Custer and Green counties. Dr. W. L. York, Hobart, was elected temporary president, and Dr. Alfred H. Bungardt, Cordell, temporary secretary. A permanent organization will be perfected at a meeting to be held in Cordell on Jan. 10, 1906.

#### Pennsylvania.

SHENANDOAH MEDICAL SOCIETY.—The Shenandoah Medical Society was organized, September 27, with the following officers: President, Dr. Stephen C. Spalding; vice-president, Dr. Harry M. Wasley, and secretary, Dr. William J. Seanlan.



## Society Proceedings

### COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.  
American Dermatological Association, New York, Dec. 28-30.  
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### OHIO NINTH DISTRICT MEDICAL SOCIETY.

*Meeting held at Gallipolis, Oct. 31, 1905.*

DR. LESTER KELLAR, Ironton, was chairman, and DR. JOSEPH S. RARDIN, Portsmouth, acted as secretary.

At the opening of the session 52 physicians were present from various parts of the district. The meeting was held at the laboratory of the State Hospital for Epileptics, and was followed by a banquet in the same building arranged by the local society.

#### The Business Side of Practice.

DR. PRESTON SEILER, Piketon, discussed many of the evils prevalent in the profession and made valuable suggestions for improvement.

#### Pleuritic Effusions.

DR. E. T. DANDO, Wellston, dwelt on the insidious character of the disease and the frequency with which it is overlooked and a wrong diagnosis made. A diagnosis of tuberculosis is frequently made and the lung destroyed, or greatly crippled, before the true condition is discovered. He classified the cases as serous, serofibrinous and purulent. The causes are pneumonia involving the pleura, pyemic conditions elsewhere, infections from contagious diseases, such as scarlet and typhoid fevers, measles and whooping cough, and trauma. In some cases it follows rupture of tubercular cavities. The treatment of the serous cases is medical, either alone or with the aid of aspiration. In the early purulent cases, cure would usually follow incision, opening, cleansing and drainage. In chronic purulent cases, Estlander's thoracoplastic resection is advisable. If let alone, almost all patients will die.

In the discussion, the necessity of early and careful examination was emphasized, as was also the importance of lack of open resonance in diagnosis. Aspiration was said to be valuable when bacteria are not present, but in purulent cases free drainage is essential.

DR. ORRIN C. ANDRE, Waverly, advised the injection of small quantities of Thiersch's solution to replace the liquid removed by operation. He also considered the syrup of the iodid of iron a valuable remedy in the serous cases.

DR. BROOKS F. BEEBE, Cincinnati, said that effusions are very often not discovered, and believed that this, in many cases, is on account of the lack of careful examination.

#### Perineal Laceration.

DR. WILLIAM E. PRICER, Ironton, read a paper on "Laceration of the Perineum, Frequency, Causes, Prevention, Treatment." Hospital records show that laceration occurs in about 30 per cent. of primary deliveries and in 10 per cent. of subsequent deliveries. He classified three degrees of laceration: First, those half-way to the sphincter ani; second, those extending to the sphincter ani, and, third, those extending through it. Many methods of prevention have been advised, but none is effective in all cases. In many instances it is impossible to prevent laceration, and censure should not follow when it happens. Immediate operation was advisable in almost all cases.

DR. CHARLES L. BONIFIELD, Cincinnati, believed that 90 per cent. of primiparae were lacerated. The only method of prevention worthy of mention was the use of chloroform in the second stage. Lacerations should be repaired as soon as possible, chromicized catgut being the best suture material.

DR. JOSEPH H. RAY, Coalton, expressed his opinion that if more care were taken regarding physical exercises during the development of the girl, and in the period of pregnancy, fewer puerperal lacerations would occur.

#### Otitis Media.

DR. GEORGE M. MARSHALL, Portsmouth, considered that many cases of otitis media are neglected and that ill results follow failure to make early incision into the tympanum, thereby evacuating infected discharges from the middle ear. Enlarged tonsils and extension of infection from the exanthemata are the chief causes of this condition.

### Banquet.

The association adjourned to meet at the Banquet Hall, where the local society had provided substantial entertainment. Dr. John B. Aleorn, Gallipolis, acted as toastmaster.

### NEW YORK NEUROLOGICAL SOCIETY.

*Regular Meeting, held Oct. 3, 1905.*

The Vice-President, DR. J. ARTHUR BOOTH, in the Chair.

#### Types of Hysterical Insanity.

DR. ROBERT C. WOODMAN read a paper on the outcome of a symptomatic study of the insanities during the past two and a half years. Cases not clearly belonging to any well recognized insane type had been especially scrutinized, and some had been found to show hysterical stigmata, while other atypical cases without stigmata presented mental symptoms very similar to those of the hysterics. His observation and study had shown that there were among the committed insane a considerable number of hysterics, and those cases were, in many instances, violently insane for considerable periods. Any medical classification that ignored that fact was incomplete, and concealed important clinical distinctions. The recognition that some hysterics, as such, were insane, helped to bridge the gap between mental diseases and general medicine, and made more easy the conception of other insanities as thinking disorders; as functional in the same sense as ordinary thought was functional.

Dr. Woodman's paper, in summary, analyzed the symptoms that insane hysterics presented. He found the origin of the attack in emotional experiences; it pursued an episodic course; there was an absence of marked disturbance in the stream of thought, excepting in dazed and stuporous states; there was a natural point of view concerning indifferent topics; often periodic amnesia; a loss of the ability to do mental or physical work, but with little or no motor retardation, and, on the emotional side, usually anxiety and fear. Cases were quoted in which the anxious depression preceded the hysterical stigmata, notably in one involuntional case, and the question of a close relation of hysteria to anxious depressions at any time of life was raised, especially as to its relationship to recurrent melancholic attacks without manic alternations. Some non-conclusive evidence on the relation of hysteria and dementia præcox was submitted, and some other symptom complexes which hysteria had been found to take were referred to.

#### DISCUSSION.

DR. ADOLPH MEYER said that the hysterical insanities are a rather interesting group from a theoretical point of view, inasmuch as they represent one of the clearest types of mental disorder, in which the psychogenic element is uppermost. Their recognition is also of decided importance from a prognostic and therapeutic point of view. A large number of the cases—indeed, the majority of the attacks which rank plainly as insanities, are, however, of a rather transitory character, and for that reason, perhaps, there is need of a detailed knowledge of the disorders, for their treatment has thus far aroused comparatively little interest. That phase of the subject must of necessity be preceded by a study in broad lines of the symptom-complex, such as Dr. Woodman's paper gave. While in some there was a distinct history of hysteria, with hysterical stigmata well marked, and the whole mechanism of the disease characteristically hysterical, there were others in which the symptom-complex seemed to coexist with well-recognized forms of insanity, such as dementia præcox and the manic-depressive type, as well as involuntional melancholia; and his suggestion concerning the latter is certainly worth attention; but under those conditions it was usually apparent that it was subordinate to the more decisive phenomena of the major affection. Some points which had of late been especially touched on in the literature of hysteria; namely, the Ganser complex, had not been especially considered by Dr. Woodman, and perhaps with some justification, as it might well be regarded as an afterfact of clinical investigation, when it goes beyond the scope of the analogous states actually described.



Ricklin, published in the *Psychiatrische Wochenschrift*, and reviewed in the *Psychological Bulletin* of July, 1905.

DR. ARTHUR C. BRUSH said that if we accept the old idea that hysteria was a mental phenomenon that was to a greater or lesser extent met with in the entire human race, it would be difficult to see how Dr. Woodman could differentiate between these so-called hysterical insanities and the true insanities. That the former were nothing but exaggerations of what was normally present in the human being is undoubtedly true, for even sane people have at times hallucinations and delusions and automatic dream states. The sudden onset of the symptoms in these cases of so-called hysterical insanity, and the sudden recovery from them, would sharply distinguish them from cases of true insanity, as would also the lack of mental deterioration. Dr. Brush said he did not wish to be understood from this as questioning the propriety of proper treatment in dealing with cases of so-called hysterical insanity, but until we could clearly define insanity and hysteria, he did not think we could accept the latter as a form of insanity.

DR. WILLIAM M. LESZYNSKY said that as a rule it is exceedingly difficult or impossible, in the majority of cases to make a satisfactory or accurate determination of the visual field. For this requires on the part of the patient, persistent concentration of attention and considerable judgment. It is possible, however, in some cases to decide as to hemianopsia or marked concentric contraction.

DR. GEORGE W. JACOBY said he was rather surprised to learn that this class of cases was considered in any way unusual, and he could only explain this on the ground that they were regarded from a different standpoint by the psychiatrist and alienist in contradistinction to that of the neurologist. The latter regards many of the somatic features of hysteria as distinct delusions, and if that interpretation is correct, then it is only one step further to the development of distinct insanity.

In the recognition of these cases of so-called hysterical insanity it would be necessary to study the previous history of the patient, and exclude the various other forms of insanity, such as epileptiform insanity, delirium of various kinds, catatonia, etc. Given, a case in which there was a previous history of hysteria, together with the course and clinical features pointed out by Dr. Woodman, and the diagnosis of hysterical insanity could in time be made, but whether a diagnosis could be made from the course alone, without such a previous history of hysteria was questionable. The value of such an early diagnosis lies chiefly in the prognosis and treatment, but the speaker said it would be a decided mistake to believe that all cases of hysterical insanity were of short duration. He recalled instances where recovery was delayed for two or three years.

DR. JACOBY said he agreed with Dr. Leszynsky that it would be exceedingly difficult to base the diagnosis of hysteria on somatic symptoms, such as restriction of the visual field, hemianesthesia, etc., because patients of that class are usually very unreliable in their statements, and susceptible to suggestions of all kinds.

DR. EDWARD D. FISHER said he would certainly draw a distinction between cases of mental disease occurring in those who gave a previous history of hysteria and in those who gave no such history. The former, as a rule, do not run the typical course observed in melancholia, or in so-called mania, using the older terms, but they may assume more of the paranoic form. The duration of these hysterical insanities, as Dr. Jacoby had said, is often prolonged. He recalled cases of this kind where restraint became necessary on account of the development of suicidal or homicidal tendencies, and where some mental instability persisted for some time after the disappearance of the acute symptoms.

DR. J. ARTHUR BOOTH said that the type in which there are convulsive seizures and hemianesthesia, with narrowing of the visual field and marked emotional disturbances, is not difficult to recognize. In some of the other types referred to, however, the diagnosis of hysterical insanity should be made with great circumspection; for just as in many organic diseases of the nervous system hysterical disturbances are not

infrequently observed, so in certain psychoses, other than the one under consideration, emotional disturbances occur, which would not justify one in grouping these cases as types of hysterical insanity.

DR. WOODMAN said he believed that in hysteria both the physical symptoms and such mental disturbances as are regarded as insane have a common basis in a characteristic thought disorder. He did not wish to be understood as presenting the provisional classification of the cases he had reported in his paper as a classification of hysterical insanity. He simply used these headings as guide posts to give some idea of where, among the many groups of insanities, we might look for the hysterical type.

DR. AUGUST HOCH, of Bloomingdale, read a paper on "Flight of Ideas."

#### PHYSICIANS' CLUB OF CHICAGO.

*Regular Meeting, held Oct. 24, 1905.*

DR. FRANK BILLINGS in the Chair.

The subject under discussion was "The Establishment of a Permanent Medical Home and Library for the Physicians of Chicago and of Cook County."

#### Suggestions as to Organization.

DR. CHARLES L. DANA, New York, outlined the history of the organization of the New York Academy of Medicine, and offered suggestions concerning the establishment of a similar organization in Chicago. The New York Academy of Medicine was founded in 1847, when there was no other medical society, for the purpose of affording physicians an opportunity to meet together and discuss scientific problems. The original membership numbered 200. Incorporation papers were taken out later, so that the society could own property. In 1872 a library was started, and in the early 80s the society purchased a building worth \$30,000. It was early felt that the influence of the medical profession should be exerted for the public welfare as well as for the promotion of medical science, and the society has always taken an active part in the promotion of sanitary measures. It was through the influence of the academy that the city board of health was established, and through the activity of its members the medical supervision of the school children was instituted. The society has never interfered directly with nor has it attempted to promote medical legislation, except in those broad measures which involve the general well-being of the public. Its membership has always maintained a high standard. The academy owns a library of 90,000 volumes, containing not only all the standard works and monographs, but a full series of the most important medical journals of the world. The library is open to the fellows day and evening for most of the year; to non-members it is open for a certain number of hours during the day, and the public also are permitted to use it on presentation of the card of a fellow. Members are entitled to borrow books, and books are sent to them while they are away from the city.

In 1889 funds were raised by contributions and donations to erect the present home of the academy. This building has a capacity for a large library, has meeting rooms for the different branches of the academy and other medical societies, a central hall, parlor and refreshment rooms. The academy now owns property worth \$700,000, all of which has been accumulated during the past twenty-five years. The academy has not undertaken any original investigation in any special line of work, directing its energies solely to the promotion of sanitation and the study of problems connected with public medicine. It brings before the public and the profession itself questions involving hospital organization, and public education, and always has in mind the fact that when its influence as a great medical body can be exerted in behalf of proper action by the state, it will be so exerted.

The academy is accessible to every educated physician of good standing and of at least three years' experience. It provides opportunities for consulting one of the best libraries in the country, and for presenting and discussing medical problems. It provides social opportunities for its members and



aims to keep clear of all cliqueism and politics. The membership is limited to 1,000. There are 100 non-resident fellows and a few honorary fellows. The fellows pay an initiation fee of \$20 and annual dues of \$10. The non-resident members pay half that sum.

A board of trustees, consisting of five members, has control of all the finances of the academy. The executive work of the academy is in the hands of a council, which consists of the president, three vice-presidents, two secretaries, the treasurer, the five trustees, the chairman of the committee on admissions, and the chairman of the committee on library, a total of fourteen. The council attends to the general management of the academy. Working under the council is the librarian, who is also the executive officer of the council. The income of the academy from trust funds amounts to about \$2,500. The income from dues amounts to about \$17,000. The income from other funds, such as initiation fees, etc., amounts to \$18,000, making a total annual income of about \$37,000. The annual maintenance of the library is about \$14,000; maintenance of building, including heating, lighting and insurance, and salaries, about \$11,000; expenses for scientific and organization work, about \$2,100. The surplus is placed in a sinking fund.

The scientific organization of the academy is as follows: There is a central body, which meets twice a month for eight months in the year. These are the stated meetings of the academy. One of these meetings is devoted to an annual discourse and to the delivery of an endowed lecture on some medical topic. The academy is divided into nine sections, each of which has a chairman and a secretary. These sections have the free use of the academy for their meetings. Each section pays its own running expenses. The chairman of the section has full control of the work of that section. Once a year each section must present before the general body of the academy a paper or a discussion which is expected to show either some special development in that particular branch of medicine or which details the relationship of that section to general medicine. The sections meet once a month.

#### The College of Physicians of Philadelphia.

DR. W. W. KEEN of Philadelphia wrote that this, the oldest medical body in the United States, was founded in 1787. The college holds a scientific meeting once a month, and monthly meetings are held by a number of sections. The college has been the professional adviser of the city in matters of health and hygiene, especially in times of epidemics or other emergencies involving the health of the city. It is also a center for professional meetings, and some non-medical organizations assemble in one of the meeting rooms. No rental is charged these societies, because the college is exempt from taxation. A small fee is charged, however, to cover the expenses of heating, lighting and janitor service. Originally the college met in private houses, later in a room in the Pennsylvania Hospital. In 1865, through bequests, subscriptions and donations, a sufficient sum was obtained to erect the building now occupied by the college. The library contains over 75,000 volumes and 75,000 pamphlets, besides a number of duplicates. The growth of the library has come from gifts of publishers, of fellows, and of friends of the college, public institutions and hospitals, medical societies and bequests of deceased fellows. Through the influence of fellows of the college library funds have been established as memorials of doctors, or of non-medical persons. The endowment funds of this character, which are only available for purposes of the library, amount to about \$65,000. Two other sources of additions to the library exist; one is the journal club, to which a large number of the fellows subscribe \$3 a year, the journals going directly to the library, and the other is a directory for nurses established by the college some years ago and which more than pays for itself. The profits accruing from this directory go to the library.

#### Establishment and Maintenance of a Medical Library.

DR. NICHOLAS SENN said that in Chicago the time is ripe for taking active steps for the establishment of a library that will be a credit to the city and to the profession. The physicians need only the encouragement of example to take an active interest in such an undertaking. He has made an at-

tempt, by example, to furnish a nucleus for such a library by donating to the Newberry Library the largest portion of his own library, including the surgical library of Professor Baum, and the physiologic library of Professor Dubois-Raymond. Dr. Senn said that when the Chicago profession has a permanent home he proposes that that collection shall grow where it shall be accessible to all physicians. It is his purpose also that that collection shall become the best and largest antiquarian medical library in the world.

#### Plans of the John Crerar Library.

MR. CHARLES ANDREWS, librarian of the John Crerar Library, outlined the plans of that institution with reference to the provisions the library intends to make for a permanent home for physicians, as well as a place for the Senn library. The new building of the Crerar Library is to contain suitable meeting rooms for medical societies and their committees, as well as rooms for the secretaries, which may be used as society headquarters.

#### Cleveland Academy of Medicine.

DR. P. MAXWELL FOSHAY related the method by which the city of Cleveland acquired a permanent home and a medical library. Twenty-five doctors formed a society whose annual dues are \$25. The running expenses were kept at \$1 per capita, and the balance was invested in interest-bearing securities. A few years later the Cleveland Medical Library Association was organized, with three classes of members. Those who held the franchise paid annual dues of \$30. An active membership cost \$10 a year, and an associate membership \$3 a year. Subscriptions and donations were solicited from outsiders. Enough money was raised to make a payment of \$10,000 on property valued at \$14,000. The house was remodeled to suit the purposes of the association, and books were secured by gift and by purchase. The association is now engaged in raising funds to erect a large auditorium and to make additions to the present home.

Other speakers were Dr. D. R. Brower, Dr. I. N. Danforth, Dr. C. S. Bacon and Dr. L. Harrison Mettler.

#### AMERICAN ACADEMY OF MEDICINE.

*Thirtieth Annual Meeting, held in Chicago, Nov. 9-10, 1905.*

*(Concluded from page 1598.)*

#### Effect of Recreation on the Nervous System.

DR. WILLIAM JAMES HERDMAN, Ann Arbor, Mich., said that when we undertake to consider recreation after toil as a need of the human organism it is in some part, if not in the whole, of the nervous system, where that need has arisen. This is quite as true of mental as of physical labor, of emotional expenditure of energy as of that which results in glandular secretion; it is the nervous system which must "pay the piper," for it is in its structure chiefly where the need for molecular reconstruction has arisen. A life that is all work, narrow in its range, pouring out its store of nerve energy in muscular effort, unvaried, monotonous; an occupation that makes a mere machine of both body and mind, and keeps that machine incessantly employed day in and day out, gradually, but surely, leaves its permanent imprint on that plastic substance, the nerve tissue, which serves as the medium of action and reaction between the physical forces on the one side and the mental and spiritual on the other. It becomes fixed and restricted in its channels of communication. Both the receptive and expressive capacities of the mind of such a man atrophy from disuse, destroying the possibilities of a larger life. Continued and unvaried draughts on the reservoir of energy, which every nervous system has stored, no matter through what channel the depletion takes place, not only disregard directly the law of recuperation for the organs so used, but indirectly through the neglect of other faculties, limit the sources from which new supplies of nerve force might be supplied.

Recreation, physiologically speaking, is local sleep for an exhausted part, not general sleep, and the fundamental principle of all recreation consists in this local rest which is secured by a change of organic activity. In the brain of man, with its common source of nutrition, but with its complex centers and



functions acting independently, the plan best suited for recuperating lost force in a functioning center is to excite activity in some associate center. The needed conditions in blood supply and lymphatic action, in commissary and scavenger service, are thus maintained, and the work of reconstruction is hastened and promoted. If, at the same time, the processes of nutrition are accompanied by agreeable emotions, the organism is in the most favorable state for quick and abundant restoration of energy to the exhausted part. In stating that recreation consists in shifting the activity from an exhausted to a rested area of the nervous system, no new fact has been revealed nor any new principle evolved. The practical methods by which suitable recreations are to be selected to meet the requirements of special classes or individuals must start from this fundamental principle, but they will vary as taste, occupations and opportunities vary. From the complexity of occupations in which our fellows engage there results the greatest variety of channels through which the store of nervous energy is depleted. Likewise taste, inclination, interests and opportunities for their exercise are so various that the transfer to congenial and, at the same time, possible activities as recreative means is largely a matter for individual decision. Outdoor plays and games, requiring some skill, such as boating, fishing, swimming, skating, horseback riding, gardening, tool-work and the like, are of much more recreative value than any of the artificial gymnastics which have no purpose nor incentive beyond the movement itself. For the brain worker, the way is open to recreations innumerable, and the opportunity for choice and the possibility of varying their character at will makes the problem of healthful living an easy one if a man would cultivate a sufficient variety of interests, so that when one channel of activity is, for any reason, closed to him as a relief from necessary work he can choose another. The practical result in this is seen when we compare the statistics of health and longevity of the brain-worker and of the muscle-worker. The researches of Beard and others have shown that brain-workers not only live from 14 to 20 years longer than muscle-workers, but that their health is more uniformly good and their stature of larger average. When mankind is once emancipated from the conception that honest work is contemptible drudgery and learns to recognize the pleasures and recompense it has in store when rightly apprehended, which means that the work selected must be suited to individual capacities and tastes, and when greed and selfishness give place to a spirit of mutual helpfulness, the problem of recreation will be solved.

#### Recreation as a Sociologic Factor.

DR. DONLY C. HAWLEY, Burlington, Vt., said that, while work is necessary and ennobling and is the law the universe obeys, refreshment of the strength and spirits after toil is likewise a necessity, which finds expression in the natural cravings of the social instinct and in the general desire for diversion and amusement. The social instinct demands satisfaction, and will find it in recreation and amusement, which is either beneficial and uplifting, or injurious and degrading. In attempting to bring about the social benefit of the working classes, of the very poor and of the criminal and vicious elements in any community, the first and greatest need is healthful recreation. One of the great sociologic needs of the day is admittedly a solution of the so-called labor problem, but of equal importance and hemmed about with greater difficulties is a solution of the leisure problem. One of the ways of bringing about the social betterment of the masses, in the opinion of the author, is by providing proper channels for the expression of every social want and every social sympathy. The author thinks that if we can improve the conditions and surroundings of the children of the poor, give them educational and industrial advantages, and control their amusements and recreation, we shall have solved, in a large measure, an important problem for the next generation, as formative processes will, in large measure, render unnecessary those which are reformatory. This applies with force to children in all classes of society. Parents should recognize the fact and the necessity of furnishing at home, and in properly conducted places, amusements and recreation which shall be satisfying and at the same time uplifting and educational. Teachers everywhere should also be made to realize the

importance of this question and to use the opportunities which their positions afford in influencing the children under their care to seek recreation which recreates and amusements which will bring the most perfect joy.

#### Physiology of Recreation.

DR. GEORGE W. McCASKEY, Fort Wayne, Ind., said that the primary predominant factor in practically all forms of recreation is the psychical one. The sudden change from a state of extreme depression and misery, with perfectly-distinct physical suffering, to one of buoyancy and exultation, with entire forgetfulness of self, as a result of a change of emotion, is a not unfamiliar experience in the lives of most people. If the various forms of recreation are closely scrutinized, it would be found that those diversions and amusements which produce the promptest and most brilliant effects on both the mental and physical states of those who participate in them, are precisely those in which the psychical impression is the strongest. The first requisite in what may be termed successful recreation is a complete diversion from self, a complete submergence of self-consciousness, which inhibits that everlasting introspection of our physical selves which is the foundation of half the morbidity of the world. How this can best be done is a problem for the individual and depends on his age, sex, social status, intellectual development and other factors which go to make up the complete ego. McCaskey called attention to the purely physical or mechanical aspects of many forms of recreation, and said that the systematic introduction into our lives of such recreation as is suited to the individual needs should be the rational aim of all, and a proper understanding of the physiological laws and facts which underlie the whole subject can not be otherwise than helpful. He concludes with the admonition of Virgil that "rural recreations abroad, and books at home, are the innocent pleasures of a man who is early wise."

#### Relation of Recreation to Education.

DR. R. K. ROW, superintendent of schools, Berwyn, Ill., presented a brief statement of the recognized psycho-physical theories of play. First—The surplus energy theory assumes in the higher forms of life a series of inborn impulses for whose serious activity there may be, for a long time, no opportunity of discharge. As a result a reserve of exuberant energy collects and presses for employment, thus calling for an ideal satisfaction of the impulse in the form of play. Second—Teleologic theory begets a tendency in the organism to practice those activities that will be needed later in life; a means of getting control of the racial inheritance of co-ordinated power and skill. Third—The organic selection theory, in part at least, includes the first and second. From the random movements of the preconscious control period the organism selects those that give pleasure and repeats them; later, these and the movements of associates, are imitated and the pleasurable activities persist in playful repetition because the organism finds them to be vital to conserve life and promote growth and development so long as growth is possible. Out-of-door games, plays and recreations are the best means of physical education. Co-operative games promote social education. They develop the qualities of leadership, self-reliance, self-control, and the spirit of co-operation in social groups. Recreation is a very large and vital factor in esthetic education. Recreative activities have also important ethical functions.

#### Ceremonials and Festa in the Recreation of Larger Groups of Individuals.

DR. BAYARD HOLMES, Chicago, said that the value of the pageant has been well recognized by every organization which has aimed to secure a control over public opinion and public life. The educational and social function of the pageant can not be confined to any one class or age. It has a use for every class and for every member of society. The wonder of the child and his imagination are touched by the color and tinsel and tawdry illuminations as by no reality of life. For the youth the occasion is one of unequaled liberty and freedom from restraint. He attains almost the buoyancy of the savage. For the young adult it furnishes the occasion for pre-nuptial amenities. For those in the prime of life abundant



opportunity is given for the display of success in any and every activity of life. The social, the economic and the political success can be ostentatiously exhibited without the odium of effrontery or vulgarity. Even the aged may receive the scanty satisfaction of an honorable decline. But the extension of the influence of the pageant and the communal festivity reaches farther and cultivates and encourages every joy-giving activity of life.

#### Medical Features of the Papyrus Ebers.

DR. CARL VON KLEIN, Chicago, described the papyrus in general and in detail and discussed prehistoric medicine from about 5,000 years before the Christian era to Hippocrates. The paper will appear in *THE JOURNAL*.

#### PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Regular Meeting, held Oct. 25, 1905.*

The President, Dr. James M. Anders, in the Chair.

#### Operative Treatment of Fractures of the Patella.

DR. JOHN H. GIBBON stated that the two factors which render the non-operative treatment of fractures of the patella difficult are, first, the attachment to the upper fragment of a powerful group of muscles which, if not properly controlled, constantly tend to separate the fragments, and, second, the interposition of ligamentous or tendinous structures between the fractured surfaces. The latter are the most important and most difficult to overcome and can not be obviated except by operation. The operation is justifiable if done in an absolutely aseptic manner. In every case the fragments of the broken patella are covered with fibrous tissue. Multiple fracture is another complication which makes mechanical coaptation uncertain and difficult. Gibbon believes that the treatment of fractures of the patella should consist either of the simple splint method or of one of the operative procedures which include a complete exposure of the fractured bone and torn ligaments. All the intermediate methods, while possessing none of the advantages of the open method, have the same danger as the open method, namely, sepsis. Reference was made to Stimson, who, in about forty cases in which the subcuticular suture was used, had two severe infections with stiff joint, while in a series of about two hundred cases treated by the open method there was but one slight infection and no stiffness of joint. Suture of the bone alone has passed out of use, the operation being done either by a simple suture of the lateral ligaments and fibrous tissue over the bone, or this with the addition of one or two sutures through the patella itself. Early operation is advocated. When operation is not done immediately, a tight bandage with ice bags should be applied to prevent effusion of blood. The incision recommended is a transverse curvilinear one, allowing easy access to the torn ligaments. An absorbable suture, preferably chromicized catgut, should be employed and the sutures should not be tied very tight. The leg should be dressed on a posterior splint and well elevated; the dressing changed at the end of a week and the stitches removed. Later the splint should be removed at frequent intervals and massage practiced. After three or four weeks the splint could be discarded, when the patient is in bed, and massage regularly employed. He advises passive flexion of the leg after four weeks. The period of convalescence after the operative treatment is less than half that following the splint method. The operative treatment should only be undertaken in a well-appointed operating room by a surgeon who has developed the "aseptic habit." Where the operator has not had a great deal of experience, and where the surroundings are not perfectly aseptic, it is wiser and safer to pursue the splint treatment, for, if suppuration occurs, a stiff joint, the loss of the leg, or even death might result.

#### DISCUSSION.

DR. JOHN B. SHOBER referred to the development of the open method and attributed the success attendant on it to the greater attention given to the ligaments in freeing the overlapping fibrous tissue. Formerly the major attention was given to the coaptation of the bones by the use of silver wire. He agreed that the operation is a serious one and to be undertaken only under conditions pointed out by the author.

DR. JOHN B. ROBERTS believes that the operation is a good one, but that in the treatment of fractures there is needed an operation which the average man can do, so that it would not be necessary to send all patients to experts. With the proper sterilization of the parts, the needle and the thread, with the subcutaneous purse-string suture, a practical and satisfactory operation is offered. The periosteum falling between the fractured ends of the bone he gets rid of by rubbing the two parts together. This operation is so simple that it ought to take the place of the more serious ones which can only be undertaken under ideal conditions.

DR. WILLIAM L. RODMAN believes the subcutaneous operation more dangerous than the aseptic open method. The open operation should be surrounded with restrictions in old subjects and in patients with visceral disease and confined to young men leading active lives. He does not believe that the soft structures falling between the ends of the bones can be eliminated, except by the open operation. He agrees with Dr. Gibbon in the advantage of the curvilinear incision. He does not approve of the use of buried silver wire, and has come to regard wiring the bone as being unnecessary. He prefers to wait for the subsidence of the acute inflammatory symptoms before operating.

DR. A. C. WOOD agreed with Dr. Gibbon in practically all he said. He believes that modern surgery tends more and more to get away from subcutaneous operations. A man who can not be trusted to open a joint can not be trusted to pass a subcutaneous ligature. He makes the incision above the patella through a part of the skin which is thick and on which there is no pressure. This also favors drainage. He still unites the bone, as well as the capsule and ligaments, though the method employed is a modification of that formerly practiced. When the parts are brought together, the knot is at a point where there is no pressure.

#### Severe General Infection of Obscure Origin.

DR. H. B. ALLYN reported two cases of severe general infection. The first patient, a boy, 4 years old, complained of abdominal pain, had vomiting and delirium, and died on the third day of a sudden, large, pleural hemorrhage. At autopsy pure cultures of an undescribed form of colon bacillus were obtained from the spleen and an enlarged mesenteric gland, and the same organism was found in the culture made from an enlarged Peyer's patch. The disease was not hemorrhagic typhoid. The second patient, a boy, 9 months old, developed, in succession, a small patch of consolidated lung, vomiting, purpura, otitis media, arthritis, bronchitis, nephritis, meningitis, and died after an illness of twenty-five days. There was no autopsy. Cultures made from the throat mucus and the spinal fluid showed only a small diplococcus, which was not that of pneumonia or cerebrospinal meningitis.

#### A New Method of Surgical Anesthesia.

DR. W. WAYNE BABCOCK called attention to the fact that the mandragora used by surgeons from the time of Herodotus until the thirteenth century contained scopolamin, which has now, after the lapse of seven centuries, been re-introduced into surgical practice. Babcock has experimented with a number of solonaceous and hypnotic alkaloids, and finds that apomorphin is the most powerful adjuvant in scopolamin-morphin narcosis. When aided by apomorphin, over 70 per cent. of the patients have been successfully narcotized, while previous writers have only succeeded in narcotizing from 9 to 26 per cent. of their patients, the remainder requiring ether or chloroform. The method is as follows: One-sixth gr. of morphin sulphate, with 1/100 gr. of scopolamin hydrobromate, is given one hour before the operation, followed by an edema containing spiritus ætheris comp., 1/2 oz.; spiritus fermenti, 1/2 oz.; warm water, 4 ozs. Fifteen minutes later the hypodermic is repeated, and twenty minutes after the second hypodermic, a third containing 1/100 gr. of scopolamin, with 1/30 to 1/12 gr. of apomorphin hydrochlorate, is given. The dose of apomorphin is regulated by the condition of the patient and the strength of the pulse, and is usually followed in from three to ten minutes by surgical anesthesia. If the patient shows a tolerance for drugs, the apomorphin, at times associated with morphin, is repeated in a dose proportionate to the patient's condition. In a small per-



centage of cases which prove rebellious to the narcotic, it might be desirable to administer cautiously a minute quantity of ether or chloroform rather than to repeat the injection of the narcotics. The anesthesia produced, as a rule, lasts two or more hours, and the patient usually is in better condition toward the end of the operation than near the beginning. The method has been used successfully as the sole anesthetic in operations on the skull, face, larynx, gall bladder, stomach, kidneys, pelvic organs and extremities, and Babcock thinks it has a special field in operations involving the upper respiratory tract.

#### Notes on General Anesthetics, with Special Reference to Scopolamin-Morphin Anesthesia.

DR. A. C. WOOD's paper corresponded closely with Dr. Babcock's. His experience regarding the time required for full anesthesia differed somewhat from that of Dr. Babcock. The real difference is not so much due to the idiosyncrasy of the patient as to the question of a reliable and uniform preparation of the drug. The contraindications for administration are of more importance than the indications. This form of anesthesia might be used in any case in which there are no contraindications, provided absolute muscular relaxation is not essential. It is a satisfactory adjuvant to ether and chloroform. He would hesitate to use it in operations involving the mouth and air passages, fearing that with the profound narcosis sometimes produced the patient could not take care of the mucus or blood in the mouth. In 15 cases in which he has used it, the success might be considered perfect in 8. In one appendectomy there was no movement of the muscles, no nausea, and the convalescence was satisfactory in every way. He believes that the results in the use of the anesthetic would be better in proportion with the greater care exercised in its selection and administration.

#### DISCUSSION.

DR. WILLIAM L. RODMAN's experience with this form of anesthetic was limited to one case, and that one case enabled him to confirm what had been said by the two essayists. While the anesthesia was not complete, it was made so by a very small quantity of ether. He thought that it could only be looked on as an adjuvant to ether and chloroform. He thinks it might be of much value in operations on the genito-urinary tract. He thinks all surgeons are remiss in not more fully availing themselves of the use of nitrous oxid preceding the administration of ether.

DR. ERNEST LAPLACE has used scopolamin-morphin a few times, and, while the effects are encouraging, he has not dared go as far as indicated by the papers read. He stated, however, that, with ether as a concomitant, there have been but very few subsequent unpleasant symptoms.

DR. ALICE M. SEABROOKE referred to three cases at the Woman's Hospital in which scopolamin-morphin had been used with success. One was a case of carcinoma of the omentum, one a hysterical child, and the third case that of an aged woman with gallstones.

DR. H. C. WOOD thinks morphin anesthesia a better term than scopolamin-morphin. The question of the introduction of a new anesthetic depends on its comparative safety. The number of cases in the present issue is so small that no absolute deductions can be drawn. It has been demonstrated that the administration of morphin preceding ether lessens many of the unpleasant sensations produced by ether, but it depresses respiration. Nitrous oxid gas is a much better drug to precede ether.

DR. JOHN B. ROBERTS said that if scopolamin is identical with hyosein he can not understand the necessity for such small doses as had been indicated.

*Regular Meeting, held Sept. 13, 1905.*

The President, DR. J. M. ANDERS, in the Chair.

#### Anorexia in Infants in Hot Weather.

DR. MAURICE OSTHEIMER called attention to this condition, in which often the only symptom is the refusal of the child to take the proper amount of nourishment. To find cause for this loss of appetite, when there are no symptoms, he said is difficult, and there must be considered the possibility of functional derangement of the gastrointestinal tract. In one case

an increase of the proteids in the milk mixture up to 2 per cent. helped the child, but only after two months did the child take more food at each feeding. In some cases he stops all food and gives barley water and whey. He especially called attention to the fact that anorexia occurs only during hot weather and that often it is cured only by removal to a cooler climate.

#### Rest in Tuberculosis.

DR. WILLIAM B. STANTON considered the treatment of tuberculosis under the heads of: 1, Abundant food; 2, fresh air; 3, regulation of the exercise. He pointed out the danger incident to injudicious exercise. The amount of exercise to be taken, he said, depended on temperature, pulse rate, respiratory rate, degree of emaciation, existence of complications in heart, kidneys, bladder, intestines etc. Constant temperature above 100 degrees or elevations to this extent in usually afebrile cases, call for absolute rest in bed. Remittent temperature when above 101 in the afternoon, also indicates rest. If the temperature is only 100 the patient may be allowed up, and exercise may be begun when the temperature is below 100 degrees. A pulse rate of 120 in the morning indicates rest. With a pulse rate of 110 or under the patient may sit up, and exercise may be begun when the pulse rate falls below 100 when resting. Breathing rate, he said depends usually on the degree of involvement and the competency of the heart. Marked emaciation contraindicates exercise, even if other signs are favorable. Rest should be insisted on until a satisfactory gain in weight is obtained. The complicating disease should decide the amount of exercise, bearing in mind that rest is even more necessary where two depressing influences are present. He recommended walking as the best and most easily regulated form of exercise. The gait should be slow, and at first the walking should be done only on level ground.

#### Suppression of Criminal Abortion.

The committee—consisting of Drs. Francis M. Perkins, Charles W. Burr and Henry W. Cattell—appointed by the society to aid in the prosecution of criminal abortionists, reported that thirty cases had been investigated and that each of the thirty persons had either left the city, was under police surveillance, was a fugitive from justice, was awaiting trial, or was in prison. As an additional example of results, it was stated that the Sunday edition of one of the newspapers, formerly carrying from ten to seventeen advertisements of criminal abortionists, no longer printed such material. The hope was expressed that the matter would be taken up by the state society and the American Medical Association. The report has been published in *THE JOURNAL*, Oct. 7, 1905, page 1095.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Asthma.

Kohn, in the *Med. Record*, after a thorough discussion of the disease and its causation, divides the regular methods of treatment into these nine classes: climatic, hygienic, symptomatic, gymnastic, psychic, hydrotherapeutic, medicinal, operative, institutional.

(1) *Climatic*.—As a rule, a high altitude relieves asthmatic paroxysms; e. g., there is no doubt that on the high plateaus of New Mexico and Colorado these patients can live comfortably. A small minority of patients seem to get the most relief from the moist air prevailing at the sea shore. Again, some patients are benefited by removal from the city to the suburbs, and others have gained the most relief by removal from the country to the crowded city. An ocean trip has been known entirely to suspend paroxysms in some cases.

(2) *Hygiene*.—This treatment consists in seeing that the functions of the skin and excretory organs are regularly performed; in regulating the metabolic functions; in modifying



the diet according to indications; forbidding overindulgence in food and drink, especially at night, and in interdicting all liquors, heavy wines and champagne. Light alkaline mineral waters like those of Saratoga, and seltzer, vichy, should be used in moderation to keep the renal functions active. The baths of Saratoga or the Virginia Hot Springs, or in Europe those of Kissingen and of Marienbad, are to be recommended.

(3) *Symptomatic Treatment*.—This consists in the indications in each individual case as, for example, in a patient with rheumatic symptoms, we should use the salicylates; in the gouty, colchicum; in the anemic, iron, arsenic, the glyeophosphates, etc.; in those of a marked nervous or hysterical disposition, valerian or the valerianates. Uterine, cardiac, renal, traumatic or other cases should be treated accordingly.

(4) *Gymnastics*.—The gymnastic and respiratory, also the pneumatic cabinet and compressed air treatments, have met with considerable favor in Germany, and are best adapted for cases of bronchial asthma in which some lung dilatation has already taken place. The object sought is to prolong expiration. Simple calisthenic exercises and walking long distances in the fresh air have afforded much relief. It is further advocated that the patient be treated by exercises in breathing, which consist in counting slowly during each expiration for five minutes morning and evening. The next day count six, the following day seven, and so on until twenty is counted with each expiration; finally ten minutes mornings and evenings should be consumed in this way.

(5) *Psychic Treatment*.—Brugelmann lays much stress on the value of what he calls "education asthmatique," that is, enlightening the patient on the nature of his disease, and teaching him that by an effort of the will, asthma can be considerably ameliorated, and showing him the necessity of leading a perfectly well regulated life; the importance of proper diet, sufficient sleep, outdoor exercises, principally walking long distances or horseback riding, breathing exercises with inspiration as deep as possible; and of keeping the function of the skin and bowels regulated. There can be no question but that autosuggestion plays a most important rôle in the cure of the disease, as it does in its production.

(6) *Hydrotherapy*.—This is of undoubted value in the treatment of selected cases, especially those of a purely neurotic character without bronchitis; but this method of treatment should be used with great care, because of the sensitive peripheral nerves of these patients and their great reflex irritability. The lukewarm shower daily is recommended, followed by friction with warm towels; douching of the nape of the neck with cool water; when patients can not stand the shower, the lukewarm pack for three or four hours at a time every day, may be tried.

(7) *Medicinal Treatment*.—(a) During the attacks the following narcotics and analgesics may be given to abate it: Opium, morphin, chloral, bromid and phenacetin. In using morphin care must be taken not to establish the habit. Touching the pharynx with a mild solution of ammonia has cut short the asthmatic paroxysm in some cases. A hypodermic of 1/150 of a grain of atropin, the inhalation of a few drops of ether or chloroform, or the burning of stramonium and saltpeter powder, producing a dense smoke, have each been used with success in many cases. Nitrite of sodium, in doses of 2 or 3 grains hourly, has been used with effect, as also the inhalation of a few drops of nitrite of amyl. In some cases the inhalation of pure oxygen gas has proved very beneficial. (b) Between attacks the treatment by drugs varies according to the individual case and its etiology. Generally speaking, however, the preparations of iodine have the most supporters. The author recommends from his own experience the use of iodid of potassium, beginning with 1 grain given in milk three times a day. This dose should be increased daily until the patient takes from 25 to 30 grains a day. It should be noted carefully whether or not the patient bears the drug well. The action of the drug consists in stimulating gland secretion and in lowering arterial pressure. The iodid of sodium or iodid of strontium may be tried when iodid of potassium is not well borne. Atropin has had innumerable advocates as a remedy for asthma; it should be given in increasing doses during the course of disease, as high as from 1/6 to 1/8 grain being

given during the twenty-four hours. The other drugs recommended in the treatment are arsenic given in gradually increasing doses, nitroglycerin, quinin, belladonna, iron, strychnin and the other tonics.

The following prescription is recommended for the cough:

R. Tincturæ lobeliæ.....m. x	06
Heroin hydrochloratis....gr. 1/24-1/12	0027-0054
Ammon. muriatis.....gr. v	03
Spiritus ætheris comp. q. s. ad.....3i	4

M. Sig.: Give this amount at one dose.

Other remedies which have been found of value in the treatment of this condition are 1/1000 solution of adrenalin, which may be given hypodermically in doses of from 3 to 6 minims. Because of the anemic condition of the mucous membranes of the larynx and trachea it has been advised to give large doses of the nitrites.

(8) *Operative Treatment*.—Exaggerated claims have been made for the relief obtained in asthma by operations directed to the nasal passages. It is sufficient to say that the nares should be carefully examined and all growths removed, deformities corrected and hypertrophies reduced.

(9) *Institutional Treatment*.—In Germany this has many advocates; it is claimed that in a sanatorium for asthma, equipped with all the necessary aids to diagnosis and treatment, such as baths, pneumatic cabinets, compressed-air apparatus, gymnastic and electric appliances, and all other necessary instruments of precision, the best results can be achieved, especially when to all of these means is added the constant supervision by physicians who thoroughly understand the disease and its causation. The moral or psychic effect on an asthmatic on entering such a sanatorium with its ironclad rules and regulations and its systematized treatment is excellent; the knowledge that he is under the care of physicians, expert in the treatment of his disease, is in itself apt to have a very salutary effect. In this way autosuggestion plays a great rôle in relieving the patient of his sufferings; and if there is one recommendation that I would make, as a result of my studies on the subject, says Kohn, it is that just as we have sanatoria for nervous diseases or diseases of women, there should be such an institution created for the treatment of this most obstinate and baffling disease.

## Medicolegal

### Regulation of Employment of Expert Witnesses.

No. 175 of the Public Acts of Michigan of 1905 provides that no expert witness shall be paid or receive as compensation in any given case, for his services as such, a sum in excess of the ordinary witness fees provided by law, unless the court before whom such witness is to appear or has appeared awards a larger sum; and any such witness who shall directly or indirectly receive a larger amount than such award, and any person who shall pay such witness a larger sum than such award, shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding \$1,000, or by imprisonment in the county jail not to exceed one year, or both, in the discretion of the court, and may further be punished for contempt.

No more than three experts shall be allowed to testify on either side as to the same issue in any given case, except in criminal prosecutions for homicide; provided, the court trying such case may in its discretion permit an additional number of witnesses to testify as experts.

In criminal cases for homicide where the issues involve expert knowledge or opinion the court shall appoint one or more suitable disinterested persons, not exceeding three, to investigate such issues and testify at the trial; and the compensation of such person or persons shall be fixed by the court and paid by the county where indictment was found, and the fact that such witness or witnesses have been so appointed shall be made known to the jury. This provision shall not preclude either prosecution or defense from using other expert witnesses at the trial.



This act shall not be applicable to witnesses testifying to the established facts or deductions of science, nor to any other specific facts, but only to witnesses testifying to matters of opinion.

#### To Promote Anatomic Knowledge.

Chapter 134 of the Laws of North Dakota of 1905 provides that superintendents of penitentiaries, hospitals, insane asylums and poor houses, coroners, sheriffs, jailors, city and county undertakers, and all other state, county, town and city officials who shall have custody of any body, of any deceased person required to be buried at public expense, shall give permission to any physician or surgeon who is a licentiate of the state board of medical examiners, or to any medical school or college, public or private, of any city, town or county within this state, on his or their request therefor, to receive and remove free of charge or expense, after having given proper notice to the relatives or guardians of the deceased, the bodies of such deceased persons to be buried at public expense, to be by him or them used within the state for advancement of anatomic knowledge and medical science, preference being given to medical colleges or schools, public or private; such bodies to be distributed to and among the same equitably; the number assigned to each being in proportion to the students of each college or school; provided, however, that if any person claiming to be, and satisfying the proper authorities that he is of kindred of the deceased, shall ask to have, within thirty-six hours after death, the body for burial, it shall be surrendered for interment; and provided, further, that any medical college or school, public or private, or any officers of the same that shall receive the bodies of deceased persons for the purpose of scientific study under this act, shall furnish the same to students of medicine and surgery who may be under their instruction.

Any physician or surgeon who is a licentiate of the state board of medical examiners, or any medical college or school, public or private, before receiving any dead body or bodies, shall give to the proper authorities, surrendering to him or them a sufficient bond that said bodies shall be used only for the promotion of medical science within this state; and whoever shall use such dead body or bodies for any other purpose, or shall remove the same beyond the limits of this state, and whoever shall buy or sell any such bodies or body, or shall traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be fined in the sum of \$100, and any officer refusing to deliver the remains or body of any deceased person, when demanded under the provisions of this act, shall be guilty of a misdemeanor and shall pay a fine of not less than \$50.

It shall be the duty of preceptors, professors and teachers, and all officers of medical colleges and schools, public and private, and all others who shall receive any dead body or bodies in pursuance of the provisions of this act, decently to bury in some public cemetery or to cremate the same in a furnace properly constructed for that purpose, after the bodies shall have answered the purposes aforesaid, and for any neglect or violations of the provisions of this act the party or parties so neglecting shall be guilty of a misdemeanor, and on conviction shall pay a penalty of \$100.

#### Pure Drug Law.

Chapter 10 of the Laws of North Dakota of 1905 provides, under penalty, that it shall be unlawful for any person, his agent or servant, or while acting as agent or servant of any other person or corporation, to manufacture for sale, offer for sale, or sell within this state any drug which is adulterated within the meaning of this act. The term "drug" as used in this act shall include all medicines for internal and external use, antiseptics, disinfectants and cosmetics.

A drug shall be deemed to be adulterated: First—If, when sold under or by a name recognized in the United States Pharmacopeia, it differs from the standard of strength, quality or purity prescribed therein, unless the order therefor requires an article inferior to such standard, or unless such difference is made known or so appears to the purchaser at the time of the sale. Second—If, when sold under or by a name not recognized in the United States Pharmacopeia, but which is

found in some other pharmacopeia or other standard work on materia medica, it differs materially from the standard of strength, quality or purity prescribed in such work. Third—If its strength, quality or purity falls below the professed standard under which it is sold; provided, that a drug or medicine shall not be deemed adulterated in the following case: If the standard of strength or purity of any drug has been raised since the issue of the last edition of the United States Pharmacopeia, no prosecution relative to it shall be maintained until such change of standard has been published throughout the commonwealth.

Every proprietary product, drug, medicine or beverage containing more than 5 per cent. of ethyl alcohol, or which contains chloral hydrate, ergot, morphin, opium or any of their compounds or derivatives, cocain or any of its salts, bromin, iodine or any of their salts, shall be clearly labeled in black open gothic letters, printed on a white background, showing the name and percentage of each of the foregoing constituents, and said label shall be affixed to each and every package, carton, box or bottle in such a way as to be clearly seen.

No sale or gift of cocain or of its salts shall be made, or delivery thereof made in this state, except on the written prescription of a licensed physician.

It shall be unlawful to sell, offer or expose for sale, or have in possession any preparation or product, intended for the use of man, either for internal or external purposes, which contains methyl alcohol or "wood spirits."

Nothing in this act shall be so construed as to in any way interfere with the written prescription of any regularly licensed physician or with the filling of the same by a licensed druggist.

The North Dakota government agricultural experiment station shall make analysis of drugs and medicines found on sale in North Dakota suspected of being adulterated, at such times and places, and to such extent as it may determine, and may appoint such agent or agents as it may deem necessary for the enforcement of the provisions of this act, and such agent or agents shall have free access and egress, at all reasonable hours, for the purpose of examining into any place wherein it is suspected any drug or medicine adulterated with any deleterious or foreign ingredient or which falls below the standard of purity or where such ingredients exist, and such agent or agents, on tendering the market price of said article, may take from any person, firm or corporation samples of any articles suspected of being adulterated as aforesaid. Whenever said station shall find, by its analysis, that adulterated drugs have been on sale in this state, or that said drugs are in violation of this act, it shall forthwith transmit the facts so found to the attorney general and the state's attorney of the county in which said adulterated product was found.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

November 11.

- 1 \*Notes on Anesthetics, with Special Reference to Scopolamin-Morphin Anesthesia. A. C. Wood, Philadelphia.
- 2 \*Importance of a Study of Nutrition. R. H. Chittenden, New Haven, Conn.
- 3 \*Distinctive Features of Animal and Vegetable Dietaries. L. B. Mendel, New Haven, Conn.
- 4 Pathology and Etiology of Human Vaccinia. W. T. Howard, Jr., Cleveland, Ohio.
- 5 \*Clinical Study of the Freezing-Point of Blood and Urine in Various Diseases. T. Ticken, Chicago.
- 6 Value of Paraldehyde in the Treatment of Insomnia. J. S. Christison, Chicago.

1. **Scopolamin-Morphin Anesthesia.**—Wood epitomizes his personal experience with scopolamin-morphin anesthesia as follows: It is capable, in many cases, of producing a satisfactory surgical narcosis lasting several hours. When successful, the patient avoids the anxiety or even alarm often felt before taking ether, and the nausea, vomiting, and depression following its administration. If it should partly or wholly fail to anesthetize the patient, the surgeon may use



ether or chloroform, with the assurance that the effect will be more prompt and satisfactory than when either is administered alone. When used in conjunction with ether or chloroform, it has been especially satisfactory. The time required to induce anesthesia was lessened, relaxation promoted, the secretion of mucus in the respiratory tract prevented, and, what is very important, the quantity of anesthetic required was greatly reduced. To induce full anesthesia in the average healthy adult, Wood recommends 0.0006 gm. (1/100 gr.) scopolamin and 0.01 gm. (1/6 gr.) morphin, to be given hypodermically two or two and a half hours before operation, and a second similar dose an hour later. If the anesthesia is not sufficiently complete half an hour before operation, a third dose may be given. This may be the same as the two previous doses, or may consist of either drug alone, or of scopolamin in conjunction with apomorphin, according to the special indications present. The doses should be considerably reduced in children, feeble patients, and in advanced age. None of Wood's patients remembered feeling any pain, or any other detail of the operation, although in some instances the patient gave evidences of the presence of sensation at the time. This preparation is contraindicated in acute affections of the pharynx and larynx; in operations involving the mouth or air passages; in edema of the lungs, and in cases in which capillary hemorrhage may be a troublesome factor. As both scopolamin and morphin are powerful drugs, prudence demands that they be used with caution. In addition to the caution mentioned, the safety and success of the method depend on having pure and reliable drugs, accurate dosage, and perfectly fresh solutions.

**2. Importance of Study of Nutrition.**—Chittenden says that physicians should have a full and complete knowledge of the various processes of nutrition so that they may be able to correct those deviations from the normal which are characterized as disease. There can be no exaggeration in emphasizing the importance of the daily diet in the maintenance of health and in the establishment of a proper and normal condition of nutrition. Prevention is better than cure, and, says Chittenden, we may well ask whether, with a proper understanding of the true laws of nutrition, of the real needs of the body for food, with a clear conception of the processes of digestion, secretion, absorption, peristalsis, circulation, and excretion, we should not be in a better condition to combat disease than we now are. In his opinion, two, at least, of the dread diseases of mankind, namely, cancer and tuberculosis, are possibly connected with a disturbance of nutrition in which, perhaps, the predisposing causes are to be found in an excess of nutritive material, in general, in the blood, or to a disturbance in the balance of nutritive materials between the circulating medium or possibly in the tissues themselves. Chittenden believes that there is much of value to be learned in a study of the minimum quantities of food required to maintain health and strength, because the real needs of the body for food are unquestionably very much below the amount ordinarily consumed, and, this being true, is it not possible that this excess of food, for which the body has no physiologic need, in the long run imperils the health of the individual, diminishes the ordinary powers of resistance, and so paves the way for various forms of disordered nutrition spoken of as disease.

**3. Animal and Vegetable Dietaries.**—Mendel contrasts the relative values of animal and vegetable dietaries. He says that vegetarianism undoubtedly has its place in ameliorating various functional disorders. In the treatment of obesity, certain forms of neuralgia of unknown origin, and of gout in many instances, the strict diet renders effective aid. In estimating food values, not only the composition of the food, but also the degree of its utilization in the alimentary tract must be considered. No exclusive system of diet deserves defense on scientific ground.

**5. Study of Freezing Point of Blood and Urine.**—Tieken reports the results of his observations of the freezing point of blood and urine in surgical diseases of the kidneys and of the urinary tract. His conclusions regarding the value of cryoscopic examination of the blood and urine in surgical diseases of the kidneys coincide with those of Kümmel, Rumpel and others, namely, that it is of value in this class of cases, because it shows whether or not the remaining organ is compe-

tent. In diabetes mellitus, of a severe type, he usually finds a concentration of both the blood and urine, but the percentage of sugar in the urine bears no constant relationship to the freezing point, as claimed by some recent writers. He was unable to demonstrate a molecular concentration of the blood in abdominal tumors not of renal origin, unless great pressure was exerted, disturbing the renal function. Tieken thinks that cryoscopy, when employed with a thorough understanding of its limitations and possibilities, may be of conceivable value to both the physician and surgeon, as a diagnostic and prognostic aid, in certain pathologic conditions.

#### Medical News, New York.

November 11.

- 7 \*Sea-Air Treatment of Tuberculosis of the Bones and Glands in Children. J. W. Brannan, New York.
- 8 \*The Influence of Climate in Pulmonary Tuberculosis. C. L. Minor, E. R. Baldwin, S. E. Solly, C. F. McGahan and others.
- 9 Case of Spinal Apoplexy with Findings. W. Browning and F. Tilney, Brooklyn, N. Y.
- 10 Thrombosis of the Receptaculum Chyli and Chylous Ascites as a Complication of Cirrhosis of the Liver. H. J. Nichols, Washington, D. C.
- 11 Strictures of the Urethra; Their Pathology and Treatment. E. C. Ballenger, Atlanta, Ga.
- 12 Treatment of Tuberculosis. I. H. Hance, Lakewood, N. J.

**7. Sea Air Treatment of Tuberculosis in Children.**—Brannan details the excellent results achieved in the treatment of children suffering from tuberculosis of the bones and glands at the Summer Home on Coney Island.

**8. Influence of Climate in Pulmonary Tuberculosis.**—This committee states that if we look for the causes of the tendency to doubt the value of climate in the treatment of tuberculosis they are to be found, first, in the unskillful use in the past of climate as a therapeutic measure; second, in the formerly widely spread belief in a mysterious specific influence of climate which led to a superstitious faith in its unaided powers and, therefore, to a neglect of those even more important matters, hygiene, diet, instruction and detailed supervision; third, in a lack of appreciation of what the climate has been doing for them all the time. Realizing, then, as we now do, that the very first aim in the treatment of tuberculosis is and must always remain the raising of the vitality of the patient's system until it is able itself to conquer its disease, we see that the beneficial effect of climate depends on its wonderful power in vitalizing the system, on its beneficial effects on metabolism, on its awakening of dormant or waning natural powers. No advanced workers in this line would to-day, as was formerly done, place climate first in the order of therapeutic measures. Let it never be forgotten that hygiene, diet, teaching and supervision must always come first, but, granted that they are properly attended to, then enters the powerful rôle of climate, reinforcing and accentuating the effects of these other measures, and yielding results that can not be approached even with the same care and watching and food in less favorable localities. The elements in climate which have a beneficial influence are, in the order of their importance, (1) an abundance of chemically and bacteriologically pure fresh air; (2) sunshine; (3) coolness, or, in a certain number of cases, warmth; (4) dryness, or, in a few cases, a moderate degree of humidity; (5) altitude; (6) wind to which the patient is not directly subjected, provided vegetation is sufficient to prevent dust storms, is beneficial; (7) equability; (8) proper soil. Brannan says that a climatic resort should be looked on as a university to which the patient goes to get under proper conditions that discipline and instruction which he will bring back with him into his daily life at home, where he should serve as a teacher of those with whom he is thrown. The physician in a climatic resort will be of use to his patient in proportion as he is able to be a forceful and stimulating teacher.

#### Medical Record, New York.

November 11.

- 13 \*Notes on Non-operative Gynecology. S. J. McNutt New York and Albany.
- 14 \*Non Gonorrheal Urethritis. H. G. Spooner, New York.
- 15 \*The Stomach in Pulmonary Tuberculosis, and the Effect of Gastric Juice on the Bacillus Tuberculosis. E. Palier, New York.
- 16 \*Treatment of Perforations of the Tympanic Membrane with Especial Reference to the Use of Gutta-Percha Tissue. D. G. Yates, New York.
- 17 Transverse Incision in Abdominal Operations. A. E. Rockey, Portland, Ore.



**13. Non-operative Gynecology.**—McNutt maintains that in many instances a woman with pelvic or abdominal disease may recover under medical treatment only, without operation. The cases calling most urgently for operative treatment are those of pelvic or abdominal tumor, the accidents of childbirth, malignant disease, and pus collections. In order to deal successfully with the non-operative cases it must be remembered that many of the symptoms present are reflex in origin. Hence, the treatment must be general as well as local. The most frequent general symptoms are the derangements of secretion and excretion, anemia and nervous symptoms. The most frequent local conditions are (1) displacements of the uterus, with or without displacements of the adnexa; (2) catarrhs, acute, subacute, and chronic, confined to the uterus; (3) the same, with extension to the tubes and secondary involvement of the ovaries. In many cases one can use local treatment indefinitely and utterly fail to cure the patient if with it does not go general medication and hygiene. This includes diet, clothing (few women dress properly), and carefully regulated out-of-door life, with some interest to divert the mind from introspection.

**14. Non-gonorrheal Urethritis.**—In view of the fact that the causes contributing to the production of urethritis are so numerous as to be beyond comprehension, Spooner prefers a classification based on the clinical conditions in which cases of non-gonorrheal urethritis have been observed. He suggests the following classification: (1) Urethritis caused by external irritation: Coitus, catheterism, ungratified erections (?), masturbation (?), medicated injections. (2) Urethritis caused by internal irritation, mechanical, chemical, and tonic, of constitutional origin: Food, drinks, drugs, gout (?), rheumatism (?), arthritic diathesis (?), diabetes (?), herpes, mumps (?), syphilis (?), tuberculosis, typhoid fever (?). From the clinical point of view differential diagnosis is impossible, but, as a rule, in non-gonorrheal urethritis the incubation period and the course are shorter and less painful than in the specific form. Non-gonorrheal urethritis of constitutional origin must be treated so as to remove the exciting cause. When due to pyogenic bacteria the treatment is the same as in gonorrheal urethritis. Some cases of aseptic urethritis of unknown origin are not influenced by any form of treatment.

**15. The Stomach in Pulmonary Tuberculosis.**—Palier has studied the gastric conditions present in a number of cases of pulmonary tuberculosis, most of the patients being men between the ages of 22 and 45. He describes several of these, and says that his observations lead him to believe that in about 60 per cent. of the cases of incipient consumption there is hyperchlorhydria, in 20 per cent. the stomach is about normal, and in about 20 per cent. there is hypochlorhydria. The diet, therefore, must vary in different cases of the disease, and it is necessary to study the condition of the patient's stomach before it is possible to lay down rules for his nutrition. The stomach tube is not likely to do harm if carefully used. The effect of gastric juice in the tubercle bacilli in the sputum swallowed was also investigated. It appears that the normal gastric juice is bacteriolytic to the tubercle bacilli, but *in vitro* the process is very slow. The author believes, however, that in the stomach it is much more active, so that ordinarily no bacilli can pass the normal stomach and reach the intestine in virulent condition. In hypochlorhydria they undoubtedly can, and also under any conditions on repeated ingestion some may find opportunities to slip through and to cause disease. The frequency of hyperchlorhydria with hypersecretion in pulmonary tuberculosis, the author believes, explains the frequency of gastric ulcer in this disease.

**16. Treatment of Perforations of the Tympanum.**—Yates recommends the use of patches of rubber to be applied over the perforation, so as to make an air-tight joint, in the treatment of recent or long-standing cases of this injury. In applying a patch to the drum a piece of rubber is selected, which is about twice the size of the hole to be covered. The canal and drum are thoroughly sterilized by syringing and mopping, and dried. If necessary, the edges of the perforation are pared or touched with nitrate of silver. The disc is carried into the drum by means of forceps or a cotton-tipped probe through a

speculum, if small, without it if too large. It is then pushed into position and the edges pressed down firmly all around. No adhesive material is necessary. The rubber is most conveniently sterilized by keeping it in alcohol or other antiseptic for a few moments while other preparations are being made. The patch hastens the reparative process and at the same time effects an immediate improvement in the hearing. Yates sums up the advantages of rubber tissue used in this way as follows: (1) It is convenient, easily sterilized and applied. (2) It is flexible, remains in place for a long time, and requires no adhesive material. (3) In large perforations it has the advantage over the various forms of artificial ear drums in not causing pain or irritation or setting up a discharge. It helps to heal at the same time that hearing is being improved. (4) Healing is rapid and the formation of scar tissue, which is likely later to give way or to become the seat of calcareous deposits, is reduced to a minimum.

#### Boston Medical and Surgical Journal.

November 9.

- 18 \*President's Address Before the American Hospital Superintendent's Association. G. H. M. Rowe, Boston.
- 19 \*Observations on the Comparative Value of Different Methods of Applying Plaster Jackets in Spinal Caries. E. G. Brackett and L. R. G. Crandon, Boston.
- 20 \*Treatment of Chronic Prostatic Enlargement. J. P. Lewis, Boston.

**18. American Hospitals.**—In this address Rowe details much of interest to hospital superintendents, as well as to the general profession. According to his statistics, New York has the largest number of public hospitals; Pennsylvania is second; Illinois third; Massachusetts fourth, and California fifth. Nevada is the only state which has no hospital, either public, private or ecclesiastical. New York also leads in the number of private or corporation hospitals. Illinois leads in the number of ecclesiastical hospitals. Of the total number of hospitals in this country, 220 are public, 442 are ecclesiastical and 831 are private institutions. Training schools for nurses are maintained by 867 hospitals. The ratio of training schools among the states is much the same as the number of hospitals. Oklahoma is the only state or territory that has no training school for nurses. The number of patients treated during the year was 1,064,512, 20 per cent. of these entering the hospitals of the State of New York; Pennsylvania comes next with 10 per cent., Illinois with 8 per cent., and Massachusetts with 4 per cent. Rowe believes that if large hospitals must increase their bed capacity it should be done by establishing branch hospitals somewhere outside the crowded city, but easy of access. The branch hospital should be used for emergency work and the main hospital for the treatment of general cases. He also advocated better utilization of the hospital for teaching purposes.

**19. Value of Plaster Jackets.**—Brackett and Crandon record the results of their observations made for the purpose of comparing the various methods of applying plaster jackets with reference to their use in various regions of the spine; to ascertain whether or not there resulted any attendant evils, immediate or remote, from the attempt to obtain the greatest possible correction; to test the fork apparatus, and to determine a way of estimating the weight of the finished jacket at the time of its application, as well as the minimum weight for a durable jacket. They found that lumbar disease improves under any method, but with the balance in favor of the hammock. Dorsolumbar and dorsal disease shows a gradual increase by any method of extension that brings about a compensatory increase of the normal lumbar curve. In disease involving the fourth dorsal vertebra (high dorsal) the spine may be held erect by either form of dorsal support, provided the jacket is carried high in front. Care is necessary, however, to avoid postural defects. The ventral position is adapted for all cases of lumbar disease. It is also applicable to dorsal cases, in which the portion covering the anterior chest is left until the patient is removed from the hammock, and the jacket finished in the sitting posture, with the patient held back in the extended position. The dorsal position is adapted to disease in either the lumbar or dorsal regions, but particularly to the dorsal. The fork is rather the more applicable to the dorsolumbar and lower dorsal, and the rods to the higher dorsal cases. In the old cases with deformity care must be taken



to avoid lordosis. The control of this by the flexed thighs is more apparent than real. The poise or balance in the standing position after the application of the jacket is a valuable guide and should be taken into account. The most accurate way of estimating the weight of the finished jacket is by the weight of the rolls before wetting. The shrinkage in weight is equal to about 9 per cent. of the rolls before wetting. A jacket of about 1 pound 12-14 ounces should be sufficient for a child of from 3 to 5 years of age, and a jacket of 2 pounds 10 ounces' weight sufficient for a child of from 10 to 12 years.

**20. Treatment of Chronic Prostatic Enlargement.**—Lewis presents the following conclusions: 1. The use of sounds is generally to be condemned. 2. The sphere of usefulness of the catheter is growing smaller and smaller as the advantages of an early operation make themselves manifest. 3. The Bottini operation may be applicable in selected cases, but should seldom, if ever, be adopted. 4. Orchidectomy, vasectomy, ligation of the internal iliaes, injection of carbolic acid, application of electricity and allied methods, he says, are to be condemned. 5. Prostatectomy is the procedure of choice, best performed when the symptoms first make themselves manifest and the patient's condition is presumably at its best. 6. The preferable route is through the perineum, the preferable method that of Young or one of its modifications, but much depends on the skill of the operator in the method employed. 7. In patients with foul bladders and diseased kidneys who, we have reason to expect, would not stand an extensive operation, thorough drainage should first be instituted either by a suprapubic or perineal incision under local anesthesia, to be followed later by enucleation, if deemed advisable. 8. The use of local anesthesia, especially spinal cocainization, is of great value, and should be more extensively employed.

#### New York Medical Journal.

November 11.

- 21 Skiagraphic and Therapeutic Factors in Tuberculosis of the Bones and Joints, with Some Reference to the Iodoform Treatment. (To be continued.) C. Beck, New York.
- 22 Relation of Milk to Typhoid Fever in New York City. J. S. Billings, Jr., New York.
- 23 \*Case of Puerperal Convulsions in which Cesarean Section was Required. F. T. Woodbury, U. S. A.
- 24 \*Treatment of Leukemia and Pseudoleukemia by the Roentgen Rays. A. Holding and M. Warren, New York.
- 25 \*Ocular Symptoms of Gout. K. K. Wheelock, Ft. Wayne, Ind.
- 26 Chronic Headache and Its Treatment by Massage. (Continued). G. Norstrom, New York.
- 27 \*Talma's Operation. G. C. Stemen, Denver, Colo.

**23. Cesarean Section for Puerperal Convulsions.**—The indications for operation in this case, reported by Woodbury, were the urgent necessity of emptying the uterus of its living contents on account of puerperal convulsions with rigid os after two failures of delivery by forceps. Version was regarded as being contraindicated by the absence of amniotic fluid and the inertia of the uterine muscle. The section was performed after Saenger's method, and a living child was extracted. The uterus was closed with interrupted sutures of catgut prepared by the Claudius method; the peritoneum and fascia were brought together with continuous sutures of the same and the skin with interrupted sutures of silkworm gut. The patient rallied well from the operation, but on the seventh day the temperature rose rapidly, and in spite of all efforts she rapidly grew weaker and died in coma.

**24. Roentgen Ray in Leukemia.**—A study of the literature by Holding and Warren shows that 25 cases with splenomyelogenous leukemia treated by the  $x$ -rays have been reported; 15 were improved; in 2 cases there was no improvement or the cases terminated fatally. Second, 8 cases of patients with lymphatic leukemia treated by the  $x$ -rays have been reported; no patients were cured; three were improved; and in five cases there was either no improvement or a fatal termination. Third, 22 cases of patients with pseudo-leukemia similarly treated have been reported; 6 were symptomatically cured; 13 were improved, while in 3 cases the condition was either unimproved or the case terminated fatally. Two cases are reported by the authors, and attention is directed to the following points: First, the marked action which the  $x$ -rays have on the lymphatic system and blood-making organs; second, its palliative action in cases of leukemia and pseudoleukemia, and to suggest that in some cases even curative ef-

fects may be hoped for; third, further observation of the action of the  $x$ -rays in this class of diseases is recommended.

**25. Ocular Symptoms of Gout.**—Wheelock reports four cases in which the ocular evidence of gout was followed by local manifestations of undoubted character. The following tissues of the eye are known to be affected by gout: Iris, choroid, sclera, retina and lens. Among the conditions observed are the following: Iritis, plastic and serous; cyclitis, plastic and serous; choroiditis, retinitis, retrobulbar neuritis, scleritis and episcleritis; cataract; hemorrhagic retinitis and glaucoma. Wheelock has observed all these conditions, except involvement of the lens, and has felt certain that the origin was gouty, yet in many cases, the evidence followed the administration of colchicum and potassium iodid. He also recognized gout as the causative factor in several forms of keratitis.

**27. Successful Talma Operation.**—Stemen operated on his patient in November, 1904, employing the method advocated by Talma as nearly as possible. There have been no unfavorable symptoms since the operation. The patient has gained in weight; his nutrition is good and there has been no ascites nor any evidence of a return of the original condition.

#### Lancet-Clinic, Cincinnati, Ohio.

November 11.

- 28 Causation of Eclampsia. J. W. Rowe, Cincinnati.
- 29 Data Concerning Uterine Cancer. A. P. Cole, Cincinnati.

#### American Journal of Medical Sciences, Philadelphia.

October.

- 30 Surgical Intervention for the Intraeranian Hemorrhages of the New-born. H. Cushing.
- 31 \*Intestinal Perforation in Typhoid Fever in Early Life. J. P. Crozer Griffith, Philadelphia.
- 32 \*Case of Acute Leukemia, with Some Striking Clinical Features. D. L. Edsall, Philadelphia.
- 33 \*The Effect of Certain Diet Cures in Diabetes Mellitus. J. Friedenwald and J. Ruhrah, Baltimore.
- 34 Gangrene of the Tonsil. C. W. Richardson, Washington, D. C.
- 35 \*Preventive and Remedial Treatment of Acute Rheumatic Endocarditis. B. Robinson, New York.
- 36 Chylous and Chyliform Effusions into the Serous Sac. J. G. Wilson, Philadelphia.
- 37 \*Case of Metastatic Endothelioma. E. J. Wood, Wilmington, N. C.
- 38 Excretion of Acetone and Diacetic Acid in Vomiting of Pregnancy. H. Baldwin, New York City.
- 39 A Procedure for Opening the Pericardium. J. H. Bacon, Cleveland, Ohio.
- 40 \*Permeability to Bacteria of Surgeons' Rubber Gloves. H. Fox and E. A. Schumann, Philadelphia.
- 41 Effect of Experimental Conditions on the Vascular Lesions Produced by Adrenalin. L. Loeb and T. C. Githens, Philadelphia.
- 42 \*Brachial Birth Palsy. L. P. Clark, A. S. Taylor and T. P. Prout, New York.

31. See abstract in THE JOURNAL, June 3, 1905, page 1797.

32. Id. Page 1800.

**33. Effect of Diet Cures in Diabetes.**—Friedenwald and Ruhrah bring forward certain diet cures which have assumed some importance during the past few years, such as the milk cure, the potato cure, and the oatmeal cure. Their observations with the use of milk as a form of diet in diabetes are in accord with those of von Noorden. They have rarely found it advisable to place any of their patients on an exclusive milk diet, except in those severe cases of diabetes in which diacetic acid is present in the urine and in which the patient is threatened with the onset of diabetic coma or in which this condition had already set in. On the other hand, they have utilized from one-half to a liter of milk daily in many of their cases of diabetes in addition to other allowable foods, often with excellent result. They have never followed Mosse's plan, that of replacing all carbohydrates by potatoes, but have rather followed the method suggested by von Noorden, that of replacing a portion of the bread by this form of food. A patient who is permitted to consume 100 grams of bread a day can take 300 grams of potatoes, so that at least a certain proportion of the bread can be replaced by this form of food. They have never seen the slightest harmful effect produced by the use of potatoes, even in severe forms of diabetes. In a not inconsiderable number of cases very beneficial results were obtained. The potato has an additional advantage, in that it lends variety in furnishing carbohydrate food as it can be prepared in various ways, and again as being a means to which fatty food, such as butter, can be furnished the body in large quantities. The oatmeal cure



was found especially useful in those forms of diabetes exhibiting diacetic acid in the urine. In the mild forms it is not only a useless treatment, but may even prove harmful. In the severe forms of diabetes remarkable results have been obtained with the oatmeal cure. The authors believe that these cures are valuable aids in the treatment of diabetes, but urge that great care must be practiced with the use of these various forms of diet. Each case must be studied individually and must be watched carefully in order to obtain the best results.

**35. Treatment of Acute Rheumatic Endocarditis.**—Robinson has found that no antirheumatic remedy is so useful and so free from objections as salicin. Salicin has been given in doses of 30 grains every hour for eight doses, and subsequently in 20 grain doses every two hours for one or several days, without occasioning appreciable accidents of any kind, and apparently with only relief to the patient's symptoms and general condition. It does not produce any headache or nausea. By the use of salicin the poison of rheumatism may be neutralized, the disease shortened, and thus there is less likelihood of having endocarditis appear. If the endocarditis exists already, it is advisable to continue the salicin to prevent further cardiac complications. In cases of subacute and chronic rheumatism, in which Robinson has given salicin many times in small or moderate doses, more or less frequently, he has repeatedly known symptoms to disappear completely or be much ameliorated in a few days or weeks, and without any intercurrent manifestations of an unfavorable nature which could be attributed to its use. Robinson cautions against interrupting the treatment too soon or reducing the amount of the drug too rapidly. In the case of children, when the heart becomes involved, Robinson has found it preferable to administer salicin, because it is a safer remedy than salicylate of soda.

**37. Case of Metastatic Endothelioma.**—Wood reports the case of a man, aged 43, whose family and personal history was negative, who four years ago noticed a small nodular mass on the surface of the right testicle. The testicle became painful and began to increase in size; it was firm in consistence and showed no sign of breaking down in any part of it. This condition gradually increased until the final removal of the testicle in the same year. Two years later the left testicle became similarly affected and was also removed. In both instances a diagnosis of sarcoma was made, which was confirmed microscopically. In 1904, following a fall, the patient began to complain of backache. This pain persisted with intervals of comparative freedom, followed by exacerbations which would necessitate remaining in bed several days at a time. During this time the man kept his full weight and showed no signs of cachexia. All the organs were normal, except the left kidney, which could not be palpated in its normal position. The provisional diagnosis was made of malignant disease of the left kidney. An exploratory incision revealed a kidney enlarged to about three times the normal size, and placed almost transversely across the abdomen. A nephrectomy being found impracticable, nothing more was done. A few days later the right leg was considerably edematous. It gave the patient some discomfort, though it was not acutely painful. The edema soon extended to the scrotum. Ten days after the operation the patient was seized with pain in the side and became cyanosed. He began to have a prune juice expectoration, developed a temperature, and finally became delirious. Twenty hours later he died with a large pulmonary hemorrhage. Tumors were found in the kidney, liver and lung. Microscopic examination showed these tumors to be endotheliomas. Wood concludes that the tumor of the testicle was unquestionably a large, round-cell sarcoma and that this was the original source of the disease. This being the case, and the metastatic tumors being of the endothelial variety, it may be taken as evidence that endothelioma is a sarcomatous tumor. It is notable in this case that the metastasis was exceedingly slow for a sarcoma, nearly five years elapsing from the time of invasion to death.

**40. Permeability of Rubber Gloves to Bacteria.**—Fox and Schumann selected at random from a lot purchased for hospital use six pairs of rubber gloves and subjected them to experiments which showed conclusively whether or not the rub-

ber glove is an absolute safeguard against the implantation of bacteria from the hands of the surgeon to the field of operation. The results of these experiments were such as to justify the authors in arriving at the conclusion that rubber gloves are absolute barriers against wound infection by the hands of the surgeon in so far that they are absolutely bacteria proof. Any infection occurring must be introduced into the wound from some point not protected by a glove.

**42. Brachial Birth Palsy.**—Clark, Taylor and Prout's research embodies new facts in the etiology and pathology of the laceration type of birth palsy, the development of the relationship thereto of the symptomatology, and the establishment of a scientific basis for treatment. They found that the cause of the laceration type of birth palsy is tension on the nerve trunks, which first ruptures the nerve sheath and then the nerve fibers. The prevention of this serious lesion of the cervical nerve trunks rests with the obstetrician, who should not overstretch the child's neck in the process of delivery. The persistence of the palsy is clearly explained by the pathologic findings, viz.: (a) Rupture of the perineurial sheath with hemorrhage into its substance, resulting in the formation of hematoma or hematoma infiltration into the neighboring tissues. (b) The cicatricial contraction following organization of the blood clot and repair of the rent in the perineurial sheath. The connective tissue thus formed indents and presses on the nerve bundles, strangulating them and preventing regeneration of the nerve fibers. In some instances the same result is accomplished by turning inward of the perineurial sheath on the nerve bundles. The nature of the lesion in all cases demands excision of the damaged areas and suture of the divided ends as soon as it is proved that spontaneous repair will not take place. The plan of treatment is then the same as that for peripheral nerve injuries elsewhere. In all cases, such treatment as will prevent contractures and deformities and maintain muscle tone in the paralyzed limb should be systematically used until either spontaneous recovery occurs or operation is done. (Traumatic neuritis is a contraindication to active treatment.) It is obvious that the above measures should be continued after operation. The proper time for surgical interference is not yet definitely fixed. It appears, however, to be much later than two or three months after birth. At the present time one year would seem to be a reasonable delay before operation.

#### Illinois Medical Journal, Springfield.

October.

- 43 Diseases of the Bile Tracts. C. E. Black, Jacksonville.
- 44 Surgery of the Duodenum. E. M. Sutton, Peoria.
- 45 \*Surgery of the Stomach. A. D. Bevan, Chicago.
- 46 \*Surgical Treatment of Bleeding Ulcer of the Stomach. C. Beck, Chicago.
- 47 Parenchymatous Keratitis, Irido-Choroidal Forms, with Loss of Both Eyes. C. H. Brobst, Peoria.
- 48 \*Climatic Treatment of Tuberculosis, with Special Reference to Colorado. C. L. Wheaton, Chicago.
- 49 \*Insanity Following Skull Injuries. E. Mammen, Bloomington.
- 50 Malignancy in Uterine Myomata. H. F. Lewis, Chicago.
- 51 Course and So called Complications of Cholecystitis. B. Holmes, Chicago.

45. See abstract in THE JOURNAL, June 3, 1905, page 1801.

**46. Surgical Treatment of Bleeding Gastric Ulcer.**—Beek formulates the indications for a surgical procedure in hemorrhage as follows: A first hemorrhage in a previously healthy individual, while in most cases healing by medical treatment, requires careful watching; if prolonged and if the pulse indicates an arterial hemorrhage, it must be treated surgically. A first hemorrhage in a previously suffering patient, if profuse or prolonged, ought to be treated surgically at once or shortly after the patient recuperates, as the ulcer will keep on bleeding and certainly will invite complications. A continuous slight bleeding with marked influence on the patient, such as anemia, weakness etc., is a clear indication for surgical interference. The operation of choice ought to be excision with or without gastroplasty.

48. Id. May 27, 1905, page 1704.

49. Id. June 3, 1905, page 1801.

#### Therapeutic Gazette, Detroit, Mich.

October.

- 52 Treatment of Acute Urethritis of Gonorrheal Origin. H. M. Christian, Philadelphia.



- 53 \*Permanency of Results in Pulmonary Tuberculosis—The After-history of 27 Cases Treated by the Combined Hygienic, Dietetic, Open-Air and Tuberculin Treatment. F. M. Pottenger.
- 54 Artificial Leucocytosis as a Therapeutic Measure. H. A. Becker, St. Charles, Idaho.
- 55 After-Treatment of Operative Cases. E. Martin, Philadelphia.

53. **Permanency of Results in Tuberculosis.**—Pottenger reports the after history of 27 patients with pulmonary tuberculosis, treated in office practice. No single remedy or measure was relied on, but everything was used that could be of any benefit to the patient. Twenty-five patients improved. Twenty patients are apparently cured and are now enjoying good health. In not one instance has there been a relapse although six years have elapsed since the first patient was discharged, and 26 months since the last patient was discharged. Seven patients are classed as improved. Of these, all are dead but one. Two of these cases were hopeless from the start, as the patients were suffering from acute tuberculosis, and in another case, which was never hopeful, the patient developed acute tuberculosis within six months after stopping treatment. The other three cases followed the natural course of chronic tuberculosis. Pottenger believes that it is just as possible to obtain a permanent cure in tuberculosis as in any other disease.

**Journal Missouri State Medical Association, St. Louis.**  
*October.*

- 56 Clinical Study of Diagnosis of Urinary Calculus. B. Lewis, St. Louis.
- 57 Hypertrophy of the Heart Without Disease of the Valves. J. R. Lemen, St. Louis.
- 58 Specimens of Pelvic Surgery, with Critical Remarks. A. H. Meisenbach, St. Louis.
- 59 Practical, Novel and Rational Treatment of Gaping Wounds, Following Extensive Septic Infection. J. F. Mcnestrina, St. Louis.

**Louisville Monthly Journal.**  
*October.*

- 60 Yellow Fever Facts. H. M. Folkes, Biloxi, Miss.
- 61 Moral Medical Triumvirate. W. F. Sterman, Winterset, Iowa.

**Oklahoma Medical News-Journal.**  
*October.*

- 62 Cyst of the Body of the Uterus. F. H. Clark, El Reno, Okla.
- 63 Treatment of Burns. F. L. Watson, Alderson, I. T.
- 64 Simple Method of Making Microscopic Examinations of the Blood. W. G. Ramsay, South McAlester, I. T.

**Vermont Medical Monthly, Burlington.**  
*September 25.*

- 66 Deforming Chronic Rheumatic Arthritis. C. W. Strobell, Rutland.
- 67 Diagnosis of Pneumonia. G. Rustedt, Rutland.
- 68 Loose Bodies in the Knee-Joint. J. B. Wheeler, Burlington.
- 69 Study of Enzyme Action in Its Relation to Human Metabolism and the Development of Tuberculosis. H. E. Lewis, Burlington.

**Columbus Medical Journal.**  
*October.*

- 70 Hints for the Early Management of Mental Troubles. H. C. Rutter, Columbus.
- 71 Compound Fractures. M. F. Hussey, Sidney.
- 72 The Trunk of the Sympathetic Nerve. B. Robinson, Chicago.
- 73 Inflammation. J. U. Barnhill, Columbus.

**Journal New Mexico Medical Association, Albuquerque.**  
*September 15.*

- 74 Hemorrhagic Typhoid—Typhoid Parotitis—Recovery. B. R. Black, Las Vegas.
- 75 Gastroenteric Intoxication in the New-born. J. R. Gilbert.
- 76 Treatment of Peritonitis. G. C. Bryan, Alamogordo, N. M.

**Chicago Medical Recorder.**  
*October.*

- 77 \*Actinomycosis. A. D. Bevan, Chicago.
- 78 Internal Hemorrhoids. C. J. Drucek, Chicago.
- 79 Two Cases of Suprapubic Prostatectomy. F. A. Leusman, Chicago.
- 80 Puerperal Fever as Seen by the General Practitioner. F. L. Glenn, Chicago.
- 81 The Prescription. W. F. Waugh, Chicago.

77. See abstract in THE JOURNAL, Jan. 28, 1905, page 317.

**Journal Kansas Medical Society, Lawrence.**  
*October.*

- 82 Medical Ethics from One View Point. M. H. Hart, Macks-ville.
- 83 Notes on General Anesthesia. F. L. Abbey, Newton.
- 84 Therapeutic Action of Chemic Salts. (Continued). B. D. Eastman, Topeka.
- 85 Case of Gonorrhea with Complications. G. R. White, Milan.

**Southern Medicine and Surgery, Chattanooga, Tenn.**  
*October.*

- 86 Medicolegal Aspects of Insanity. J. T. Searcy, Tuscaloosa, Ala.

- 87 Appendectomy in Pus Cases. J. A. Gaines, Nashville.
- 88 Diagnosis of Pregnancy at Term. G. Baughman, Richmond, Va.
- 89 Stricture Following Gonorrhea. R. C. Bryan, Richmond.

**Kentucky Medical Journal, Louisville.**  
*October.*

- 90 Our Prostatics—What Advice and Treatment Shall We Give Them. H. H. Koehler, Louisville.
- 91 Strangulated Hernia. D. C. Donan, Three Springs, Ky.
- 92 Summer Diarrhea in Infants—Prophylaxis and Treatment. L. B. Wilkerson, Russellville.
- 93 Cholera Morbus. R. F. Duncan, Tompkinsville.
- 94 Ectopic Gestation. C. G. Daugherty, Paris.

**Brooklyn Medical Journal.**  
*October.*

- 95 Pharmacopœia of the United States of America—Eighth Decennial Revision. E. H. Bartley.
- 96 Cholelithiasis. J. M. Van Cott.
- 97 Uncertain Course of Bullets in Gunshot Wounds. C. S. Barber.
- 98 Relief of Hay Fever by Radical Intranasal Operation. A. C. Howe.

**FOREIGN.**

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

**British Medical Journal.**  
*October 28.*

- 1 Lecture on Grave's Disease. H. Mackenzie.
- 2 \*Case of Addison's Disease. B. Bramwell.
- 3 \*Tumor of the Spinal Cord Removed by Operation. B. J. Ward.
- 4 \*Relationship of Heredity to Disease. F. W. Mott.
- 5 Ricin and Abrin Experiments. G. A. Watson, G. A. Reid, E. Schuster, A. W. Gilchrist and others.
- 6 Correlation of Sex and Disease. C. J. Bond.
- 7 Etiology and Pathology of Beri-beri. H. Wright, C. Hose, F. W. Mott, and others.
- 8 Case of Microgyria. W. P. May.
- 9 \*Certain Features Exhibited by Cells in Their Relation to Cancer. F. W. F. Ross.
- 10 \*Observations on the Feces in Biliary Obstruction and Pancreatic Disease. P. J. Cammidge.
- 11 \*Rapid and Simple Process for the Estimation of Uric Acid. A. F. Dimmock and F. W. Branson.
- 12 Diphtheroid Organisms in the Throats of the Insane. J. W. H. Eyre and J. F. Flashman.
- 13 \*Caffein Enrichment Method. C. Hirst.
- 14 Mitoses in the Cells of the Graafian Follicle. R. Cattley and A. S. Grünbaum.
- 15 \*Influence of Certain Micro-organisms on the Cellular Constituents of the Red Bone Marrow. C. P. Jones.
- 16 Method of Demonstrating Individual Metabolism in the Investigation of Pulmonary Expiration. A. W. Gilchrist.
- 17 Aspects of Carcinoma Ventriculi; Its Variations in Malignancy. F. G. Bushnell and F. Hinds.
- 18 Red Degeneration of a Fibromyoma of Uterus. F. G. Bushnell.

2. **Addison's Disease.**—Bramwell reports a case of Addison's disease which improved remarkably under the open-air treatment and the simultaneous administration of suprarenal extract. The patient, a man, aged 36, had been ill for eighteen months. He applied for treatment early in November, the weather at the time being cold, wet and stormy. The man was placed on the balcony outside the hospital ward and stood the exposure well. The suprarenal extract was administered in 5-grain doses three times daily. All the symptoms disappeared rapidly and the patient was discharged as cured five and one-half months after the beginning of the treatment. Death occurred suddenly two years afterward, due to asthenia and failure of the heart action, probably from autointoxication. A postmortem examination was not held.

3. **Tumor of the Spinal Cord.**—Following a fall, Ward's patient developed a marked spastic paraplegia, with no voluntary control of any muscle in either lower limb. A diagnosis was made of the tumor and an operation was advised. The spines and laminæ of the ninth and tenth dorsal vertebræ were separated with saw and bone forceps, and as soon as they were removed the dura mater bulged through the opening. It looked like a cyst filled with transparent fluid, through which the posterior surface of the cord could be dimly seen. On palpating the cord a tumor could be felt almost entirely filling the canal. The dura mater was incised, and immediately fluid under great pressure bulged out, and the posterior roots protruded through the opening thus made; when the first gush of fluid had lessened fluid was also seen to be spurting out in a tiny stream from between the strands of the posterior roots: no tumor was to be seen, but it could be felt as a distinctly localized growth about the size of a walnut, quite hard, covered in by the posterior roots which were stretched over it, and



situated somewhat more on the right side than the left, the cord itself was not to be seen, being completely covered in by the roots. The strands of these roots were carefully separated with a director and the tumor exposed; it was then shelled out quite easily by curving the director and passing it round the tumor in all directions, care being taken to keep it pressed against the tumor so that no damage should be done to the cord. Free oozing followed and immediately filled the cavity from which the growth had been removed, so that the cord itself could not be seen, and as the patient was rather collapsed, no time was wasted in examining the cavity, but owing to the size of the tumor the cord could not have been much thicker than a piece of ribbon. The dura mater was closed by a continuous fine catgut suture, and the wound closed except for a drainage tube. The wound healed by first intention, but there was a discharge of cerebrospinal fluid from the drainage tube hole for three weeks afterward. At first this was very profuse, soaking the dressings through in a few hours, but gradually lessened. Except for the relief of distressing pain in the back, the patient's condition remained practically the same until his death, twenty months later, from extensive bedsores. The tumor was a fibrosarcoma weighing 75 gr. and it had evidently grown from the posterior root sheaths.

**4. Heredity and Disease.**—Mott discusses at length the relationship of heredity to disease, and cites a number of well-known instances, such as Sanger Brown's family of hereditary ataxia, hereditary hemophilia and hereditary Daltonism. A study of statistics relating to the birth and death rate of tabetic and "tabo-paralytic" patients showed the following: Twenty-two married women suffering with tabes or tabo-paralysis had 38 children. Ten are still alive; 10 died in infancy or later; 18 were born dead. These women had 31 miscarriages. Of 54 married men, 151 children are living; 75 died in infancy or later, and 52 were born dead or were miscarriages. Mott says that there is no lack of fertility or fecundity on the part of the male parasyphilitics, but the death rate of offspring is higher than the normal average. The female parasyphilitics, however, show a very high death rate, lack of fertility and sterility. Over 30 per cent. are absolutely sterile and never conceive. In 32 pregnancies in which the father suffered from lead poisoning, the mother being free from that condition, 12 resulted in the death of the infants before term. Twenty children were born alive, but all except 2 died before the fourth year of life. This study shows that not only can lead produce abortions and miscarriages in females, but that male workers in lead, suffering with lead poisoning, have devitalized offspring which either die *in utero* or survive only a short time after birth. As to alcohol, Mott says that it is assumed that alcoholism is a potent factor in the production of mental and physical degeneracy of the offspring, but there are no certain data to show whether the transmission to the offspring is the inherent defect of control, vicious temperament, or the unbalanced mind which led to the drunkenness of the parent or parents, or a defect induced by the poison. Probably there is a transmitted mental defect increased by the poison, fixed and made permanent by the force of imitation. Drunkenness in several generations of the same family may be the result of several factors, and it goes on until regression to the normal by conjugation with a healthy stock occurs, or terminates by degeneration and elimination of the stock. Mott is strongly of the opinion that alcohol is a poison to all neuropathic stocks. Tuberculosis and degeneracy, nervous and mental diseases, and hereditary tendency to suicide are also discussed.

**9. Relation of Cells to Cancer.**—Ross believes that the genesis of cancer and of all malignant growths appears to be a question of alteration of cell polarity, and, therefore, work on cancer research should consider cell polarity in all its bearings.

**10. Feces in Diagnosis.**—Cambridge suggests that a chemical examination of the feces may often be of assistance in arriving at a correct diagnosis in cases of jaundice or suspected pancreatic disease. When the analysis is carefully performed by a competent and experienced observer, the results, considered in conjunction with the clinical symptoms, are of inestimable value.

**11. Rapid Estimation of Uric Acid.**—The method devised by Dimmock and Branson consists in taking 100 c.c. of urine and adding to it 1 gram of lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) after boiling in a conical flask (Erlenmeyer) of about 100 c.c. capacity for three minutes, the liquid is filtered while hot to remove the precipitated earthy phosphate, etc., which are washed with a little distilled water until the filtrate measures exactly 100 c.c. To 50 c.c. of the filtrate, which contains uric acid as lithium urate, 5 grams of ammonium chlorid are added, shaking the liquid until dissolved. After three minutes the contents of the flask are warmed to 120 F., so as to secure a uniform aggregation of the precipitated ammonium urate. The whole is now poured into a tube graduated in parts per thousand of uric acid, and deposition allowed to take place, the reading being taken after four hours have elapsed.

**13. Caffein Enrichment Method.**—Birt found that 0.5 per cent. caffein in 1 per cent. peptone water does not always restrain the development of the *Bacillus coli communis*; that 0.5 per cent. caffein in 1 per cent. peptone water inhibited the growth of 26 out of 31 races of *Bacillus typhi abdominalis* examined; that 0.5 per cent. caffein in 1 per cent. peptone water completely arrested the development of 18 varieties of dysentery bacillus; that caffeinated media are of service in isolating streptococci and staphylococci; that negative results with caffeinated media can not be relied on to exclude the presence of *Bacillus typhi abdominalis* in water or dejecta.

**15. Influence of Bacteria on Bone Marrow.**—In the course of observations made by Jones with a view to determining the influence of micro-organisms on the cellular constituents of bone marrow, he found: (a) That different micro-organisms bring about different types of bone marrow; (b) that this depends not only on the virulence, but on the specificity of the organism; (c) that apparently a lymphoblastic marrow is usually associated with an increased production of erythroblasts; (d) that a leucoblastic marrow, on the contrary, is not connected with an increased erythroblast production.

#### The Lancet, London.

October 28.

- 19 \*Study of Sixty Cases of Membranous Colitis. W. H. White.
- 20 New Lines of Work in Electrotherapeutics. H. L. Jones.
- 21 Problem of How Best to Utilize Hospitals and Sanatoriums in the Treatment and Prevention of Consumption. J. E. Squire.
- 22 Light Treatment of Lupus Vulgaris. M. A. Morris.
- 23 Multiple Abscesses of the Kidney Due to Acute Ascending Infection of the Normal Urinary Tract by *Bacillus Coli Communis*. H. L. Barnard.
- 24 Intravitreal Hemorrhages. L. Paton and W. E. Paramore.
- 25 \*Use of Plaster-of-Paris Splints in the Treatment of Fractures of the Leg. G. Wilkinson.
- 26 Dementia Due to Huntington's Chorea. G. E. Peachell.

**19. Membranous Colitis.**—White reports the history of 60 cases observed by him. Fifty-one patients were women and 9 were men. Forty-nine of these cases occurred between the ages of 20 and 50, the fourth decade claiming the largest number, 22. The youngest patient was under 10 years and the oldest over 70. Eight of these cases were fatal. In 16 cases complete recovery did not take place, although they were not fatal; 6 patients were much improved, and 21 made complete recovery. White lays great stress on the association of membranous colitis with disorders of the female generative organs. In about 41 per cent. of his female patients such an association existed. White says that by far the most important part of the treatment is to keep the large bowel empty. The simplest way to do this is by aperients and in many cases castor oil by the mouth will cure the patient. The best time to give this is the early morning as soon as the patient wakes; then the bowels are usually comfortably opened after breakfast. Many people wake an hour or two before they get up, so the oil should be taken then. Between half an ounce and an ounce is usually required. If the disease has lasted some time many weeks, even up to twelve or sixteen, may be needed before improvement is observed; the treatment should never be given up until a long trial has been allowed to it, and in all cases it should be continued for some months after apparent recovery. A minority are so nauseated by castor oil, however given, that they can not take it; in such cases sulphate of magnesium should be tried instead, or if this be found unsuit-



able calomel should be given over night. Should these methods fail the large intestine should be kept empty by washing out with plain water at a temperature of 100 F., a pint or more being used at a time. Operation should not be resorted to except in desperate cases.

**25. Plaster-of-Paris Splints.**—In order to overcome the objections made to plaster casts applied in the treatment of fractures, Wilkinson uses a form of plaster splint which he believes fulfills every requirement. Gauze such as is used for making gauze bandages is employed. The splints consist of from eight to twelve folds of this gauze, between the layers of which dry plaster is well rubbed in. Before applying they are immersed in warm water, squeezed out, and then more dry plaster is rubbed into their inner surfaces. No plaster cream should be employed. If the plaster is well baked, splints made in this way set very quickly and firmly and are very durable. The method of applying the plaster splints is as follows: Supposing the case to be one of fracture of one or both bones of the leg in the lower third, the plaster splints need only be carried as high as the knee. A pattern of the posterior splint is obtained by laying the sound limb on a sheet of paper and cutting round it with scissors. The splint extends from the root of the toes, under the heel, and up the back of the leg to just below the knee. It should be wide enough to embrace about two-thirds of the circumference of the limb. A good width should be allowed at the ankle to accommodate the projection of the heel. The pattern must be turned over so as to reverse the sides in cutting out the splint for the fractured limb. From ten to twelve folds of ordinary gauze bandage material should be laid out in a length equal to, and rather wider than, the pattern and cut out to form the posterior splint. This should be laid on a considerably wider piece of gauze and the whole thickness stitched together down the middle line. Dry plaster should be rubbed in plentifully between the layers of the gauze. The extra width of the outside layer of gauze should be split into tails on either side of the splint and the tails rolled up so that they may not become "taffled." The posterior splint should then be rolled up from either end on rollers. Two pieces of broomstick answer the purpose. The anterior splint is simply a strip, three to four inches wide, long enough to reach from the root of the toes to the knee. From eight to ten folds of gauze suffice and the ends should be secured by stitching them together. Plaster is rubbed in as in the case of the posterior splint, and the splint is rolled up on a piece of broomstick. The leg should then be bandaged evenly with a single thickness of flannel, a pad of wool being placed on either side above the heel, this being a point on which the splint is likely to cause pressure. The knee should be bent to a right angle and the leg laid on a support. Both anterior and posterior splints on their rollers are then placed in warm water for a few minutes to moisten the plaster. The surgeon then makes traction from the heel and foot. Counter traction is obtained by passing a clove hitch round the upper part of the thigh and tying to the head of the bed. Flexing the knee to a right angle eliminates one of the chief obstacles to reduction of the fragments by relaxing the gastrocnemius muscle. If the foot is kept at right angles to the leg and the inner side of the great toe in a line with the internal malleolus and the inner side of the patella the fragments will come into correct position on making traction. The anterior splint is now unrolled and laid along the front of the leg and foot. The posterior splint is removed from the water and well squeezed out. It is then unrolled and laid under the limb. Some additional plaster may be rubbed into its upper surface. While the surgeon keeps up traction and maintains the foot in the correct position an assistant brings the posterior splint round the under surface of the leg and foot and fixes it in position by tying the tails over the anterior splint. It is better to avoid tying the knots directly over the sharp anterior margin of the shin, where they may cause undue pressure. Traction with the foot in the correct position must be kept up until the plaster is set sufficiently hard to prevent displacement of the fragments; three minutes generally suffice. The leg is left for about half an hour lying flexed on the box with a support, such as a thin book, under the heel and hot-water bottles or bricks on either

side to hasten the drying of the plaster. After about twelve hours the plaster will be perfectly hard and the patient may then be allowed up on crutches. Unless there is any special reason for cutting up the case it is usually left untouched for about three weeks, when a fair amount of union may be expected to have taken place. It is then cut up with a pair of scissors along the interval between the two splints and subsequently the limb should be removed from the case, about twice a week for passive movements of the ankle. After replacing it the splints should be bandaged firmly with a calico roller. If the fracture is above the lower third of the leg it will be necessary to fix the knee joint. The splints may be put on in the same way, except that the knee will have to be in the extended position and the splints carried as high as the middle of the thigh. The advantages claimed for this form of plaster cast are the following: 1. It is applicable to all cases of fracture of the leg, with the exception of certain cases of compound fracture. 2. Its method of application is simple. 3. It is rigid and durable. 4. It can readily be cut up without disturbing the limb, and can be reapplied without loss of rigidity. 5. It is put on with the limb in the most favorable position for reduction of the displacement—i. e., with the knee flexed and the gastrocnemius relaxed. 6. The position of the leg is not shifted and traction on the axis of the limb is kept up during the whole time of application of the splints. Consequently there is a fair certainty of the fragments being fixed in good position.

#### Semaine Médicale, Paris.

- 27 (XXV, No. 42, October 18.) \*The Struggle Against Tuberculosis, According to the Labors of the Paris Congress.—*La lutte contre la tuberculose.* L. Cheinisse.  
28 (No. 43.) Esophagoscopie et trachéobronchoscopie. J. Garel.

**27. Present Status of Campaign Against Tuberculosis.**—Cheinisse remarks that the first enthusiasm for the sanatorium as the sole means of salvation from tuberculosis has subsided. The recent international congress showed this declining tendency in a marked degree. The sanatorium for the well-to-do person, who can modify his mode of life afterward so as to maintain the benefit derived, is still the great benefit claimed at first. Members of the working classes, however, return from the public sanatorium to their old poverty-stricken environment. Their zeal and conviction will gradually be modified, and they will refrain from using their pocket cuspidore for fear of the prejudices of proprietors and fellow-workmen, as it stamps them as dangerous. The rôle of the sanatorium in prophylaxis is thus illusory; its therapeutic rôle, evidenced by the restoration of the working capacity, is more than dubious, as it is subordinate to the natural progress of the disease and to the occupation of the individual. On the other hand, the expense of the public sanatorium as conducted in Europe is out of all proportion to its purely palliative effect among the laboring classes. It should be reserved for the incipient cases, and should be regarded merely as the auxiliary to certain more general hygienic measures. Cheinisse cites Beco to the effect that the sanatorium has been too long regarded as the pivot of the antituberculosis campaign, when in reality it is only a secondary element. The German advocates of the sanatorium confessed that about 7 out of every 10 applicants have to be rejected. The tuberculosis dispensaries are more humanitarian than sociologic in their aims, and Calmette calculates that in the one at Lille it costs about \$14,500 dollars a year to care for 100 families, exclusive of expenses of installation. Experience has also shown that, besides the true scientific and useful dispensaries, pseudo-dispensaries spring up for advertising purposes, which, under the guise of benevolence, are in reality but centers of competing interests to advertise the physician in charge and his assistants as specialists, and to advertise politicians connected with the inception and promotion of the dispensary. These various interests obscure the real work of the dispensary, and absorb the attention which should be devoted to the patients, so that the latter find themselves at the mercy of regrettable practices where seances of electrization or ozonation or exploitation of pharmaceutical specialties substitute hygienic regulations. The congress adopted a resolution to the effect that the sanatorium and the dispensary are neither exclusive nor predominant in the campaign against tuberculosis, but that the prob-



lem of healthy homes will always dominate its prophylaxis. Courtois-Suffit preached that the economic factor is the main one in the campaign against tuberculosis. "The conditions of life of the working classes must be changed. Their starvation wages must be raised by modifying the conditions actually existing between capital and labor." Cheinisse concludes with the remark that until this has been realized the economic conditions of the working classes will oppose an inflexible veto to the extermination of tuberculosis. "However," he adds, "the interests of the mutual benefit societies, the sickness insurance societies on the mutual plan and of similar organizations would be promoted by reducing the morbidity from tuberculosis, and they may prove a powerful aid in the campaign when they once awake to this fact." Another innovation which promises much is the organization of charitable societies whose aim is to remove healthy children from tuberculous environments and place them in healthy homes in the country or elsewhere. France takes the lead of all countries in its care of weakly children, sending those affected with tuberculosis to seaside health resorts and sanatoriums. It again leads the way in the recent organization of the Society for the Preservation of Children against Tuberculosis, which does not wait for the children to become tuberculous, but removes them from the infectious surroundings at once if it proves impossible to improve the home environment.

#### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 29 (XXXI, No. 39, Sept. 28.) Retrogression of Hemianopsia After Paralytic Attacks.—Ueber den Gang der Rückbildung hemianopischer Störungen nach paralytischen Anfällen. A. Pick.
- 30 Zur Kenntnis Pneumococcensepsis als Sekundärinfektion. A. Vlach.
- 31 \*Weitere Beiträge zur Fremdkörperentfernung mittels der Oesophagoskopie (removal of foreign bodies). v. Hacker.
- 32 \*Ueber ischiadische Skoliose in Theorie und Praxis. A. Lorenz.
- 33 \*Ueber operative und nicht operative Behandlung entzündlicher insbesondere eitriger Adnexerkrankungen (suppurative affections of adnexa). O. von Franqué.
- 34 Zur osteoplastischen Resektion der äusseren Augenhohlenwand (of external wall of orbit). W. Czermak.
- 35 Zur Diagnose der Neubildung der Kieferhöhle (neoplasms of maxillary sinus). O. Chiari.
- 36 \*Ueber die chirurgische Behandlung der otogenen Meningitis. G. Alexander.
- 37 \*Zum Problem der Angioneurosen-Behandlung. K. Kreibich.
- 38 Diätetik des vorgeschrittenen Kindesalters (for older infants). Monti.
- 39 Nothnagel's Bemerkungen ueber seine stenokardischen Anfälle (Nothnagel's last notes. See news columns, page 1179).

31. **Removal of Foreign Bodies by Aid of Esophagoscopy.**—Since 1887 von Hacker has been urging the necessity for direct inspection, preliminary to extraction, of a foreign body in the esophagus. He reported 27 cases in 1901 and now reports 12 more, in all of which extraction of the foreign body proceeded smoothly after its shape and location had been determined with the esophagoscope. He thinks that the surgeon should practice esophagoscopy as a routine procedure, just as cystoscopy has been adopted. In his experience, pieces of bones were found in 8 cases, false teeth in 4, and fruit stones in 2. In 17 cases in which there was a cancer or stricture, the foreign body proved to be a chunk of meat in 8, and a plum stone in 6, a cherry stone in 2 and a marble in 1. In 3 cases he was able to remove a plum stone with forceps from above, controlled by esophagoscopy. Local anesthesia with 20 per cent. cocain has always proved sufficient for adults, but for children he generally prefers chloroform anesthesia.

32. **Sciatic Scoliosis.**—Lorenz shows by several diagrams that sciatic scoliosis is the result of instinctive reflex contraction of the muscles. It protects the lumbo-sacral nerves against mechanical, painful traction, and no attempt should be made to correct this scoliosis while the affection is in its painful stage. On the contrary, the trunk should be immobilized in the position which the patient finds is least painful. Any other mode of fixation increases the painfulness and the cast has to be taken off.

33. **Indications for Operative or Non-operative Treatment of Affections of Adnexa.**—The statistics of Keitler and Peham show that in one-sixth of their cases of suppurative affections of the adnexa treated by conservative measures the patients regained complete functional capacity, as evidenced by pregnancy later. This surpasses the results attained by operative measures. When operating in cases of pyosalpinx, von

Franqué now makes a practice of suturing the wall of the abscess to the wall of the vagina, as also in cases of suppurating hematocele. This insures constant drainage; an ordinary drain is liable to become displaced or to be removed by the patient, as occurred in some instances which he cites. As a rule, in gonorrheal or puerperal pyosalpinx the patients have more or less temperature, but it is reduced to normal in one or more weeks by mere rest in bed and application of the ice bag. The spontaneous and induced painfulness of the tumor in the adnexa subsides more slowly, while the tumor gradually shrinks in size. Several days to a week after the temperature has been reduced to normal, he commences hot irrigations of the vagina, followed by ichthyol-glycerin tamponing. This is supplemented by alcohol compresses or Priessnitz packs to the abdomen. Superheated air can also be applied locally to good effect in so far as the pains are concerned, although his experience has not shown any decided superiority of the superheated air in gynecology over other methods of treatment. His patients were kept reclining until the tumors had grown smaller and were no longer painful, which occurred on an average in from four to six weeks. Then baths were given, especially Franzensbad brine baths, and this course of brine baths was repeated a year afterward. Patients able to be treated according to this plan seldom require operative measures for a gonorrheal or puerperal pyosalpinx. The brine baths must not be commenced until after the temperature has been normal for from six to eight weeks, and they should be suspended at the least rise. He warns, further, against massage. It can not do much good, he says, and is liable to do great harm, mobilizing the germs and spreading them into hitherto sound regions, while cautious tamponing, rinsing and baths leave them undisturbed and enclosed in the more or less quiescent focus. Operative intervention is indicated on suspicion of cancer and when symptoms indicate torsion; also when the symptoms suggest that a tuberculous process in the adnexa is the primary or principal localization of the affection. Von Franqué has had 11 out of 13 patients who have been in good health for from eleven months to ten years after a radical operation for tuberculosis of the adnexa. In other patients, he was able artificially to wall off the focus from the abdominal cavity, even when there was already a communication into the rectum. Infection from the field of operation occurred in only 1 out of the 20 tuberculous patients on whom he has operated, and possibly it might have been prevented by more ample drainage in this instance. A simple hydrosalpinx can be evacuated if it causes trouble.

36. **Surgical Treatment of Otogenic Meningitis.**—Alexander describes the technic at Politzer's clinic. It consists in immediate operation on the ear and removal of the entire disease focus, then exposure of the dura, incision and drainage of the intradural space, suction and aspiration of the fluid through the opening thus made, and lumbar puncture. The virulence of the micro-organisms is an important factor in the results of treatment, and this should be determined at once, preferably by inoculation of animals. This was scarcely attempted in the 10 cases treated by operative intervention on record. Five were essentially improved. The indications for operation require the differentiation of suppurative from serous meningitis, and for this reason lumbar puncture is imperative. Repeated lumbar puncture for therapeutic purposes may be advisable in meningitic affections not originating in the ear, or when the focus is not accessible, but in otogenic meningitis local surgical intervention and local aspiration of fluid from the intracranial regions lying near the ear are preferable. In case of suppurative meningitis, the dura should be opened wider, with an incision from 1.5 to 5 cm. long. Counteropenings may be useful to promote ample drainage. Politzer made a counteropening in the posterior cranial fossa, behind the sinus, in 2 cases with good results. In cases of far advanced otogenic suppurative meningitis, it might be advisable to expose the brain and to remove the outer diseased layer in case of existing encephalitis. Manasse has recently recorded a case of serous meningitis with superficial encephalitis, which suggests the possibility of removing the softened diseased membranes and the adjacent layers of the cortex in such cases, as also in the early stage of the suppurative form. Experi-



ence has fully demonstrated that exploratory opening of the cranial fossa in connection with the operation on the ear is a less dangerous procedure than temporization.

37. **Causal Treatment of Cutaneous Affections.**—Kreibich believes that a certain number of cutaneous affections are sympathetic reflex phenomena. The stimulus is not exerted on the vasomotors directly, but indirectly, by sensory stimuli, centrally transmitted. The pathologic intensity of the effect is due either to the intensive sensory irritation, as, for instance, in the affection of the ganglion in herpes zoster, or else to the abnormally increased excitability of the vasomotors. This pathologic excitability which causes the vasomotors to react to sensory stimuli with a pathologic response can best be explained by assuming a lack of stability on the part of the dominating vasomotor center. He is convinced that this is the cause of gangrene of the skin, of urticaria, prurigo, glossy skin, decubitus, etc., while Raynaud's disease is due to abnormal excitability of the vasoconstricting instead of the vasodilating center. Local measures are unable to influence such a vasomotor phenomenon. It must be attacked at the source, by preventing the afferent sensory irritation and by reducing the central reflex excitability. For the latter, the most effectual weapon at our command is arsenic. It acts on the central nervous system, as is shown by its efficacy in chorea, and by the fact that too large doses induce typical reflex phenomena, such as arsenic zoster and urticarial, painful erythema. When an affection with itching follows certain lines or appears in symmetrical regions, its origin in the central, sensory tracts becomes apparent, and arsenic is the remedy *par excellence* for the condition. He relates experiences which demonstrate beyond question that this drug is superior to other remedies in reducing morbidly exaggerated reflex excitability. It has proved exceptionally successful in all long-persisting, urticarial, urticaria-erythematous or purely pruriginous conditions. Inadequate or unsystematic dosage is generally responsible for the failures. He gives it in the form of Fowler's solution and aqua menthae, equal parts of each. Five drops are taken morning and evening, then ten drops morning and evening. He keeps the patient on this dose until its effect is apparent. If stomach symptoms develop, he continues the arsenic in the form of subcutaneous injections of sodium arsenate. When convenient, he combines the subcutaneous injections of .02 gm. of the sodium arsenate every second day with five drops of the above mixture morning and evening.

#### Münchener med. Wochenschrift, Munich.

- 40 (LII, No. 39, September 26.) \*Ueber Spirochæte pallida. G. Sobernheim and E. Tomaszewski. Id. K. Herxheimer.
- 41 Die Wanderungsfähigkeit der Lymphocyten (migrating faculty). H. Schridde.
- 42 \*Veränderungen im Granulationsgewebe fistulöser fungöser Herde durch Hyperämisierung mittelst Saugapparate (action of congestive hyperemia). A. Hofmann.
- 43 Ueber menschen-pathogene Streptokokken. E. Fraenkel.
- 44 \*Der Wert der einzelnen klinischen Symptome des Typhus abdominalis für die Diagnose. G. Treupel.
- 45 \*Serum-Behandlung der fibrinösen Pneumonie. Lindenstein.
- 46 Ueber Frakturen-Behandlung. Gebele.
- 47 \*Biersche Stauungs-Hyperämie bei Sehnenscheidenphlegmonen (congestive hyperemia for phlegmons in tendon sheaths). W. Lossen.
- 48 \*Eine seltene Komplikation der diagnostischen Probe Exzision. v. R. Steinbüchel.
- 49 \*Augenerkrankungen und gastro-intestinale Auto-intoxikation (eye affections). F. Groyer.
- 50 Behandlung der Syphilis. M. v. Zeissl.
- 51 Grundsätze und Erfahrungen auf dem Gebiete der Kindermilchbereitung (preparation of milk for infants). Backhaus.
- 52 Eine einfache Methode der Hauttemperaturmessung (temperature of skin). G. Gaertner.
- 53 Der Arzt als Begutachter Unfallverletzter (medical certificates after accidents). Vulpius.

40. **Spirochetes in Syphilis.**—Sobernheim remarks that the findings of spirochetes coincide with the clinical experience in regard to the transmission of syphilis. He found them in 50 out of 58 cases of certain syphilis, all the positive cases being those with primary or secondary lesions, while the 8 negative cases were those with tertiary lesions. In 34 control cases of various affections, the findings were invariably negative. Herxheimer states that perfected staining technic has resulted in the discovery of certain bodies in or near the spirochetes which he regards as confirming their protozoan nature.

#### 42. Changes in Granulation Tissue After Treatment by Suc-

tion Congestive Hyperemia.—Hofmann gives illustrations of the microscopic changes in the tissue after it had been treated with Bier's suction apparatus to induce congestive hyperemia. He was surprised to find that the leucocytes had nearly vanished from the region, actually washed away by the congestion and hyperemia induced. The benefit of the procedure must lie in the fact that the bacteria and their poisons are washed away also, while the influx of fresh blood to the parts brings renewed life and vigor. The histologic picture shows that the vessels become much enlarged under the suction, while the composition of the blood is comparatively normal, showing no preponderance of leucocytes. The parts have merely been thoroughly rinsed and drained.

44. **Signs of Typhoid Fever.**—Treupel has been diligently sifting the clinical records of 60 cases of typhoid fever recently observed. The anamnesis suggested the possibility of typhoid in only 75 per cent.; a typical temperature curve was noted in only 46 per cent.; bronchitis at the commencement of the disease in 48 per cent.; pulse slow in proportion to the temperature in 86 per cent.; tendency to euphoria or remarkably good general condition in 56 per cent.; typhoid tongue in only 16 per cent.; catarrhal sore throat in 33 out of the 60, and follicular sore throat in 1; abdominal symptoms, meteorism, tenderness, etc., in 61 per cent.; enlarged spleen in 86 per cent.; roseola in 71 per cent.; diazo reaction in 73 per cent., and the agglutination test positive in 90.6 per cent. of 53 patients, and typhoid bacilli found in the blood by the second or third day in 92.8 per cent. of 14 cases. In 3 cases, the clinical picture was at first that of a rhinolaryngeal bronchitis, without roseola, enlarged spleen or diazo reaction, but the positive findings of the agglutination test were confirmed by the course of the disease. In another case, a woman recovering from childbirth had chills. The uterus was normal for her condition and the persisting euphoria suggested the possibility of typhoid, which was sustained by the positive agglutination. In another case, a woman presented considerable cachexia, dullness over the apices, hectic fever and strongly positive diazo reaction. The lung affection seemed to remain stationary and no bacilli could be found in the sputa, while the diazo reaction grew more and more marked, and the fundus of the eye showed no signs indicating miliary tuberculosis. The agglutination test was very strongly positive, and typhoid bacilli were finally cultivated from a furuncle on the leg and from the urine. See editorial page 1575.

45. **Serum Treatment of Fibrinous Pneumonia.**—Lindenstein's experience in 4 cases has been extremely favorable.

47. **Suction Hyperemia in Treatment of Tendon Sheath Phlegmons.**—Lossen gives illustrations of the remarkable functional results attained in 3 cases of tendon-sheath phlegmons in the hand, treated by Bier's method of congestive hyperemia. Healing was prompt and the tendons did not become contracted or necrotic, but resumed normal functioning.

48. **Fatal Complication of Exploratory Excision.**—A woman of 40 presented atypical uterine hemorrhages and, although in apparently the best of health, the suspicion of cancer was excited by the aspect of the portio vaginalis, and an exploratory excision was made. Symptoms of septicemia developed at once and the patient died in less than a month. She had been referred to a careful surgeon for the excision, it had been done in a well-equipped operating room, and the field had not been touched by the hands nor was any other sin against asepsis committed. The exploratory excision had revealed incipient carcinoma and also several mucous follicles which had become closed at the mouth and distended by their secretion. Steinbüchel had seen such little cysts before and had had occasion to open some of them with the thermocautery on several occasions in years past. It was noticed during the exploratory excision that the contents of two of these Nabothian follicles had a somewhat different appearance from the others, as if pus were mixed with the mucus. At the same time, a small vein had been opened by the exploratory excision. The vein was sutured and the lips of the wedge-shaped excision brought together and sutured. Two sutures for a wound only about an inch long did not close it hermetically, but he ascribes to these sutures the evil results. If the wound had been left open and drained, the germs would have been drawn outward.



They must have been exceptionally virulent, and some must have found their way into the opened vein and thus have transformed a clean wound into an infected one. He advises, therefore, in case a retention cyst of this kind is opened in the course of an exploratory excision that it should not be sutured, but should be merely tamponed and drained. In any event, a patient should be carefully supervised after an exploratory excision.

**49. Eye Affections and Autointoxication.**—Groyer announces that the test for indican resulted strongly positive in a large number of cases of eye affections for which he could not discover any primary cause. They included cases of scleritis, keratitis, iritis, iridocyclitis, retinitis, choroiditis, neuritis, retrobulbar neuritis, cataract, opacity of the vitreous body, hemorrhages in the vitreous body, glaucoma, atrophy of the optic nerve, hemianopsia, scotoma, paralysis of the ocular muscles and functional disturbances for which no cause could be discovered. In all of these cases, he noted evidences of digestive disturbances with tenderness on pressure of the regions of the stomach, liver, gall bladder and spleen, or typical pains in the sacral region and between the shoulder blades, radiating into the shoulders and arms; or else pain on pressure of the emerging points of the lateral branches of the intercostal nerves, the cervical plexus, the supraorbital, infraorbital and mental nerves, or radiating pains in the forehead and temples and occiput, or pronounced palpitations or nervous respiratory disturbances. In all the above ocular disturbances no affection of any other organ could be detected. In all these cases, the tests for sugar and albumin in the urine always resulted negatively, while the tests for indican revealed its presence in very large amounts. As indican is an indication of putrefactive processes going on in the intestines, he assumes that its presence in these cases indicates that poisons from the intestines are circulating in the body of these patients, these intestinal toxins affecting primarily now this, now that organ of the body. Their ravages are most readily perceived in the eye, and hence the ocular disturbances were the first to attract attention.

#### Wiener klinische Wochenschrift, Vienna.

*Last indexed page 743.*

- 54 (XVIII, No. 28.) \*Zur abdominellen Operation des Gebärmutterkrebses (uterine cancer). W. Latzko.
- 55 Zur Pathologie der Zungengrundtumoren (of base of tongue). Two cases. E. Glas.
- 56 Ueber einen Fund von Sprochæte pallida im kreisenden Blut (circulating blood). H. Raubitschek.
- 57 (No. 29.) Der gegenwärtige Stand der Zahnheilkunde (present status of dentistry). R. Welser.
- 58 \*Zur Aetiologie der Pinguecula und des Pterygiums. II. A. Sachsälber (Graz).
- 59 (No. 30.) Apparat für Inhalationsversuche. J. Bartel.
- 60 \*Zur Inhalation zerstäubter bakterienhaltiger Flüssigkeit. R. Hartl and E. Herrmann.
- 61 \*Zur Kasuistik und Therapie der Pankreas Cysten. A. Exner.
- 62 \*Ein leicht transportabler Blutdruckmesser (blood pressure measure). S. Tauber (Vienna).
- 63 Die Lehre von den normalen Antisubstanzen im Lichte unserer Lipoidtheorie. L. Detre and J. Sella.
- 64 Ueber die Antihämolyse des normalen Serums. M. v. Eisler.

**54. Abdominal Extirpation of Uterine Cancer.**—Latzko makes it his principle in operating on a cancer of the uterus to remove all the glands, lymphatics and vessels, with the connective and fat tissue, *in toto*. He gives an illustration of the piece removed, a long chain of glands hanging from it on each side, and describes his technic in detail. The only possible dubious feature in regard to asepsis is the cutting of the uterus out of the vagina, but this is the last step in the operation. Ten patients operated on by this technic all recovered with remarkably little suppuration. He ascribes this to the ample drainage, the lack of recesses in the connective tissue, and the avoidance of mass ligatures. This technic, he claims, demonstrates the feasibility of removing all the suspicious elements in extirpating a cancer without enhancing the gravity of the operation.

**58. Etiology of Pterygium and Pinguecula.**—Sachsälber reiterates his previous announcement in regard to pterygium and pinguecula as being the result of irritation from the presence of fine downy hairs on the inner side of the lids. He does not claim that all cases are of this origin, but that a large proportion can be traced to this source and that a cure can be effected by removal of the hairs. The hairs are generally found in the inner angle; in some cases he has found them so

long that they projected 2 mm. beyond the limbus of the cornea, but they are so fine that they can seldom be seen without a magnifying glass. He describes a series of 6 cases, and states that in examination of 1,100 inmates of an insane asylum he found the hairs in all but 3 of the individuals affected with pinguecula, and in nearly all the cases of progressive pterygium. The stationary, traumatic cases, of course, do not belong to this category. His first article was summarized on page 1971 of the last volume of THE JOURNAL.

**59-60. Experiments with Inhalation of Drugs and Germs.**—Bartel describes an apparatus which supplies a very fine spray blended with compressed air for inhalation. Hartl and Herrmann report experiments with the apparatus on animals compelled to inhale a spray containing the *Bacillus prodigiosus*. It was found that the bacilli inhaled were caught on the walls of the nose and throat, while but a very small number of them reached the peripheral portions of the lungs. The experiments proved, however, that the inhaled spray from the apparatus actually found its way to the remoter parts of the air passages. The inhaled bacilli did not proliferate.

**61. Seven Cases of Pancreas Cysts.**—Exner has been collecting information in regard to the later fate of 7 patients with cysts in the pancreas who were operated on at Hochenegg's clinic. The cases have all been previously published. One of the patients was treated by total extirpation of the cyst and is in perfect health. Of the other 6 patients only 2 are still alive after ten years, and one of them has a recurring fistula. These 6 patients had been treated by suturing in the cyst. Death was due in one instance to ileus from adhesions. In a more recent case a man was kicked in the stomach region by a horse. When seen six weeks later, he had a tumor in the pancreas region, with sugar in the urine, a sign of functional disturbance in the pancreas. The tumor increased in size during the day, but the next morning it suddenly subsided, having perforated into the abdominal cavity. This did not cause any special disturbances. The tumor was probably a hematoma in the pancreas, and its rupture put an end to the functional disturbances in this organ. Four months later the tumor had recurred. This time it proved to be a cyst, and no traces of the preceding hematoma could be discovered at the operation. The cyst was drawn up and sutured to the parietal peritoneum, and not opened until five days later. Its wall was about 3 cm. thick. A small drain was inserted and the secretion gradually subsided from a quart in the first twenty-four hours to 300 c.c. in about five weeks, and then became minimal. The fistula has not healed during the five months since, and it is now proposed to remove the shrunken wall of the cyst to facilitate closure of the fistula.

**62. Portable Blood Pressure Measure.**—The little instrument consists of a manometer with a tube on each side of its base. One tube connects with a broad ring slipped over the finger, the other with a small syringe which serves to compress the air in the tubes.

#### Gazzetta degli Ospedali, Milan.

*Last indexed page 1125.*

- 65 (XXVI No. 103.) Sleeping Sickness.—La malattia del sonno. C. Tarchetti.
- 66 \*Influence of Cold and Heat on Development of Cerebral Hemorrhage and on Gastrointestinal Affections.—Influenza del freddo e del caldo sullo sviluppo di certe malattie. E. Leonardi.
- 67 Suture secondaria del nervi. A. Dal Vesco.
- 68 (No. 108.) \*Sulla patogenesi dell'idrocele volgare. R. Cecca.
- 69 \*Nuovo metodo per la siero-diagnosi del tifo. G. Applani.
- 70 (No. 112.) \*La crioscopia delle urine nelle malattie infettive. B. Mariotti.
- 71 \*Profilassi della malaria. G. Casardi.
- 72 Sui canali anomali del pene. Urethra duplex. Condotti paruretrali (deformities in passages in penis). E. Aievoli.
- 73 Bullet Wound of Spinal Cord.—Lesione trasversa completa del midollo spinale per ferita d'arma da fuoco. I. Bruschi.
- 74 Legatura del dotto di Wirsung (Wirsung's duct). T. Carpenfieri.
- 75 (No. 114.) Questioni di fisiologia cerebrale. E. Tramonti.
- 76 (No. 115.) \*Sui rapporti fra la pericardite e le lesioni valvolari dell'aorta. L. Ferri.
- 77 \*Un nuovo pericolo dell'operazione di Talma (new danger of omentopexy). D. Maragliano.
- 78 \*Remedying Insufficient Mammary Secretion.—Della possibilità di rimediare alla insufficienza della secrezione lattica nella donna. G. B. Burzagli.
- 79 Diagnosi e cura dello edema maligno e della pustola maligna. V. Torresi.



**66. Influence of Cold and Heat on Certain Affections.**—Leonardi, in central Italy, has been studying the records of 107 cases of cerebral hemorrhage during the last fourteen years. He found that 71 cases occurred during the three coldest months and 23 during the three hottest months, while only 15 were observed in fall and spring. This fact, in connection with others which he cites, he thinks, demonstrates that the visceral congestion during cold weather is responsible for the hemorrhages. The blood is driven away from the periphery; it accumulates in the right heart, with consequent enlargement of the vessels and tendency to rupture. During the summer the blood is drawn to the periphery, and the heart is overtaxed. The brain is a peripheral organ, and consequently the congestion in its vessels is liable to entail rupture. The extremes of the seasons thus have the same effect, but by a different mechanism. The gastrointestinal tract also suffers in the same way, the visceral congestion in winter and the anemic condition of the viscera during the summer causing disturbances. The result of each is identical, that is, abnormal digestive functioning, and the presence of imperfectly digested food in the alimentary tract, entailing auto-intoxication and consequent nervous depression.

**68. Pathogenesis of Hydrocele.**—Cecea has demonstrated that certain portions of the parietal peritoneum are semi-permeable, that is, they allow the passage of water alone while holding back its salts. He believes that when the vaginalis has developed from the part of the parietal peritoneum exhibiting this property, a predisposition is afforded for the development of hydrocele. He describes his experiments on animals and on the cadaver and tests of the membrane taken from normal individuals. All concur in demonstrating only semi-permeability on the part of the membrane in the cases of hydrocele.

**69. New Method of Serodiagnosis of Typhoid.**—Appiani writes from Lucatello's laboratory at Padua to describe a technique for the serodiagnosis of typhoid by means of the precipitating action of the pulp of typhoid bacilli. He thinks that the procedure described is more reliable, more practical and simpler than the ordinary agglutination test. He first made a large amount of bouillon culture of pure and extremely virulent typhoid bacilli. On the eighth day he filtered 2 liters of the culture through a Chamberland filter, rinsing by passing sterilized and distilled water through the filter for twelve hours. The pellicle left on the filter was ground for four hours in a mortar, a few drops of distilled water being added occasionally. The result was about 20 c.c. of a turbid, milky colored fluid. This was filtered again, and the result was a clear fluid, slightly alkaline, not coagulating with heat nor throwing down a precipitate with the ordinary reagents for the albuminoids, and becoming only slightly turbid when treated with acetic acid and potassium ferrocyanate. A few cubic centimeters of serum from a typhoid patient were placed in test tubes arranged in a stand and 5 c.c. of the bacillus pulp, obtained as described above, was allowed to flow down the wall of the tube on top of the serum. No change was observed in the contents of the test tube for nearly two hours. Then the fluid began to grow turbid, until it was entirely turbid after the third hour. A clear zone then developed at the point of contact, becoming most pronounced by the seventh hour, the fluid above and below remaining turbid indefinitely. These results were observed in serum from a patient at the twelfth day of typhoid. In another at the twenty-first day, the process proceeded much more rapidly, the whole being complete in an hour and a half. Appiani is now experimenting with the colon bacillus by the same technique.

**70. Freezing Point of Urine in Infectious Diseases.**—Mariotti reviews the history and present status of cryoscopy, and adds that most of the communications on the subject have been devoted to the conditions in heart and kidney affections. In this article he gives tables with the details in regard to the urine in 8 cases of typhoid, pneumonia, malaria or tubercular meningitis. These tables demonstrate that the molecular diuresis is low in febrile infections, but it may become abnormally high during convalescence. This is probably due to the elimination of the substances retained during the course

of the disease. Cryoscopy of the urine in acute infectious diseases is a better indication of the condition of the organic metabolism than of the functional capacity of the kidneys.

**71. Prophylaxis of Malaria.**—Casardi mentions that the present season has been an unusually wet one, and yet the prophylactic measures introduced against malaria have succeeded in keeping down the morbidity from this cause. The proportion of persons primarily affected has dropped from 38.71 per cent. to 0.3 per cent. since the houses have been screened, in one of the greatest hotbeds of malaria. In the regions where malaria is not bad, prophylactic doses of quinin are sufficient to ward off infection, but in the worst infected districts mechanical measures are indispensable. He adds that the term malaria means bad air, but that the air has been exonerated of complicity in the development of malaria except as it bears up the wings of the mosquitoes. He concludes by urging legislation to compel the screening of all houses in malarial districts.

**76. Relations Between Pericarditis and Valvular Lesions of the Aorta.**—Ferrio reports five cases of valvular affections superposed on pericarditis and discusses the connection between them.

**77. New Danger of Omentopexy.**—A robust man of 32 exhibited symptoms of cirrhosis of the liver and, as the ascites was large and annoying, omentopexy was undertaken to provide collateral circulation for the portal vein. The operation proceeded smoothly and the patient was convalescing satisfactorily when, on the third day, symptoms of collapse became apparent and he died in a few hours. The autopsy revealed laceration of one of the veins in the omentum. This accident was explained by Maragliano as the result of an effort to vomit. The stomach in the retching must have pulled on the omentum and torn one of the vessels, with resulting hemorrhage. The attendant did not realize the seriousness of the symptoms until too late. If the surgeon had been called at the first sign of collapse the laparotomy wound might have been opened and the ruptured vessel sutured. The case is a warning to make the fixation high up and to pull the omentum down as little as possible. Everything should be done to prevent vomiting until solid adhesions have formed; a week is long enough for this, as a rule.

**78. Remedy for Defective Secretion of Milk.**—Burzagli reviews the history of attempts, ancient and modern, to increase the mammary secretion, and relates the fine results he has obtained with anise. He learned that veterinarians were using anise as a reliable galactagogue, and when he was consulted by two women who deplored the lack of sufficient milk for their infants, he recommended them to drink an infusion of anise seed and to apply to the breasts four or five times a day compresses impregnated with the infusion. After five days both women were able to supply all the milk the infants needed. Each had used about seven quarts of the 25 per 1,000 infusion, taking five quarts internally. It was continued for another five days and then suspended, but the secretion of milk remained abundant. The effect is not apparent till from the third to the fifth day.

## Books Received

**PATHOGENIC MICRO-ORGANISMS, INCLUDING BACTERIA AND PROTOZOA.** A Practical Manual for Students, Physicians and Health Officers. By W. H. Park, M.D., assisted by A. W. Williams, M.D. Second Edition, Enlarged and Revised. 165 illustrations. Cloth. Pp. 556. Price, \$3.75. New York: Lea Brothers & Co., 1905.

**MATERIA MEDICA AND THERAPEUTICS.** An Introduction to the Rational Treatment of Disease. By J. M. Bruce. New and Enlarged Edition. Cloth. Pp. 632. Price, \$1.75 net. Chicago: W. T. Keener, 1905.

**ORGANOTHERAPY OR TREATMENT BY MEANS OF PREPARATIONS OF VARIOUS ORGANS.** By H. B. Shaw, M.D., F.R.C.P. Illustrated. Cloth. Pp. 256. Price, \$1.75 net. Chicago: W. T. Keener, 1905.

**MEDICAL RECORD VISITING LIST or Physicians' Diary for 1906.** New Revised Edition. Flexible Leather. Pp. 181. New York: William Wood & Co.

**DISEASES OF THE STOMACH AND INTESTINES.** By B. Reed. Illustrated. Cloth. Pp. 1021. Price, \$5.00. New York: E. B. Treat & Co., 1904.



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## Original Articles

### THE SECRET NOSTRUM EVIL.

FRANK BILLINGS, M.D.

CHICAGO.

I shall make no apology for bringing this subject before this Section. Its importance to the profession of medicine and to the public justifies an exposition of the evil now. In no other country has this menace to the welfare of the people and to the best interests of scientific medicine developed as it has with us.

Probably the reason is that other countries, with one or two exceptions, protect the people against frauds in foods, medicines, etc.

Some day it is to be hoped that the Congress of the United States will enact a national pure food law which shall include the regulation of the copyrighting and exploitation of proprietary and other medicines.

Just here it will be well to say that the term "proprietary medicine" does not necessarily stamp a preparation or remedy as a nostrum. Webster says that a nostrum is "a medicine, the ingredients of which are kept secret for the purpose of restricting the profits of sale to the inventor or proprietor; a quack medicine." Some proprietary medicines are patented, or better, the process of manufacturing an article is patented. This patent protects the discoverer, or owner, in the manufacture of the medicine or drug for a period of 17 years. These preparations are ethical, in that they are not secret, for any one for a small fee may obtain from the patent office of the government a copy of the description of the process of manufacture and the actual chemical composition of any such patented drug or remedy. The chief harm which has come to us in America from the protection by patent of the process of making a chemical or drug has been the resulting high price of the product. Many of the synthetic chemical drugs, like anti-pyrin, phenacetin, etc., cost ten times their worth as compared with the price of the same drugs in Germany and in other countries. As stated, however, such really patented preparations are not secret; the composition is known. Some of them are of value therapeutically. Many of them are valueless. Some of them are harmful. Most of them we could easily get on without and fare better with the older, more simple remedies. Too many "made in Germany" specifics are shoved under our noses.

Now, as to the other proprietary medicines. All the so-called "patent medicines" put on the market for the public, and many of the preparations exploited to physicians and distributed by them to the public, are not patented, but are protected by a copyright or trade mark. Technically there is no difference between the secret proprietary medicines manufactured for physicians' use

and the "patent medicines" exploited to the public. Both are protected by a copyright or trade mark name. Both are protected for an indefinite time. They are mixtures, as a rule, of several ingredients.

The relation of the physician to these preparations, however, is very different. Those "patent medicines" which are advertised to the public are not considered ethical and physicians abhor them and rightly condemn their use because they are often dangerous and always irrational as remedies. On the other hand, the manufacturers of those copyrighted proprietary medicines which are exploited to physicians by extravagant claims of specific therapeutic action, use the doctor as the middle man to distribute the cure-alls to the public.

Medicines so prepared that the busy physician could easily dispense them found a certain class of doctors eager to use them. The indications for use appeared on the label or in the accompanying literature. Tonics, blood and tissue builders, emmenagogues, pain relievers, febrifuges, laxatives, calculi dissolvers, soporifics, bile promoters, heart tonics, cures for Bright's disease, etc., have appeared in countless number and some remedies offered are confidently presented as cures for not one, but a half dozen diseases or symptoms complex. Indeed, the claims of many of the promoters of this class of remedies do not differ in extravagance from the cure-all patent medicines offered directly to the public.

It has been easy to obtain testimonials of the alleged value of many of these remedies. Many even of the "faculty" have extolled them. Why, therefore, should not the less experienced physician use these "elegant," palatable, all-ready to use, with label-specifying-dose, disease-indicating remedies? Prominent physicians and the "faculty" had testimonials in the circulars sent with the samples indicating the virtues; why, therefore, use the simple proved remedies of the pharmacopeia, and especially as the latter would often necessitate the trouble of writing a real prescription.

To the rational physician most of the mixtures, even with the formulæ, are objectionable. Disease is never quite the same in different individuals, nor does the picture remain the same from day to day. The treatment must be modified to meet the varying problem of the morbid process. Rational therapy calls for simple prescriptions; but if there be an objection to mixtures with fixed and known formulæ, what must one say of mixtures of secret or semi-secret composition?

As Dr. Horatio C. Wood, Jr.<sup>1</sup> says:

A much more elusive and therefore dangerous evil lurks in the class of mixtures which attempt to cloak their secrecy with a deceptive show of frankness. I think you will grant that the physician is rarely justified in the use of remedies concerning which he has no knowledge, and I maintain that the publication by a drug firm, of whose integrity the physician is absolutely ignorant, of a professed list of ingredients of some mixture is not sufficient knowledge to pardon

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. "Proprietary Therapeutics," The Journal A. M. A., June 10, 1905, p. 1836.



or to warrant the uses of that remedy. In the first place, if the published formula be correct, it is not enough to know simply the composition of a mixture, the exact quantities must also be known; there is a vast difference between the effects of 1 grain and of 100 grains of opium. Moreover, there is no means of knowing that the formula is a true one, for many of these corporations do not hesitate to pervert the truth.

Many of the promoters of these preparations claim, as chemists or as pharmacists, to be the discoverers of the wonderful remedies and the alleged unusual knowledge of chemistry or of skill in pharmacy has enabled the discoverer to develop in a mixture heretofore unknown, therapeutic qualities. Truth to tell, however, it is known that the proprietors are not always the manufacturers of the preparations they exploit and distribute. Many of the proprietary preparations are made by the large manufacturing pharmacists for the owners. Pharmaceutical skill is doubtless used in these instances, but it is the kind of skill which is for sale and is not personal.

I am informed that it is not unusual for one manufacturer of proprietary mixtures to have several so-called "companies," through which he can more easily exploit and distribute his products.

There is said to be a direct relation between the Dad Chemical Co., the Od Chemical Co., the Sultan Drug Co., the Rio Chemical Co., and the Peacock Chemical Co., or at least that they are linked together through one individual, and that Battle & Co. and the Lambert Pharmacal Co. are related to the above list. It is said, too, that the Vass Chemical Co., the Lotos Chemical Co., and the Valley Chemical Co. are one combination. Doubtless other combinations exist.

Curiosity recently prompted me to look through a number of medical journals and I can not resist the temptation to quote some of the preparations advertised in them: Aletris Cordial, Celerina, Neurilla, Respiton, Sanmetto, Caetina Pillets, Seng, Chionia, Thialion, Zareol, Eethol, Hagee's Cordial of Cod Liver Oil Compound, Mandragorine Tablets, Rheumagon, Ponca Compound, Ammo-phenin, Chloro-Bromon, Anasarcin, Bronchiline, Zemamol, Zymotieine, Sulphogen, Labor-dine, Satyria, Manola, Caecodol, Eusoma, Leprosen, Sulpho-Naphtol, Pas-Avena, Neurosine, Germiletum, Bonn's Passiflora Tablets, Dioviurnia, Tongaline, Lithiated Hydrangea, Melachol, Gonoseptone, Calicolo, Saliolin, and so on *ad infinitum*. These are only a few samples of what the physicians of the United States are asked to prescribe. But there are hundreds of secret preparations that are not advertised in medical journals, whose literature and samples come to us through the mails, etc. In the majority of cases, we do not know their contents, and in many instances an analysis shows that they are simply mixtures. Often a prescription written by a physician for a particular case is purloined, put up under a trade-name and exploited as a cure-all.

As an illustration see the official announcement of the Council on Pharmacy and Chemistry regarding certain nostrums that have been exploited as synthetic chemical preparations guaranteed to cure everything. I have no doubt that the majority of the physicians who have been prescribing phenalgin, antikamnia, sal-codeia (Bell), and ammonol were shocked when they found out that, according to the analyses, they had been giving a simple mixture of acetanilid, with bicarbonate or salicylate of sodium or carbonate of ammonium, with a little caffeine in some instances. What physician will be foolish enough to use these preparations, when he can

get the same of his druggist for at most one-tenth the cost, but especially what physician with a particle of medical knowledge would think of giving acetanilid if he knew it, in the majority of the conditions in which, according to the advertisers, these nostrums are indicated?

What physician would prescribe Gray's glycerin tonic, if he knew that its chief ingredients are gentian, dandelion, glycerin and sherry wine?<sup>2</sup> Could he not write a prescription as good and feel that he was his own judge of what constitutes a tonic?

Let me quote from THE JOURNAL A. M. A.<sup>3</sup> This, I am told, refers to an article advertised as a cod liver oil preparation—one of the tasteless kind, that has been investigated by a subcommittee of the Council:

We have recently had occasion to open a package of a well-known "Tasteless Cod Liver Oil" preparation. The circular which was wrapped about the bottle was replete with interesting information, especially for the patient, who obtains the remedy in the original package, as prescribed by his physician. He finds in it a list of the diseases in which the preparation does wonders—they range from the dread consumption to cystitis and hemorrhage of the kidney. Most interesting to us, however, is the statement that this compound "contains all the necessary elements of nutrition." It is too bad to disturb this beautiful vision by the report of the chemist. This shows that the product is quite free from oil or proteids; the only nutrient ingredients are alcohol, sugar, and perhaps glycerin. But the claims of the manufacturers are probably correct, for it contains carbon, hydrogen, oxygen, and probably a trace of nitrogen—so does gunpowder.

Perhaps it will now be the turn of strychnin to be advertised as the ideal food. It seems superfluous to point out the moral of this tale.

It is not necessary to enter into a discussion as to whether we should ever prescribe secret proprietary medicines, for in the minds of intelligent men, even with only a smattering of medical knowledge, there can be but one answer. A physician who has a true appreciation of his responsibilities, who has even ordinary knowledge of the action of drugs, and the danger from their unintelligent use, would not think of prescribing for the sick, who have placed themselves under his care, a preparation about which he knows nothing except what the manufacturer, about whom he knows less, had told him. While there is no excuse for prescribing these medicines, too many unthinking physicians are influenced to do so by the claptrap designated "literature," which the exploiters publish about their preparations.

There is not a secret proprietary preparation that has any more value, from a pharmaceutical or therapeutic standpoint, than has the ordinary prescription of the average general practitioner. Stop advertising them and they would be forgotten, just as "patent medicines" pass away if they are not advertised. A review of 10 or 15 years will call to mind many concoctions which physicians were asked to prescribe, and which, according to the advertisements, performed wonders, but now are heard of no more. Their advertising literature stopped coming and the nostrum-prescribing doctor ceased to use them.

What is the cause of the nostrum evil? There are several.

1. Pharmacology and therapeutics are neglected relatively by many of our medical schools. Anatomy, phy-

2. "Each half ounce is stated to contain dilute phosphoric acid, 12 minims; gentian root, 10 grains; extract of taraxacum, 15 grains; glycerin, 80 minims; sherry wine, 80 minims; carminatives, q. s."—"Thesaurus of Proprietary Remedies," p. 148.

3. June 17, 1905, p. 1943.



siology, pathology, diagnosis, etc., are emphasized and too often the usefulness and limitations of drugs are neglected. Too frequently drug nihilism is taught. If the student were fully taught the physiologic action of drugs, the art of prescribing, preferably single remedies or in simple combination, using if he desires the pharmacopeial preparations prepared by reliable manufacturing pharmacists, and at the same time if he were taught when not to rely on drugs, but frankly to prescribe for his patient a course of hygienic measures which alone would accomplish all that would be required, he would not be the willing dupe of the nostrum vendor, as he now is.

2. The reputable manufacturing pharmacists deserve great credit for the improvement they have made in pharmaceutical products. They have afforded us official preparations in the form of pills, tablets, syrups, tinctures, extracts, etc., which are elegant in appearance, often palatable and usually potent.

For this advance in pharmacy, a distinct credit to our country, we owe them our thanks.

Unfortunately, many of them have not stopped at this point, but have manufactured their own special mixtures which are just as objectionable as the products of the special manufacturers. They, too, have been active with their agents in visiting physicians and in distributing "literature." This encourages drug-giving in specific mixtures for special symptoms, and is wrong. With one hand they do good work, with the other much evil is done.

3. The nostrum makers at first copied the methods of the reliable manufacturing chemists, in exploiting their products, but they have gone a step further and have reached a point where one may say that they have subsidized the medical press. I know I am on dangerous ground when I make this statement, but right here is the chief cause—and the remedy. How many of our so-called medical journals are subsidized by medicine manufacturers I do not know, but all physicians know as well as I that there are many, and I do not refer to the so-called house organs. I unhesitatingly affirm that one-half of the medical journals of the country would be out of existence if it were not for the nostrum advertisements. Under the circumstances, therefore, can we expect these journals to say anything? Need we be surprised that scarcely a journal published the official report regarding the acetanilid mixtures, when the preparations hit were the best paying advertisements in the country?

What is the remedy? Publicity. The enlightenment of the profession. The truth regarding not only what the preparations contain, but who makes them. Certainly no honest manufacturer will object to this last proposition, and no honest physician will put up with less than the former.

The Council on Pharmacy and Chemistry has been created to investigate the non-official preparations, to find out the truth about them, and to publish its findings. It is not necessary to repeat here the results of the work already done by this body. All physicians have read, or may read all about it. In my opinion there has been no movement undertaken by the American Medical Association that will be so far reaching as this one to rid us of the blight of the nostrum evil. For the first time, we see the possibility of the elimination of a part, at least, of this curse to American medicine. It is the first practical solution offered of a most difficult problem.

But—and I want to emphasize what I am about to say—the movement will have the most determined opposition that money can bring. Millions are being made annually by the nostrum manufacturers, and they will not sit idly by and see this wealth-producing business done away with if they can prevent it. It won't be an open fight, for their business will not stand publicity. They will have with them those so-called medical journals which are published solely in their interests.

This movement will have the sympathy of every thinking physician of the country, but sympathy does not win battles. In this fight those who are representing us should have all the support we can give. In society meetings especially we should aid in the propaganda by helping to enlighten and to interest those of our profession who have given the matter no thought. We should support those journals that represent us, and not tolerate in our offices those that we know to be subsidized and to represent their advertisers rather than their readers.

#### DISCUSSION.

DR. JOHN H. MUSSER, Philadelphia, said that the cordial reception of this paper indicated that the members of the Section are in full accord with the sentiments expressed by Dr. Billings. He said that the nostrum evil as defined by Dr. Billings stultifies the profession in many ways. First it robs the physician of that practice of nice discernment in the choice of remedies, of their indications and their doses, which is essential to the full development of therapeutic skill. A physician's chief asset is experience, but what experience of the value of a remedy can be acquired when it is used in the manner in which we are instructed to administer it by the audacious five-dollar-a-day peripatetic therapist? Second, it prevents a cultivation of the scientific therapeutic habit, for, if premises are wrong, how can conclusions be correct? The uncertain combinations in unknown proportions, of unreliable remedies, concocted by unscrupulous grafters, can not possibly form a true figure in a proposition. Consequently, no true conclusions are drawn, and, hence, scientific habits are very soon cast to the winds. Third, it engenders irresolution as to the value of remedies. They are given in a half-hearted manner, and consequently a minimum effect is produced. A physician who prescribes with a clear knowledge of the effect of a remedy gets a surer and more immediate response. Doubt causes inaction. Fourth, it destroys scientific habits. If a scientific habit is not employed in our work, we are not truthful in our action. This lack of the worship of truth in treatment soon engenders a want of exactness in diagnosis. In consequence, a slovenly habit of practice in general will follow. Fifth, the doubt of the value of drugs and of medical measures is soon transmitted to the laity. Is it any wonder, Dr. Musser asked, that all *isms* flourish when physicians can not support their own therapeutic actions by experience or by scientific induction? The fact that every three years, perhaps less, the whole type of nostrums changes shows that experience has not been garnered. Time alone enables physicians to gather knowledge which the nimble "nostrum-mer" or drug drummer would prefer us not to have. Sixth, the nostrum evil threatens the enlightened principles of modern medicine. Our great glory is in adhering to the line of conduct of the tenets of Hippocrates and of Sydenham. "Do good or do not harm." It is not the use of drugs, but it is management and measures that mark our later-day progress. By the nostrum tenets, polypharmacy is essential and excessive drugging is the rule, both contrary to modern medical practice. Seventh, the nostrum evil stultifies physicians, because it makes them dishonest. They can not be honest if they prescribe things of which they know little or nothing. Dr. Musser urged medical men to be true to themselves and to hearken to the warnings of the paper. Concluding, he said: "Let us lash with thoughts of indignation those tempters who, with literature that is beyond all measure untruthful, unscientific and presumptuous, and with words of rank sophistry are surely entwining us in a python-like grasp that will strangle us, to feed their coffers."



DR. W. G. MOORE, St. Louis, heartily agreed with the statement that there is no subject of greater importance than that embodied in the paper just read. He presented to the Missouri State Medical Association a paper along the same lines and feels greatly re-enforced by Dr. Billings's paper. If there is any infamy blacker than this that confronts the medical profession, Dr. Moore does not know of it. Nothing can be a greater curse than this subsidizing of medical journals. When Dr. Billings was mentioning the various companies, Dr. Moore thought he had been living in St. Louis, but, instead, he is at the other end of the canal and the stench reached him up the river. There are medical journals published to-day that should be placed in the sewer. The best efforts of medical men are demanded, and physicians should not only refuse to support, but should despise such journals as publish advertisements of these secret nostrums. He said that he could not understand how any one could trust a patient to the care of a man who would consent to give something that the hired man had taught him to use. The laborer is worthy of his hire, and Dr. Moore respects his mission, but he can not honor his employer. In a recent issue of a prominent journal Dr. Moore saw this statement regarding the treatment of gastroenteritis: "Apply warm all over the abdomen; place a cotton compress over it and bind on antiphlogistin (blue mud), and you will have no further need of doctors or medicines."

DR. ALFRED STENGEL, Philadelphia, said that the nostrum evil is such an insidious one that the best informed may be taken in. As Dr. Billings has pointed out, these preparations are placed before physicians in such a way that, unless they have abundance of time to look into details, it is difficult to distinguish *bona fide* chemical preparations from untrustworthy mixtures. When the copy of THE JOURNAL containing the analysis of certain nostrums was issued, one of his colleagues asked Dr. Stengel if he knew that phenalgin was not a chemical combination. The physician in question was under the impression that it was and was greatly surprised to find that it was a mere mixture, subject to constant change and with no guarantee of its character. Dr. Stengel declared that it is important that the members of the Section on Practice of Medicine, as a body, should take a firm stand at this time. The remedy for many of the evils that affect the profession is in organized action. This association has a membership of 19,000; in addition to the members, from 14,000 to 15,000 other subscribers read THE JOURNAL; whatever attitude the members take officially and whatever point of view is supported in the editorial pages of THE JOURNAL will reach so large a number of readers that the association may confidently hope for a removal of such evils as it attempts to correct. Dr. Stengel said that he felt, therefore, that, as a Section, they should indorse the Board of Trustees in their appointment of a "committee" to investigate and to make public the character of various substances or compounds offered as medicines and that they should indorse all that Dr. Billings has said.

DR. JAMES J. WALSH, New York, seconded the resolution presented by Dr. Stengel. He stated that, while he is in accord with others in blaming the medical journals, he wished to call particular attention to the fact that it is the members of the medical profession themselves who are most to blame. He said that there is no use in physicians hiding their shame behind objections made against the management of the medical journals of the country. The manufacturers of secret nostrums find only too many customers for their wares, and even in medical centers, where physicians are supposed to be well educated, the evil of prescribing secret nostrums of various kinds is very widespread. Within a few years, it has been shown that in New York City about 70 per cent. of all the prescriptions written contain some proprietary medicine that ordinarily would be expected to fall under the ban of professional use. Dr. Walsh has made it his business to secure information regarding these preparations whenever he could. On a number of occasions, when the agent of a firm has brought some new and especially seductive nostrum, hitherto unheard of, but recommended as good for nearly every ill that flesh is heir to, and a few others besides, he has inquired of druggist friends as to whether the new remedy was being prescribed or not. In nearly every case, he found that, within a month after the new remedy was so persuasively introduced by the agent, some physicians were prescribing it in their

practice. This emphasizes the necessity for making the physician realize that in doing this he is selling his birthright for the proverbial mess of pottage and not always getting the pottage.

DR. W. O. BRIDGES, Omaha, Neb., said that he feared that the resolution does not reach far enough. An appeal should be made to the individual physician, whether he be a member of this organization or outside it. Dr. Bridges believes that a large number of physicians unconsciously and unwittingly prescribe these secret nostrums against which we are making war to-day. He stated his belief, if physicians discontinued receiving the journals which advertise these preparations, more than one-third of them would go bankrupt. A friend of his, an editor and publisher of a metropolitan daily, recently told him that, since the expose of the secret remedies by the *Ladies' Home Journal*, his paper had suffered a loss in advertising income of one thousand dollars a month. Dr. Bridges declared that the profession is largely responsible for the conditions which exist. Dr. Moore has stated that a large number of these journals should be thrown into the sewer, and Dr. Bridges believes that still better results would be accomplished if physicians declined receiving them at all, that they might be returned to the offices from which they emanate.

DR. J. T. PRIESTLEY, Des Moines, Iowa, said that the graduates of the various institutions in this country have had neither the time nor the opportunity to learn to dispense their medicines, and in this they certainly are weak. He mentioned the case of a bright young man who told him that he had ordered so much calomel to be placed in so much water and a teaspoonful given so often. It must be remembered that at times a very affable gentleman comes along and shows something that appeals to these young and untrained men. Dr. Priestley believes that the fault is in the teaching. If the young men were taught how to prescribe drugs as well as to give them, there will be much less of this nostrum evil.

DR. JOHN A. WITHERSPOON, Nashville, Tenn., said that too little attention is given to the actual bedside teaching of the management of disease. Most young men leave college with an imperfect knowledge of the physiologic action of drugs and imperfectly prepared to make any therapeutic application to a case in hand. Dr. Witherspoon blames the man who has the proper instruction and who takes the responsibility on his shoulders of caring for a human life without a due sense of that responsibility, and who prescribes drugs at the dictation of the traveling man. The medical man who continuously and constantly keeps on prescribing such secret remedies becomes narrow and contracted in his ability to handle disease and becomes like the negro in Mississippi who was given a new safety razor to use. Shortly after, the donor saw him and asked him how he liked his new razor, and the answer came that it was good for shaving purposes, but for marriages, social functions and funerals it was perfectly useless. Now that is the position of the physician who continuously prescribes these quack nostrums; he will become perfectly useless in the practice of medicine. Many men who publish journals are not men who can be considered as molding public or professional opinion in medicine. Medical men should continue to fight them, and also should make it appear disreputable for any journal to publish these nostrums.

DR. JOSEPH M. KING, Los Angeles, Cal., declared that some men with a good knowledge of the physiologic action of drugs, will yet grasp at every will-o'-the-wisp, but one of our troubles is that the rank and file of the profession have not an exact knowledge of materia medica and therapeutics. In several of the large clinics in this country which Dr. King has visited, a great deal is taught regarding diagnosis, but he heard very little concerning treatment, and it would seem that clinics are being held to teach diagnosis only, and not for the purpose of teaching therapeutics also. Of course, no man can successfully treat a case until he can diagnose it, but the patient pays for the application of what the physician knows regarding remedies. It is important that the physician should have a thorough knowledge of the weapons at hand, and then he will not be so prone to run after false gods.

DR. A. B. GROSSE, San Francisco, Cal., said that the physicians of California are in full accord with the views expressed by Dr. Billings, or it might be said that Dr. Billings has practically expressed his sympathy with the work done by the



California *State Journal* under the able leadership of Dr. Jones. Dr. Grosse disagreed with some of the views expressed that the nostrum evil flourishes through the baneful influence of the subsidized medical press and the lack of therapeutic tuition in medical colleges. Just as long as the nostrum can be found in the advertising pages of respectable and standard medical journals, the root of the evil will not have been reached. He said that this is no time to mince words and we may as well admit the error of our ways. Even the official organ of the association, *THE JOURNAL* of the American Medical Association, has had its advertising pages polluted by the nostrum manufacturers, and this in the face of an organized fight against the evil by the *California State Medical Journal*. Dr. Grosse urges immediately remedying these abuses. He said: "Let us purge the advertising pages of *THE JOURNAL* so that our hands at least may be clean."

DR. THOMAS MCCLEAVE, Berkeley, Cal., stated that all physicians in California are greatly interested in this matter. He referred to the fact that several speakers had mentioned journals published especially to cater to this class of preparations, and said that *THE JOURNAL* of the American Medical Association is as great an offender as any. This crusade, he said, was started by Dr. Jones, editor of the *California State Journal of Medicine*, who called attention again and again to the advertising in the columns of *THE JOURNAL* of the American Medical Association and was villified for so doing. Dr. McCleave said that he should like to add to the resolution offered by Dr. Stengel or to make an amendment to the effect that the Trustees be requested immediately to remove from the advertising pages of *THE JOURNAL* of the American Medical Association the advertisements of these nostrums. He said that, under the stimulus of criticism, much of this objectionable matter had been removed from the pages of *THE JOURNAL*, but that some still remains.

DR. CHARLES G. STOCKTON, Buffalo, said that Dr. Billings' paper will do good because of the fact that he has mentioned names, and it is in this that courage is shown. If the names were more frequently mentioned, carefully but strongly, the profession would soon be educated as to what is right and what is wrong. Many in the profession are not of a way to learn what they should regarding these agents. Dr. Stockton said that he believed that the committee of the Association will help if names are mentioned, if a list of objectionable preparations is published regularly in *THE JOURNAL*.

DR. ALFRED STENGEL, Philadelphia, added the following to the resolution he offered:

"Resolved, That the Board of Trustees be requested to effect the removal from the pages of *THE JOURNAL* of the American Medical Association of the advertisements of any nostrums."

He thinks that this resolution should be passed. Unfortunately, all the 200,000 doctors in the country have neither the time nor the facilities for looking into the composition of objectionable medicaments. It is desirable, therefore, that *THE JOURNAL* should contain no deceptive advertisements and that a list of desirable or undesirable remedies should be available to the profession.

DR. NORMAN BRIDGE, Pasadena, Cal., proposed an amendment that the Trustees be requested to remove the nostrum advertisements.

DR. R. H. CARTER, Victoria, Canada, said that, although he is not a member of this Association, he would like the Canadian Medical Association to be informed officially of what has been done. Physicians in Canada receive many secret nostrums and much advertising matter from time to time from all the different drug houses that Dr. Billings has mentioned.

**The Physician's Duty.**—It is not only a physician's duty to be a good doctor, but, if he will exercise the influence he ought, he should extend his culture and make himself an intelligent force—a force which, exercised through an organized body of medical men, is bound to make itself felt. While to know one's business may be the whole duty of the medical man, it is not the whole duty of the cultivated physician; not the whole duty to himself, or to the standing of his profession before the public.—Hurd, in *Buffalo Medical Journal*.

## SYNCYTIOMA MALIGNUM.\*

LAURA HOUSE BRANSON, M.S., M.D.

IOWA CITY, IOWA.

### DEFINITION.

In some of our latest works on pathology and gynecology we find this growth mentioned and thus defined:

Syncytioma malignum is a malignant neoplasm exhibiting the morbid physiologic characteristics of sarcoma and carcinoma.<sup>1</sup>

It is a degenerative malignant disease of the sarcomatous type originating in the decidual structures of the pregnant woman and tending to a rapidly fatal issue.<sup>2</sup>

It is a hemorrhagic tumor, a malignant growth developing in the body of the uterus, which belongs to the sarcoma group, and to a variety never before observed.<sup>3</sup>

It is derived from the syncytium, and the syncytium is the undifferentiated embryologic tissue, and the tumors derived from it are neither epithelial nor sarcomatous.<sup>4</sup>

It is a peculiar neoplasm of the uterus, peculiar in that it occurs only after pregnancy, in that its parenchyma is derived from two forms of cells, and, finally, in that its origin is in the fetal tissue and its development in the maternal organism.

I have found that but a comparatively few of the works recently published to be used as text-books in our medical colleges even mention this as a distinct neoplasm; this is a remarkable statement in view of the fact that there are now on record about two hundred cases of this tumor formation as differentiated from all other growths. Sanger began the record in 1888; Pfeiffer followed with a case in 1889; Sanger reported 12 cases in 1893; Bacon reported a collection of cases in May, 1895; Williams, 27 in August, 1895; Ladinski, 132 in April, 1902; Bandler, 150 in August, 1902; Teacher, 188 in August, 1904; since then I have noticed reports of the following cases: Metcalf and Swafford,<sup>5</sup> 1904, one; Wallert,<sup>6</sup> 1904, one; Krukenberg,<sup>7</sup> 1904, one; Bland,<sup>8</sup> 1905, one; total, 192.

There is no doubt that there have been other cases diagnosed, but not reported; and, again, other cases that have passed unrecognized because of the lack of facility to conduct properly examinations leading to a correct diagnosis.

### NOMENCLATURE.

Those who reported these cases or who have contributed otherwise to our literature on this subject have used the nomenclature that seemed to them an exposition of their personal opinions as to the origin of this growth. Consequently, we have a confusion of terms, as carcinoma syncytial, malignant placentoma, sarcoma chorii, epithelioma serotinale, deciduoma malignum, deciduo-carcinome, sarcoma-deciduo-chorii-cellulare, chorioepithelioma, syncytioma malignum, etc.

The term syncytioma malignum is, in my opinion, the best designation for this particular neoplasm, in that it immediately fixes one's attention on the growth

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Hektoen & Riesman: American Text-Book of Pathology, 1902.

2. Reed: Text-Book of Gynecology, 1901.

3. Cullen: Cancer of the Uterus, 1900.

4. McFarland: Amer. Jour. Obs., vol. xlix, 1904.

5. Metcalf & Safford: Amer. Jour. Obs., vol. l, 1905.

6. Wallert: Zeitschrift fur. Geb. and Gyn., Stuttgart, vol. xliil.

7. Krukenberg: Diag. Mal. Chorionepith. Gyn., Stuttgart, vol. xliil.

8. Bland: THE JOURNAL A. M. A., vol. xlv, June 10, 1905.



with its distinctive features, and in that it shows without the possibility of a doubt its derivation and its location, the conditions under which it must exist, as well as its relation to its host.

#### DERIVATION AND HISTOLOGY.

According to Marchand's<sup>9</sup> theory, which is now generally accepted, this neoplasm is originally derived from the fetal ectoblast or trophoblast. Following the implantation of the fertilized ovum on the maternal endometrium, the trophoblast develops villi which penetrate the endometrium, reaching the maternal network of blood vessels from which the ovum is nourished. Covering these chorionic villi is found an epithelium consisting of two layers; the outer, the syncytium; the inner, Langhans' layer of cells, which Langhans considers mesodermal in origin, syncytium resulting when the blood comes in contact with fetal cells. This syncytium consists of protoplasmic masses which are the product of blood cells—the nuclei, being the changed trophoblastic nuclei. The derivation of these layers forming the covering of the chorionic villi is now the point on which those who have made the most exhaustive investigation along these lines disagree. Bandler,<sup>10</sup> who has studied the subject of placentation in the lower animals, concludes thus: "Clear in almost every detail, a trophoblast formation, consisting of an inner layer of separated cells and an outer or plasmodial layer, such as is found in the placental development of animals, is present in the human placentation." Many noted authors across the waters contend that this chorionic epithelium is derived from the deciduæ; consequently, that this growth is of maternal origin. Some authors have urged the opinion that the layer of Langhans disappears during pregnancy and that the outer layer remains. However much diversity of opinion there may be as to origin of these two layers covering the chorionic villi, it is universally agreed that this neoplasm takes its origin in these layers, and demonstrations have been made which leave no doubt that the protoplasmic masses found in this growth originate in the syncytium and that its individual cells are identical with those of Langhans' layer.

#### DEVELOPMENT.

This neoplasm is usually one of rapid development, running its course in a few days or weeks, although it may remain in a latent or quiescent condition for months after impregnation. I want to emphasize the fact that this malignant growth may develop during, as well as following, pregnancy.

In April, 1902, Ladinski<sup>11</sup> reported over a hundred cases showing that occurrence of syncytioma malignum or deciduoma malignum had taken place in from one week to twenty months after termination of pregnancy. In the same year Noble<sup>12</sup> reported a case examined microscopically by Dr. McFarland in which thirty months had elapsed between the last puerperium and the extirpation of the uterus for this neoplasm. In this case twenty months had elapsed before the first symptoms had manifested themselves.

In 132 cases collected by Ladinski<sup>11</sup> the average lapse of time was eight weeks after mole pregnancy; seven weeks after abortion, and five weeks after labor at term.

Dorland,<sup>13</sup> in a report in a series of cases of this disease, says: "Fifty-nine and six-tenths per cent. manifested symptoms either during labor or within four weeks of that time; in 78 per cent. death occurred six months from the appearance of the symptoms.

#### LOCATION.

The usual location for this neoplasm is on the inner surface of the uterine wall, at the placental site; it may extend outward from the endometrial<sup>14</sup> surface or it may be intramural.

#### MICROSCOPIC APPEARANCE.

This growth occurs single or multiple, and it may be nodular or pedunculated. In size it is variable; it may be a small tumor or one filling the entire cavity of the uterus; in one instance, the weight is recorded at seven and one-half pounds;<sup>15</sup> in its earlier history it is a somewhat firm mass of a pinkish-gray color, which later on becomes infiltrated by blood or dotted with circumscribed hemorrhagic areas, changes to a soft fragile mass, usually sharply defined from the muscularis. It is prone to ulcerative processes, and it may become enucleated and escape from the uterine cavity in the lochial discharge.

#### MICROSCOPIC APPEARANCE.

Some authors have asserted that a greater part of this tumor is made up of degenerated muscle cells; others oppose this, claiming that the cells formed in the muscles are in reality choriomatous cells which have invaded the muscularis by the process of infiltration. In a microscopic examination of this growth protoplasmic masses are found, which, because of their arrangement, sometimes assume a striated appearance; then, again, they simply form irregular masses; these masses are homogeneous and contain nuclei which readily imbibe stain, while here and there throughout these masses are found vacuoles, some of which are found to contain blood cells; these constitute the syncytium.

Aside from this structure are found cells with boundaries well marked, and distinct muscular division, all together forming an atypical representation of normal placental tissue. Another element sometimes present in this formation is the chorionic villi; Reed claiming that these may be found entire, but marked by aplastic features. The proportion of these elements may vary in different stages or in different parts of the same neoplasm; so, also, may different degrees of degeneration be found. Bland<sup>8</sup> claims that the tumors containing the chorionic villi do not have so great a tendency toward malignancy.

#### METASTASES AND SECONDARY GROWTH.

This tumor is one in which metastases occur quickly and early in the history of its formation; this is one of the most distinctive features of the syncytioma malignum.

When we study the subject of placentation, its normal activities resulting in the giving up of nourishment from the maternal circulation for the vital processes in the fetus, we do not wonder at this property of metastasis, carried on by means of these same maternal blood vessels from these same elements or tissues; which tissues, instead of carrying out Nature's design to make the pregnant as well as the parturient condition a phy-

9. Marchand: *Monat. of Gebart, Gyn.*, vol. i, 1895.

10. Bandler: *The Trophoblast and Chor. Epith.* *Am. Jour. Obs.*, vol. xlv.

11. Ladinski: *Am. Jour. Obs.*, vol. xlv, 1902.

12. Noble: *Am. Jour. Obs.*, vol. xlv, 1902.

13. Dorland: *Statistics, Mal. Decid.* *Univ. Med. Mag.*, vol. xiv, 1897.

14. Theilhaber: *Archiv. of Gynäk.*, 1894, vol. xlv, p. 56.

15. Croom: *Med. Press and Chir.*, June 25, 1902.



siologic one, have by some means been thwarted in the performance of their legitimate work. Metastasis takes place almost entirely through the blood vessels. Gebhard and Menge<sup>16</sup> reported cases in which the lymph channels transmitted the material forming the secondary growth. This may have taken place in the later stages. The site for the formation of these secondary growths may be in any tissue, however remote, as well as in tissues adjacent to the primary location. The secondary formation may be the first manifestation of the disease, and it may equal or exceed the primary tumor in size. In gross appearance, as well as in histologic features, it is identical with the original growth. Of 52 cases reported by Dorland, the secondary growths were found in 70.76 per cent. Relative frequency of occurrence in the various organs he computed as follows: In lungs, 78.37 per cent.; vagina, 54; spleen, 13.5; ovary, 13.5; kidney, 13.5; liver, 10.8; broad lig., 10.8; pelvis, 10.8; brain, 5.4.

#### DIAGNOSIS.

The prime factor in the diagnosis of this disease is that it is a tumor formation dependent for its origin on impregnation. It has been shown that it may occur after delivery at full term, abortion, or hydatid mole pregnancy. The first symptom usually manifesting itself is hemorrhage that will not yield to any usual methods for relief. A hydatid mole formation may be found in the uterus; this may be a guide to a correct diagnosis. Findlay,<sup>17</sup> in his clinical deductions from 210 reported cases of hydatidiform, found that in 25 per cent. of mortality, of these 210 cases, syncytioma malignum claimed 16 per cent.; other statistics show that 50 per cent. of all cases of syncytioma malignum follow hydatidiform mole. Following the hemorrhagic discharge, there may be a foul watery discharge, as the necrotic conditions take place; pain may be present, later referred to the pelvis; headache not localized, cachexia, anemia.

On examination, the uterus may be found enlarged and soft with os patulous, on manipulation, tumor may be localized; a specimen should always be subjected to an examination under a microscope. In themselves the clinical symptoms are not pathognomonic, but in combination with history of patient, her age, her previous parturitions, confirmed, as a rule, beyond doubt by the microscopic examination of the specimens obtained, the diagnosis should be correctly made.

#### COMPARATIVE DIAGNOSIS.

All modern writers who have thoroughly studied the different phases of this growth, and who now consequently recognize the distinctive morphologic and pathologic features, do not hesitate to call it an intensely malignant neoplasm, and to place it in the list with other malignant tumors of the uterus. Reed classifies malignant neoplasm of the uterus thus: 1. Syncytioma malignum; 2, adenoma uteri; 3, sarcoma uteri; 4, carcinoma uteri; 5, exceptional cases.

In making a diagnosis, these four neoplasms must be considered, as well as remnants of abortion; the main distinctive features may be tabulated thus:

##### *Adenoma Uteri.*

1. Malignant degeneration of gland structure.
2. Long duration.
3. Least active, less pain, less hemorrhage.
4. Papillomatous growth or growths.

##### *Sarcoma Uteri.*

1. Developed from embryonic connective tissue.
2. Has no arrangement of cells.
3. Has intercellular reticulum.
4. Blood vessels are abundant, thin walled, and lie between cells.
5. Metastasis by blood vessels.
6. Peculiar to young in life, before age of 35 years.
7. Slight tendency to ulcerate.

##### *Carcinoma Uteri.*

1. Developed from epithelial cells.
2. Cells arranged in alveoli.
3. No intercellular tissue, same being arranged about groups of cells.
4. Blood vessels not abundant, and lie in the stroma, not between the cells.
5. Metastasis by lymph channels.
6. Occurs generally in middle and advanced life, after 35 years.
7. Great tendency to ulceration.

##### *Remnants of Abortions.*

1. Shaggy appearance due to composition of slender threads.
2. Not friable.
3. Placental cells with nuclei, always present, isolated by wide zone of protoplasm.

##### *Syncytioma.*

1. Dependent on pregnancy.
2. Fifty per cent. of all cases follow hydatidiform mole.
3. Average age, 33 years.
4. Developed from chorionic epithelium.
5. Disease of child-bearing period.

#### COMPARATIVE MALIGNANCY.

In comparing this neoplasm of the uterus with other malignant new growths of the same locality, we claim that it outranks all others in the degree of the severity of the malignant manifestations, because of its unheralded attack on the part of the human organism that has but a short time previous been called on to perform a function that has no parallel among all of the many and varied functions of our economy; because of its presence made known only when it is already well developed; because of its early proneness to rapid metastases; because of its great danger dependent on the site selected by these secondary growths; because of its short history; because of its almost certain tendency to fatality from exhaustion, hemorrhage, sepsis, etc.

#### REPORT OF CASE.

*Patient.*—Mrs. A., aged 31 years; primipara, married two years, family history negative. Husband has syphilis in tertiary stage.

*History.*—Low vitality, sedentary habits; chronic constipation, menses regular, but scant, never painful, but accompanied by intense malaise. The first six months of gestation were uneventful. During the seventh and eighth months there was persistent headache, which at times became unbearable, patient relying for its relief on household remedies and headache powders obtained at drug stores, never at any time consulting a physician. At the end of the eighth month of gestation I was called and found the patient in labor, with os dilating slowly; labor continued thirty-six hours; pains far apart, anemic and manifesting hysteria throughout the period; no other marked clinical symptomatology except dilatation of both pupils. At the end of thirty-four hours I made a forceps delivery which was accomplished in thirty minutes with no outward effect on the patient; child still-born, small and poorly nourished. While inserting one blade of the for-

16. Menge: Ueber Deciduo Sarcoma Uteri, Zeitschrift für Geb. and Gyn., xxx.

17. Findlay: Hydatidiform Mole, Trans. Gyn. Soc., Chicago, 1903.



ceps I came in contact with a nodular mass, some four inches in length or diameter, on the inner uterine surface, quickly removing a portion I placed it in alcohol to examine later. In thirty minutes placental delivery was finished; hemorrhage profuse; thin with disagreeable odor. I remained with patient four hours because of her exhaustion. On my return thirty hours later I found the patient exhausted, pupils in same condition of dilatation, lochia foul. A sudden severe attack of tonsillitis kept me confined to the house for ten days; consequently, the subsequent history could not be followed by me. Patient died, evidently from exhaustion, three days after delivery. I subjected the section of enucleated portion of suspected tissue to a microscopic examination, using the Mallory and Wright technic, the clinical history of the case leading me to suspect neoplasm dependent on pregnancy. I could not detect villi in sections examined, but recognized cloudy masses without cell walls containing two or more nuclei, which readily imbibed stains, in combination with clearly defined cells in different stages of proliferation or degeneration; cells of varied size with karyokinesis manifested; blood cells were present, as were also hemorrhagic spaces. The diagnosis was syncytioma malignum.

The peculiarities of the case were that the tumor formed preceding delivery of fetus, the persistent severe headache, the well-marked dilatation of pupils showing possibility of metastasis into brain tissue.

Davis and Harris<sup>18</sup> reported a case of this neoplasm in a multipara two months after parturition with severe unlocalized headache as the one prominent symptom; at the autopsy, syncytial tumors were found in the brain, lungs, kidneys and liver.

Dean, professor of ophthalmology in the Iowa State University, states that a frequent result of brain tumor is dilation of the pupils with slow reaction to light; frequently the pupils are unequal. A choked disc should also be present. A tumor in any part of the brain may produce this condition, but those of the cerebellum most usually are the cause.

There are instances recorded in which hydatidiform mole formation and pregnancy have existed in the uterus simultaneously with delivery of a healthy child at term.<sup>19</sup>

Depaul remarked: "All the world knows that the celebrated Beelard was the result of a hydatidiform pregnancy." He urges the possibility of a viable child being born as a reason for abstaining from active interference.

Carcinoma and pregnancy may coexist in the uterus. I will briefly refer to Cohnstein's<sup>20</sup> 134 cases prior to 1873, Theilhaber's<sup>14</sup> 165 cases from 1873 to 1893, while Noble<sup>21</sup> has found 165 cases recorded since 1886. Further, 61 per cent. of Cohnstein's cases went to term; in 36 per cent. of them the child was born alive, while in 47.2 per cent. of Theilhaber's cases the child was born viable.

Polano<sup>22</sup> claims that the tumor malignant epithelioma follows or may coexist with hydatidiform mole.

I claim that malignant epithelioma or syncytioma may coexist with pregnancy.

#### CONCLUSIONS.

"It is the accumulation of our experiences that makes our empirical knowledge at last a fact."—Munday.

In my case just reported, could the syphilis of the father have had anything to do with the formation of this malignant neoplasm in the mother? We have abundant proof all about us of the unlimited influence

that the fertilizing element may exert on the ovum; further researches in biology, physiology and chemistry may throw some light on this interesting study.

Again, the growth of these elements that make up this tumor depend on the maternal nourishment; if the maternal circulation is disturbed or impoverished by a constitutional disease, such as syphilis, could this not result without the syphilitic germ being manifested in the new growth?

The power of the maternal blood has been demonstrated in its action on the trophoblastic cells, changing them to syncytium; could not this maternal blood by a slight relative change in its own elements cause an undue proliferation and consequently a degeneration from lack of proper supply of blood in these very elements, and this cytotoxic result in a neoplasm with the distinctive features of this one?

Fifty per cent. of the cases of hydatidiform mole are followed by syncytioma malignum. From this statement one would deduce the opinion that the same cause that produces the hydatidiform mole must necessarily be an etiologic feature in the production of syncytioma malignum. There have been many and varied opinions recorded as to the etiology of hydatidiform mole, but as yet none have proved satisfactory.

In the evolution of theories which have been recorded from time to time as to the real nature of hydatidiform mole, beginning with that of Hippocrates that it was thickened sperm; later Litre's view that it was due to the hypertrophy of the Nabothian glands and down to the view promulgated by Virchow<sup>23</sup> that it was due to a myxomatous degeneration of the chorionic villi, we have reached the conclusion held by Marchand<sup>24</sup> and the most generally accepted at the present, viz.: hydatidiform mole is due to a proliferation of the syncytium and of Langhans' layer, accompanied by a dropsical condition of the chorionic villi.

Findlay<sup>25</sup> claims that this condition results from a disturbed maternal circulation causing these elements to penetrate more deeply into the decidua where nutrition is adequate.

Bacon<sup>26</sup> continues thus: "The hydatidiform mole, which is very frequently found in these cases, predisposes to the growth of the tumor, deciduoma malignum, by diminishing the resistance of the uterine tissue to these elements." Could one not find cause for this in the continued vitiated blood supply of the syphilitic subject?

We hope for a speedy solution of the problem as to the causation of this neoplasm: a solution which in all probability will settle the question of etiology for other malignant growths of the uterus, as well.

We look to biology to focus its research on the cell processes and to differentiate between the normal and the pathologic changes taking place within the cell; the study of the cause of cell proliferation opens up another avenue full of hope; the greater our knowledge of cytomorphoses the clearer will be our understanding of cell proliferation. We look to chemistry to show the natural cell constituents and to differentiate between these and the products of the metamorphoses taking place in the neoplasm.

Cell growth is controlled by certain stimulating and inhibiting influences; knowledge of these may explain many of the now unknown phenomena, including the re-

18. Davis and Harris: Am. Jour., Obs., July, 1900.

19. Parvin: Science and Art of Obs., 1886.

20. Cohnstein: Arch. of Gynäk., 1873, vol. v. p. 3366.

21. Noble: Med. News, 1895, vol. xlviii.

22. Polano: Volkman's Klinische Vorträge, No. 320.

23. Virchow: Virchow's Archives, 1903.

24. Marchand: Monatsch. of Geb. and Gyn., 1895.

25. Findlay: Diag. Dis. Women, 1903, Lea Bros.

26. Bacon: Am. Jour. Obs., vol. xxxi, 1905.



trogressive metamorphoses that are attributed to the cells of this tumor.

#### DISCUSSION.

DR. W. O. HENRY, Omaha, said that hemorrhages following abortion or labor, and the rapid growth of the tumor and its early metastasis, should lead the physician to suspect that it is of malignant character. This is a particularly fatal disease and rapid in its course. Not much can be done in such cases unless the diagnosis is made in the very beginning and then a radical operation done. Dr. Henry disagreed with Dr. Branson that this disease might be a manifestation of syphilis; syphilis is, indeed, a terrible disease, but he believes that too many things are laid at its door. Whenever a physician is confronted by a condition which he can not explain he is apt to conclude that some member of the patient's family had syphilis as a primary cause of the trouble. This, Dr. Henry believes to be a serious mistake. Physicians should always seek for a scientific rather than ascribe so many of these obscure conditions to syphilis, simply because they can not be explained on other grounds.

### A STUDY OF THE BONY PELVIS IN ONE HUNDRED AND FIFTY CASES.\*

EFFA V. DAVIS, M.D.

CHICAGO.

In reviewing my work in pelvic measurements in the past five years, some general impressions were borne in on my mind relative to the frequent causes of deformities in the cases handled and the not infrequent difficulty encountered in the normal pelvis, which moved me to take some notes in regard to childhood, puberty, family and general habits, to verify, if possible, the impressions left by my daily work.

The cases in which sufficient notes have been taken to permit of an accurate report are those personally attended by me, though often assisted by medical students and internes, and are made up of private and dispensary cases in about equal numbers. Seventy-three have been attended in their homes and 77 in the hospital, 150 cases being considered.

In studying the pelvic measurements in this series of cases a diagonal conjugate of 11.5 cm. or over has been considered a normal pelvis. A pelvis has been considered generally contracted when all external measurements were diminished with the diagonal conjugate, 11.5 and less, and simple flat with a diagonal conjugate of 11 cm. and all external measurements normal.

Rachitic pelvises were distinguished by the narrow conjugate and flaring brim, as shown by the decrease of distance between the crests and spines.

Over 82 per cent. of the cases (124) were normal in measurements, and somewhat over 17 per cent. (26) were deformed.

In classifying the deformities eighteen or 69.23 per cent., were generally contracted. Four, or 15.38 per cent., were simple flat and four rachitic.

In the deformed cases, 16, or 61.54 per cent., were normal deliveries, and 10, or 38.45 per cent., were operative. The operations included mid-forceps twice, high forceps twice, extraction twice, version and extraction three times and Cesarean section once. The indications for operation were the bony pelvis and malpositions.

Of the normal cases (124), 112 were delivered spontaneously, and 12, or 9.67 per cent., were operative.

Classifying the operative work in the normal cases,

low forceps was applied once, mid-forceps six times, high forceps twice, extraction twice, version and extraction once. These operations were indicated by an oversized child four times, inertia with large child three times, toxemia once, eclampsia twice, transverse presentation once and breech once.

In comparing the size of the child at birth with the size of the pelvis—those born of normal cases averaged 7.94 pounds, and those from deformed cases 6.43 pounds—making an average of one and one-half pounds in favor of the normal pelvis. It is to be regretted that an accurate weight and height measurement was not kept of the mothers, but only a portion had been noted, not enough to carry out a correct report.

A study of 135 cases was made to determine the relation, if any, of the child's average weight at birth to occupation and diet in the mother during pregnancy.

Eighty-eight mothers were found inactive and abundantly well fed. The average weight of their infants at birth was 8.06 pounds.

Thirty-eight mothers were compelled to take active exercise, with plain but wholesome food, and the average weight at birth of their infants was 6.7 pounds. Nine mothers were ill with chronic diseases during pregnancy, and the average weight of their infants was 5.77 pounds. These cases were studied individually, and about half were attended in the hospital and about one-half in their own homes.

Many patients were kept in the hospital for several months before labor, but those that were charity charges were obliged to do active housework and they were considered as active patients on plain but wholesome diet.

It soon became noticeable that the active patients had short easy labors, with moderate weight in the child, while the inactive private patients that waited with us, and whose appetite was tempted by friends and relatives, often had the most tedious labors, with oversized children.

As we were so often met with reproachful surprise when a charity applicant was informed that she must work for her board, both she and her friends thinking because she was pregnant that it was cruelty to expect her to do active housework, we determined to study the matter more closely and began the notes which furnish these figures.

A temperature and pulse record, with observations as to excreta, is taken daily of all waiting and working patients, and a patient showing any evidence of toxemia is not permitted to work, but is placed in bed and diet restricted.

An abdominal supporter is advised in all cases of pendulous abdomen, but when there are no unusual symptoms the patients are encouraged to do an active day's work up to the time of delivery, and private patients are directed to walk two or three miles in the open air daily.

The nativity of the patients gives 105 American, or 70 per cent., and forty-five foreign born, or 30 per cent.

The deformed patients show twenty American and six foreign. A preponderance of the deformities were of the generally contracted type, of which there were twenty American and two foreign; simple flat, three American and two foreign; rachitic, two American and two foreign. The foreign cases were classified as follows: German, 10; Italian, 7; Irish, 7; Scandinavian, 7; Russian Jew, 6; Austrian, 5; English, 2; Dutch, 1. This gives 19 per cent. of American women with deformity and 13.33 per cent. of foreign. Though the number of

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



cases is rather limited for accuracy, this is evidence that European women may not have, as has so long been believed, a larger number of contractions than our own country women.

Some notes have been made as to education and attendance in school. All foreign-born women were illiterate (18) or of common-school education (27), not being in school after the twelfth or fourteenth year. Their menstrual period began as an average at the fourteenth year, and their deformities were divided equally between the three varieties. Of the 105 American-born women, twenty-five were of high-school, academy or college education. Seventy-five had a common-school education, being in school until the fourteenth or sixteenth year. Five were illiterate. Their first menstrual period average was at the fourteenth year.

In comparing the normal with the deformed cases, it could not be determined that application to school duties had anything to do with the growth and development of the bony pelvis; neither had such diseases of puberty, as chlorosis or chorea, malaria or other chronic wasting disease which attacked the body after the bones had once received a normal childhood start.

In looking for causes of pelvic deformity in this series of cases, the family history and childhood history was carefully noted.

Artificial and improper breast feeding is so commonly the cause of rickets that the four cases of rachitic pelvis were easily classified under that head.

The simple flat cases could not be assigned to any one cause, but occurred in cases where "delicate in childhood" was a common statement.

The parental history so far as obtained of all deformed cases was interesting, confirming the theory that contractions of the general type is a form of degeneracy.

The following is a list of the diseases mentioned as affecting one or both parents of the twenty-one patients out of twenty-six deformed: Inebriety, seven times; rheumatism, twice; heart and kidney disease, twice; tuberculosis, three times, and syphilis once. Two had a negative history and three were not noted.

#### CONCLUSIONS.

Deformity occurs often enough to make pelvimetry a practical part of the examination of pregnant women.

Generally contracted pelvis form by far the most common deformity in American women, though the rachitic pelvis is often present in those who have been artificially or imperfectly breast fed in infancy.

Inebriety in the parents is the most constant element toward degenerate types in the deformities studied.

The size of the infant can be regulated by diet and exercise if carried out strictly for a proper time during the last three or four months of pregnancy.

#### SUMMARY OF NOTES.

Number of cases studied ..... 150  
Primipara, 76; multipara, 74; attended in hospital, 77; attended in homes, 73.  
Normal pelvis 124, or 82.66 per cent.  
Deformed pelvis, 26 or 17.35 per cent.  
Generally contracted, 18, or 69.23 per cent.  
Simple flat, 4, or 15.38 per cent.  
Rachitic, 4, or 15.38 per cent.

#### NATIVITY.

American ..... 105, 70 per cent.  
Foreign ..... 45, 30 per cent.  
German ..... 10  
Italian ..... 7  
Irish ..... 7  
Scandinavian ..... 7  
Russian Jew ..... 6  
Austrian ..... 5  
English ..... 2  
Dutch ..... 1  
Nativity in deformed cases: American, 20; foreign, 6.  
Generally contracted: American, 15; foreign, 2.  
Simple flat: American, 3; foreign, 2.  
Rachitic: American, 2; foreign, 2.

#### AVERAGE PELVIC MEASUREMENTS.

Number of cases	.....150	External conjugate	.....19.82
Spines	.....24.43	Diagonal conjugate	.....11.59
Crests	.....27.29		
Trochanters	.....31.31		
Average in Normal Cases.		Average in Deformed Cases.	
Number of cases, 124.		Number of cases, 26.	
Spines	.....24.70	Spines	.....23.10
Crests	.....27.55	Crests	.....26.00
Trochanters	.....31.63	Trochanters	.....29.7
External conjugate	.....20.26	External conjugate	.....17.7
Diagonal conjugate	.....12.29	Diagonal conjugate	.....10.9

#### AVERAGE WEIGHT OF CHILD.

Normal pelvis, 7.94 pounds. Deformed pelvis, 6.43 pounds.  
Weight compared with occupation and diet.  
Mothers inactive and well fed: Number of cases, 88; average weight of child, 8.06 pounds.  
Mothers compelled to active exercise, with plain food: Number of cases, 38; average weight of child, 6.7 pounds.  
Mothers ill during pregnancy with chronic diseases: Number of cases, 9; average weight of child, 5.77 pounds.

#### CHARACTER OF LABORS.

In normal pelvis	.....124	Extraction	.....2
Normal deliveries	.....112	Version and ex.	.....1
Operative deliveries	.....12		
Low forceps	.....1		
Mild forceps	.....6		
High forceps	.....2		

#### Indications.

Large fetus	.....4	Eclampsia	.....2
Inertia and large fetus	.....3	Transverse presentation	.....2
Toxemia	.....1		
In deformed pelvis	.....26		
Normal deliveries	.....16		
Operative deliveries	.....10		
Mild forceps	.....2	Version and ext.	.....3
High forceps	.....2	Cesarean section	.....1
Extraction	.....2		

#### Indication.

Pelvic contractions with malpositions and one case of eclampsia.

#### EDUCATION.

American, 105.	Foreign (European), 45
High school, academy or college	High school or college..... 0
.....25	Common school .....27
Common school, in school until 14 or 16..... 75	Illiterate ..... 18
Illiterate ..... 5	

#### FAMILY HISTORY OF DEFORMED CASES.

Number of cases ..... 26  
History not noted ..... 3

#### Diseases of Parents.

Asthma	.....3	Heart and kidney	.....2
Inebriety	.....7	Tuberculosis	.....3
Neurotic	.....3	Syphilis	.....1
Rheumatic	.....2	Negative	.....2

100 State Street.

#### DISCUSSION.

DR. W. O. HENRY, Omaha, said that the number of cases is too small for accurate statistics. The report is instructive, however, because of the careful tabulation, and it is hoped that Dr. Davis and others will continue this work until the profession has a sufficiently large number of cases on which to base more reliable statistics.

DR. J. H. CARSTENS, Detroit, said that there was a time when physicians believed that deformed pelvis were confined to the poorer classes, but more and more are developing in women of the better classes. Among the poor they are the result of bad environment and poor food, but among American women these factors usually do not prevail; hence some other factors are responsible.

DR. EFFA V. DAVIS said that perhaps too luxurious habits are permitted in pregnant women. In discussing the subject with Dr. Davis, many physicians have said that is impossible to do anything to limit the size of the child, but Dr. Davis thinks that this can be done. An infant that weighs ten pounds at birth is too large. Women who are active and careful in diet do not have such large babies, although they can have average well-nourished infants. Of course, once in a while a woman who has been well fed and idle is delivered of a small baby, and occasionally a poorly fed, hard-working woman will have a large child, but that is not the rule, and there may be other factors affecting the results in these apparent exceptions.

Meteorism in Pneumonia.—H. Schiller considers meteorism of considerable degree one of the worst prognostic symptoms in pneumonia. When it is distinct, he says, it indicates a severe and often deadly course.—*American Medicine*.



## THE PSYCHOPATHIC MANIFESTATIONS OF THE NON-INSANE PSYCHONEUROSES.\*

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The active, enthusiastic investigation and widespread interest in the nature and character of the insanities deserves most cordial consideration and support.

Heretofore the study of psychiatry has been more or less divorced from practical clinical neurology, while to the average general medical practitioner it was almost a sealed book. The tendency of modern medical progress, however, is such as to bring psychiatry into closer relationship with general medical practice by furnishing the general practitioner with more accurate scientific knowledge concerning the clinical aspects of insanity and its allied neuroses.

At the recent meeting of the American Psychological Association, the scientific program beautifully illustrated the practical trend of psychiatry in America at the present time, for it is interesting to note that the burden of the themes presented by the leading alienists in their papers and discussions was intended to enforce at least three practical truths:

1. The great necessity for a more thorough knowledge of insanity by the general medical practitioner.

2. The marked and prompt curability of insanity in its incipency.

3. The extreme susceptibility of insanity to prevention.

Moreover, another important fact was also not only recognized but duly emphasized, viz., that, while insanity is primarily a psychosis of the highest order, yet there are a number of morbid mental states which, while showing a marked kinship to insanity, are not usually so regarded by the general medical profession.

These include such conditions as neurasthenia, hysteria, hypochondria, certain forms of epilepsy, the precocious dementias, paranoia, melancholia, mania, manic-depressive insanity, and the toxic and exhaustion psychoses. Many of these morbid states follow acute fevers like typhoid, pneumonia, la grippe, and other infections, or become the sequelæ of alcoholism, syphilis and other poisons, all of which in their clinical syndrome may present varying degrees of delirium, confusion and stupor.

Such psychoneuroses, as a rule, however, first come under the observation of the family physician, who, unfortunately, often fails to recognize their true psychologic significance until the obsession, impulsion, or imperative concepts and other mental manifestations accompanying them become so conspicuous and striking that the opportunity for the patient's recovery is thereby greatly lessened.

The extreme relational importance of these various so-called nervous disorders with insanity, while having been referred to occasionally in medical literature and now duly accepted by us, are not so well understood by the general medical profession as their seriousness justly warrants.

The special object of this communication is to emphasize the close kinship which they sustain to the great psychoses by their progressive transitional nature illustrated by their psychopathic manifestations.

To the average general practitioner the diagnosis, prognosis and treatment of the various nervous diseases become at once the most formidable clinical problem

with which he is confronted. It is not strange, therefore, that in the incipency of the states referred to he should fail to recognize their true psychologic significance or properly to interpret their more serious, morbid, progressive, incurable tendencies.

To the family physician such morbid conditions as neurasthenia, hysteria, hypochondria, the precocious dementias, paranoia, melancholia, and allied states are often recognized and diagnosticated as purely neurotic disorders, and even when the mental symptoms are very pronounced he fails fully to appreciate their true psychopathic significance. Hence what was formerly, and even to-day, regarded by many as a pure neurosis is now known by us to constitute a true psychosis. In making this differentiation between the neuroses and psychoses, however, and thus defining their special pathologic significance, much depends on our use and understanding of the term insanity. Dr. Dewey has recently shown that, according to views now generally prevalent, "if there be a dividing line between the neuroses and psychoses, insanity exists on both sides of this line." Hence, nervous prostration and hysteria are often nothing more nor less than a polite misnomer for actual insanity. Recognizing, however, that in all such psychoneurotic states there is a marked admixture of rationality, and that even in many the intelligence may be far above the average standard so that when the term insanity is even hinted at in their connection, much less applied, it necessarily meets with a vigorous, and perhaps just objection.

This opposition also seems the more feasible when we remember that associated with the purely mental phenomena various somatic disorders and disturbances of the different mechanisms of the nervous system, more especially those of the visceral and sexual organs, are often present in all degrees of intensity. Moreover, these may account, to some extent at least, for the clinical symptom-grouping and therefore should also be duly considered in not only their nomenclature, but in any classified system of their nosology. It is not surprising, therefore, that the many attempts which have been made by different authors to furnish a term to express the pathologic condition underlying such states—the same to be in strict accord with scientific medical nosography—should fail to overcome the serious objections to such terms as hysteria, neurasthenia, phrenasthenia, and insanity, when applied to these psychoneurotic states, as such terms are not only inappropriate, but often misleading, and, therefore, subject to criticism, and even by some regarded as bitterly offensive.

The term "psychosomatasthenia," therefore, suggests itself to me as being essentially appropriate and applicable to all such morbid conditions. Like its many predecessors, it is subject to some objections as, for instance, its length, yet it has the redeeming virtue of indicating not only the seat, but also the nature and character of the malady, thereby encompassing the two most essential features in every diagnosis, while its general use would readily and satisfactorily overcome the many objections to those terms now in use which give offence.

While all such psychoneurotic states are attended with every degree of physical infirmity which are chiefly illustrated in disorders of nutrition, yet we contend that the various somatic changes are primarily and essentially the result of weakened inhibition or lack of nervous innervation due to some defect of perversion of the higher cerebral nerve centers, whether this disturbance is in response to their protracted functional activity or

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



the reverse of this, or to some hereditary effect or even toxic agent. Such morbid influence, however, in the early stages is undoubtedly capable of being readily repaired or adjusted by appropriate means, but if unduly prolonged without such treatment the lesion of necessity becomes more fixed and pronounced, and may even prove altogether irreparable in spite of all temporary expedients. The clinical study of the various psychopathic manifestations of the non-insane psychoneuroses and their special pathogenic significance, therefore, may be found most useful in aiding in their diagnosis, prognosis and treatment.

It is now a well-established scientific fact that neurasthenia, hysteria and allied states are simply the forerunners of actual insanity. Indeed, in the vast majority of instances such neurotic conditions constitute its earliest or incipient stage. Moreover, all authorities agree that incipient insanity is attended with physical and mental changes that are indicative of nervous exhaustion or nutritional defects which thus form its physical basis.

Increasing knowledge of the etiology and pathology of these psychoneuroses also emphasize the intimate relation existing between them besides endorsing the significant fact that insanity is but a different phase and further development of the same morbid process which underlies their protean clinical manifestations. Independently, therefore, of the purely physical phenomena that attend such morbid states, the psychopathic or mental symptoms demand our most earnest consideration, for on these hinge not only the diagnosis, but also the prognosis and treatment.

That the conditions of mental aberration comprised in these borderland and episodic states should present a wide range of symptoms of equally varying gravity is readily understood; hence we find them presenting every degree of seriousness in proportion as they involve the functions of the higher mental faculties. While the intelligence may not be materially implicated, yet there is in all such individuals a decided nervous weakness, or lack of inhibitory control which seriously mars the normal power of the will, weakens the judgment and intellect, and excites or depresses the emotional attributes. As the highest function of the nerve cell its power of inhibition or that energizing force which not only directs, but also restrains and controls the various mechanisms of the nervous system, it follows as a logical sequence that this supreme physiologic endowment by virtue of its late evolutionary development readily responds to the well known biologic law that those nerve centers which are the latest evolved are the least organized and consequently more vulnerable to all kinds of morbid influence.

Whatever, therefore, may be the cause of the various psychoneuroses, whether congenital or acquired, or due to hereditary defects, stress of all kinds or the result of some toxic agent, their first effect is seen in a lack of normal inhibitory control of the directing mental forces of the individual, which in turn produces nutritional changes that greatly weaken the various functions of the nervous mechanism.

With the higher inhibitory and controlling power impaired or abolished the instinctive inclinations also dominate and become highly exalted, varying with the peculiar idiosyncrasy of the individual. These are also attended with more or less headache, neuralgia, feelings of oppression, insomnia, unpleasant dreams, mental apathy, defects of memory, marked irritability, morose-

ness, and vacillating emotional apprehensive states, all of which are psychopathic manifestations of an unstable nervous organization.

"Blandford"<sup>11</sup> has demonstrated that the most notable clinical psychologic feature observed as a result of lessened inhibition is an increased activity of the lower instincts or impulses normally held in check by the highest mental faculties. These, he claims, pertain chiefly to egoism or self-conscious emotional states, which owing to their lack of proper inhibition, are allowed to become unduly ascendant and even exalted.

Like all physiologic qualities, however, the normal power of self-control exists in every degree of strength and weakness in different persons. The same is true of the mental disposition or temperament and other sensibilities, all of which are modified and even largely controlled by the exercise of the will and judgment, while these faculties are again subject to the powerful influence of heredity, environment and education, together with other external conditions.

The psychopathic manifestations of psychosomasthenia, therefore, consist in differing degrees of impairment of these higher psychical functions and are said by Regis to be fundamentally dependent on some lesion of the will. In their clinical aspects, however, they present every degree of exaggeration of the normal intellect, emotion, and will of the sufferer, thus comprising all forms of peculiarities, oddities, eccentricities, notional absurdities, obsessions of every kind, and even criminal tendencies, all of which at times are so cunningly concealed, or possibly even rationally defended, that their true nature and character are often overlooked, or their progressive, transitional, incurable, and even vicious, tendencies wholly disregarded.

Except in the most pronounced developments of these conditions, such persons are seldom found in our insane hospitals. They usually appeal for relief to the family physician, however, who is often at his wits' end to know how best to provide for his vacillating and even unruly nervous patient.

As a result of the weakened mental directive power due to lessened inhibition and consequent lowering of neuron activity a general feeling of weakness or bodily illness is thus engendered, which attracts the attention of the patient to himself and forms the basis of morbid introspection with all degrees of apprehensive anxiety, suspicion and morbid fear. This again leads to the development of despondency, petulance, irritability, selfishness, impatience, hilarity, indecision, doubt, mental confusion, stupor and vacillating, impulsive conduct, all of which are marked features in the incipient or formative stage of insanity.

These psychopathic manifestations of the non-insane have been variously designated by the different authors as obsessions, besetments, imperative concepts, impulses, and fixed ideas, all of which, however, consist of a general feeling of anxiety, doubt, or fear, which may lead later to impulsive acts like suicide and homicide.

As an aid to their diagnosis Regis has ably divided them into three classes, viz:

I. These characterized by indecision of which all kinds of morbid doubts are typical.

II. Those characterized by all kinds of morbid fears constituting the various phobias.

III. Those characterized by morbid propensities or irresistible impulsive tendencies.

Each of these is again subdivided, for instance, Ball has divided the first class, or doubters, into five



different classes, according to the nature of their predominating ideas, hence we have:

1. The metaphysicians, who are especially haunted by abstract questions of all kinds, such as doubts concerning Heaven, hell, the world, the Deity.

2. The realists who constantly revolve in their thoughts the lower and base details of objects, such, for example, as the conformation of the genital organs, copulation, etc.

3. The scrupulous, whose doubts pertain to forms of religion, such as accusing themselves of committing the unpardonable sin, or of some theft.

4. The timorous, who are fearful of committing some indelicate action by even allowing their clothing to come in contact with others, etc.

5. The counters, whose doubts are manifested under the form of irresistible enumeration. Such patients never get through counting different objects, such as the door knobs, the houses on the street, or their number.

The second class, or those suffering from morbid fears or phobias, is divided into three sub-divisions:

1. Those who have a morbid fear of all kinds of objects, its expression is extremely varied, and may involve such articles as glass, knives, pins, guns, thunder, flowers, besides certain kinds of food and drink.

2. Those who have a morbid fear of places, elements of diseases. Such patients are morbidly fearful of high places, bridges, streets, churches, theaters, rivers, besides a dread of all kinds of diseases, such as heart disease, liver disease, cancer.

3. Those who have a morbid or irresistible propensity to steal, lie, cheat, drink, blaspheme, set on fire, or abuse the sexual organs.

The third class, or those having irresistible impulsive tendencies are illustrated in such conditions as suicide, homicide, crime and other impulsive or reckless conduct.

In the simplest form, all these vagaries consist of certain ideas which obtrude themselves in varied and diverse ways on the consciousness of the individual, and in a limited degree they are present in health; indeed, very few of us escape the presence of doubts, fears and impulses as isolated sudden thoughts, but which are readily restrained or controlled by the dominating power of inhibition. For instance, it is a common experience for persons looking from a height to be tempted to jump down, or in riding on a boat to throw themselves overboard; or when walking in the streets they are suddenly seized with a desire to count the houses or numbers on the doors, or in leaving the office habitually return for fear the safe was left unlocked, or the water running from the faucet, or the doors or windows unfastened. Such doubts, fears and impulses are usually readily restrained; when, however, from any cause they constantly and persistently recur and get beyond control of the will, they eventually dominate the thought, speech and conduct of the individual, thus becoming true psychopathic manifestations of the underlying pathogenic factor which essentially consists in some lesion of the will, and consequent impairment or actual loss of power of self-control. Moreover, there can be little doubt that certain crimes are often due to such morbid ideation which arise in the minds of persons who are not ordinarily regarded as insane, and yet who are wholly unable to resist such pathogenic impulses. Indeed, clinical observation and experience demonstrate the truth that the line of demarcation between "psycho-

somatasthenia" and insanity is at times as dimly drawn as that which exists between sanity and insanity, or health and disease.

In conclusion, it would seem important, therefore, that in our clinical study of the various psychopathic manifestations of the non-insane psychoneuroses that the essential thing after all is not only to recognize the foundation on which they are based, but also the contributing factors which generate, foster, sustain and develop them into their fullest maturity.

Thus considered, the following deductions would seem warrantable:

1. The psychoneuroses which constitute "psychosomatasthenia" are the forerunners of insanity, and the only difference between them is one of degree.

2. In fundamental nature they are the same, viz., a pathologic lack of inhibitory control of the higher mental directive forces with consequent nutritional cellular instinctive and physical defects, which seriously mar the power of the will, weaken the judgment and intellect, as well as excite or depress the emotional attributes in all degrees of intensity.

3. Their causes are similar, being both congenital and acquired, while heredity, stress, and toxicity are the chief factors of each.

4. Independent of the purely physical clinical phenomena the psychopathic manifestations dominate the syndrome, direct the prognosis, and most acutely solicit treatment.

5. In their incipency they are extremely amenable to curability, but when neglected the morbid ideation becomes fixed and persistent, thus defying all therapeutic efforts to give relief.

#### DISCUSSION.

DR. H. A. TOMLINSON, St. Peter, Minn., declared that Dr. Punton's effort to find some other term than insanity to describe mental perversion reminded him of a letter he once received from the mother of a patient, saying that the patient must be insane, after that it is simply a question of degree. It does not alter the nature of the mental disturbance to use another term, having the same meaning, to describe it. Dr. Tomlinson hopes that the time will come when the profession will frankly admit the fact of insanity and its significance, and that through the profession the public will be educated to recognize the existence of mental perversion as frankly as they do any other diseased condition. The difficulty is largely a social one and depends on the fact that, as the result of superstition and statutory provision, the word insanity suggests a stigma and gives the individual so afflicted a "subhuman" or quasi criminal status. Calling insanity nervous prostration or psycho-asthenia does not alter the condition or its nature, but it does lead to confusion and helps to keep up the medieval superstition with regard to its nature and significance. As a consequence, instead of being dealt with promptly and intelligently, it is hidden and improperly treated until it becomes chronic and is only recognized when the individual becomes a menace to himself or to the public.

DR. SMITH ELY JELLIFFE, New York, said that he could not assent entirely to Dr. Tomlinson's point of view. He was reminded, while listening to Dr. Punton's paper, of his trip throughout Montana. The present study of the psychoneuroses has its analogies to the numerous prospectors' holes scattered throughout the state. Occasionally a deep shaft is found where a Brissaud, Chareot, Janet, Forel, or a Vogt has mined for useful truths, but the surface of pathologic psychology has barely been scratched. It is still in the prospecting stage. He thought it premature, therefore, to assume too much definite knowledge concerning the subject under discussion. He quoted Professor Cattell's remark that a 4-year-old child could exhibit more psychologic activities in an hour than a historian could record and analyze in a lifetime. It is folly, he said, to argue



concerning words. It is natural that the needs of language are such that new words are inevitable, but the facts for which the words stand are antecedent, and a prevalent fault of all is to ascribe too much of an entity to word symbols, forgetting that they are purely abstract representations. Insanity is not an entity; it has no relation to an entity. Psychoneuroses as a word means nothing. Insane patients have series of symptoms. These symptoms are capable of description, of analysis, of synthesis, etc., and individual cases may be grouped, and generalized ideas made therefrom, but the abstraction should be clearly separated from the realities, especially in speech. It is imperative, Dr. Jelliffe believes, to discard the old metaphysical categories of the mental faculties. They are not separate nor separated by dividing walls—will, emotions, memory, are not separate in the mind. The entire mental life is continuous. There may be some anatomic groupings of elements that render Wernicke's ideas concerning pathologic psychology comparatively sound, but the old terminology of metaphysical psychology still encrusts and encumbers the psychiatry of today to the discomfort of students. Dr. Jelliffe is not in favor of the complex word used by Dr. Punton, as it creates an air of definiteness about conditions which are extremely hazy and which, he thinks, are only beginning to be understood. The simple term, psychoneuroses, including neurasthenia, hysteria and states of mild psychical depression or exaltation, is a better one to use. He agreed with Dr. Punton that the word insanity carries with it a stigma which, if applied to patients who are suffering from the varieties of psychoneuroses mentioned, works a great injustice. To say to the world that a person who has a psychoneurosis is insane, although he may be sufficiently ill mentally to be treated as a pronounced case of mental imbalance, serves no useful object and is often an imprudence which brings about a complete mental breakdown, which the physician should try to avoid.

DR. H. T. PERSHING, Denver, Col., said that when a physician is asked to determine whether a patient is or is not insane he must first ascertain whether the mind is changed by disease or defective by reason of imperfect development. He must then find the degree of defect. There are many mental defects which do not constitute insanity, but if the mind is so imperfectly developed that the individual is unfitted thereby for the ordinary relations of life then he is insane. Dr. Pershing thinks that if neurologists were to keep these two points in mind they would be saved a great deal of trouble, especially in medicolegal cases.

DR. J. H. MCBRIDE, Pasadena, Cal., said that if Dr. Punton intends to be understood as saying that hysteria always precedes insanity he should certainly differ from him. Hysteria may precede insanity, but there are many insane who are never hysterical. Not all emotional display in insanity can be called hysteria. There is certainly a prejudice against the person who is known to have been insane, and it must be admitted that there is some reason for it. In most cases of recovered insanity it is not difficult to see that the insanity has left a scar; there is some loss of mental vigor and balance. Insanity is not a highly recoverable disorder. Out of ten insane patients possibly two or three recover and stay well. There are many cases of insanity in which the disorder is due to causes that might be called incidental, acute infections, traumatisms, etc. In these cases hereditary tendency must play a very subordinate part. In the great majority of cases, however, the insanity is essentially due to conditions of brain structure that are inborn. These people have brains that are made of crumbly material that breaks down under adverse conditions of life, and in these individuals there is a very low rate of recovery.

Here the insanity is the final stage in a degenerative tendency that has been in operation for one or more generations. It is inevitable, therefore, that only a minority of cases of insanity should be curable. Nature is attempting to eliminate the unfit and, though she may adopt cruel methods and proceed in a bungling fashion and often fail, yet in the long run the object is accomplished.

**The Physician's Holiday.**—The reorganization of the medical profession makes it possible for one physician to leave his patients temporarily in the hands of another and fare forth into the world for a period of change and rest.—*Western Medical Review*.

## INTESTINAL PERFORATION IN TYPHOID FEVER.

WITH REPORT OF CASES.

WALTER COURTNEY, M.D.

BRAINERD, MINN.

In the general consideration of intestinal perforation in typhoid fever, it may not be amiss to compare it with appendicitis, relative to the surgical history of both. Without going into the earlier history of these pathologic conditions, it will be sufficient to consider them from the time they were prominently brought to the notice of the medical profession. The epoch-making contribution on appendicitis, by Fitz of Boston, appeared in 1886. What ought, equally, to have been the awakening call in regard to typhoid perforation was made by Leyden of Berlin, in 1884, and again in 1886 by Wilson of Philadelphia. What has happened meanwhile? An enthusiastic and glorious achievement for the surgery of appendicitis and only faltering and apathetic efforts in the direction of typhoid perforation; thousands of successful operations annually for the former, and, the world's record in 1904, 362 reported operations on the latter.

Why have we been so intensely active in regard to appendicitis and so hesitant concerning typhoid perforation, when such statisticians as Taylor and Brooks inform us that from 16,000 to 20,000 persons die annually in the United States alone from the latter cause? The answering explanation is not immediately obvious, particularly when we recall that the earlier consideration given to appendicitis was essentially for perforation, abscess and peritonitis. The difference is one of the anomalies of surgical progress.

Of all the explanations that might be advanced, the one that seems most reasonable is the poor results that followed early surgical efforts, in general peritonitis, from whatever cause, and the infrequent and fortuitous contact of the general practitioner with typhoid perforation.

The frequency of perforation in typhoid fever has been variously given by different authorities. Liebermeister found it in 26 of 2,000 cases (1.3 per cent.); Murchison in 48 of 1,580 cases (3.03 per cent.); Curschmann in 22 of 829 cases (2.7 per cent.); Armstrong (Montreal General Hospital) in 34 of 932 cases (3.66 per cent.). In my work it was present in 11 instances in 576 cases (1.9 per cent.).

Curschmann,<sup>1</sup> in his admirable work, says: "I believe that under the most unfavorable circumstances perforation occurs in not more than 3 per cent. of all cases of typhoid fever."

Children, it has been stated, are less liable to perforation than adults. My work offers no assistance on this point, since all the cases were in adults.

As regards sex, there seems to be but little difference, although perforation is said by some writers to occur more often in males. (As my own cases were almost wholly in the male sex, I have no basis for an opinion.)

Season seems to have but little influence. Curschmann states: "The frequency of perforation of the bowel, precisely like that of intestinal hemorrhage, may be extremely variable at different times." This I have particularly noticed in my own cases—the first 3 cases, of 11 perforations, occurred in the late months of 1890 and the early months of 1891; the last 3 cases have

1. "Typhoid Fever and Typhus Fever," edited by Osler, *North-nagel's Encyclopedia*.



occurred within the last six months—prior to March 15, 1905.

That perforation is more likely to occur in cases accompanied by diarrhea would seem to be indicated by the fact that in 30 cases of perforation at Johns Hopkins Hospital, 20 patients had diarrhea, 16 of them at the time of perforation. My 11 cases of perforation showed marked diarrheal tendencies in only 4.

The relationship of tympany to perforation does not seem to be very marked. When there is deep ulceration and accompanying tympany, perforation may be more readily brought about by mechanical causes, such as straining at stool, turning in bed, etc. Curschmann is inclined to believe that tympany is not so much a sign of severe intestinal lesions as it is a symptom of severe general infection, which gives rise to paralysis of the muscular layer of the intestine and consequent gaseous distension. My own experience tends strongly to confirm this view.

Hemorrhage in typhoid fever occurs in varying frequency, in anywhere from 4 to 8 per cent., in the larger collection of reported cases. In 829 cases at Johns Hopkins Hospital it occurred in 6 per cent. In my 576 cases it occurred in 43 (7.4 per cent.), counting all evacuations of blood sufficient in amount to be termed hemorrhage; it was the cause of death in 11 cases. The average number of hemorrhages per case was 3.3. The average number of hemorrhages to each patient who died was 5.1. Hemorrhage occurred in 3 of the 11 cases of perforation.

Like perforation, I have found hemorrhage to vary considerably at different times, but with no well-marked relationship between the two. In my hemorrhagic cases the intestinal loss of blood occurred in nearly all during the primary attack of the fever, and seldom during a relapse.

In dealing with the subject of intestinal perforation, Keen<sup>2</sup> summarized the 83 operative cases that had been reported. The result showed 19.36 per cent. of cures and 80.64 per cent. of deaths. The first three operations ever performed for typhoid perforation were by Mikulicz, Kussmaul and Bontecou, in the order named.

Finney<sup>3</sup> gives a brief history of the 112 operative cases he was able to collect. Of these 23 patients recovered (20.05 per cent.).

Harte and Ashurst<sup>4</sup> summarize the 362 operative cases that they collected with the following results: Recovered, 94 patients (25.97 per cent.); died, 268 (mortality, 74.03 per cent.). Their analysis by lustums gave:

1884-1888,	10 cases,	mortality 90	per cent.
1889-1893,	16 cases,	mortality 87.5	per cent.
1894-1898,	100 cases,	mortality 72	per cent.
1899-1903,	166 cases,	mortality 69.2	per cent.

This readily gives an idea of the progress in operative work.

Of my 11 perforation cases, 5 patients were operated on, with one recovery and four deaths—recovery, 20 per cent.; mortality, 80 per cent. All the patients not operated on died.

The status of perforations not operated on does not seem to change. Various writers place the mortality in these cases at 95 per cent., and this opinion is confirmed by Curschmann.

One can not comprehensively discuss the subject of intestinal perforation of typhoid apart from typhoid fever

itself. A long list of cases from any institution, or practitioner's records, when carefully studied, can scarcely fail to be of value. The accurate and painstaking work on typhoid fever, performed under Osler, at Johns Hopkins Hospital, throughout a number of years, has been of incalculable benefit in the study of every feature of the disease. Similar work elsewhere, of course, is entitled to its proper share of credit.

Simply to review cases of perforation, I believe, would not be of the same value as if all typhoid cases were given, even brief, consideration. This report is intended to cover a period of fifteen years, from March 15, 1890, to March 15, 1905. The work was all performed within the Northern Pacific Railway Hospital, at Brainerd, and does not include cases among our employes and others treated at their homes. There is a peculiarity about the work that does not often exist outside of railway hospitals, and that is the extent of territory which the work covers. The patients came from along the railway lines in Minnesota, Northern Wisconsin, Manitoba, North Dakota, and as far west as the middle of Montana.

In view of the fact that more than 90 per cent. of the patients came from abroad, frequently with little or no previous observation or treatment, often in the second week of the disease, sometimes in the third, with mental hebetude, and occasionally delirium, already established, it will be appreciated how difficult it is to be exact concerning early clinical features in many of these cases.

During the fifteen years (1890-1905) we admitted and treated 576 patients with typhoid fever. Of these 534 recovered (92.7 per cent.), and 42 died (a mortality rate of 7.3 per cent.). The causes of death were as follows: Toxemia, with severe nervous manifestations, 12 (28.5 per cent. of the total mortality); hemorrhage, 11 (25.9 per cent. of the total mortality); intestinal perforation, 10 (28.8 per cent. of the total mortality); pulmonary complications, 5 (11.9 per cent. of the total mortality); acute heart failure, with sudden death, 4 (9.5 per cent. of the total mortality).

Exactly 75 per cent. of the 576 patients were admitted during the last six months of the year, from July 1 to December 31; the remaining 25 per cent. were admitted from January 1 to June 30, while over one-third (35.76 per cent.) of the total cases were admitted during the months of September and October.

In this series of 576 cases, 291 patients, over 50 per cent., were admitted and treated during the last five years, during which time there was a total of 16 deaths, from all causes, or a mortality rate of 5.5 per cent.

The total mortality rate in 829 cases of typhoid fever treated at Johns Hopkins Hospital during the years 1889-1899 was 7.5 per cent. Comparison tends to show that typhoid fever patients' chances for recovery are not necessarily minimized by being transported long distances on railway trains.

In the hospital we used Widal's method of serum diagnosis in a considerable proportion of the cases, particularly the doubtful ones. I wish incidentally to call attention to an objective symptom of typhoid fever, namely, tremor of the tongue. I have found it almost universally in all grades of cases, and from the earliest stage to convalescence. In character it may vary from complete loss of muscular control to a mere vibrating tremor movement, noticeable only near the tip. Associated with other of the usual clinical symptoms I have found it of value before Widal's reaction test could be elicited.

2. "Surgical Complications and Sequels of Typhoid Fever," 1898.

3. "Surgical Treatment of Perforating Typhoid Ulcer," Johns Hopkins Hosp. Rep., vol. viii, 1900.

4. "Intestinal Perforation of Typhoid Fever," *Annals of Surgery*, January, 1904.



Case.	Age.	General Course of Disease.	Bowels.	Hemorrhage.	Tympanites.	Day of Perforation.	Mode of Onset.	First Symptoms.	Abdominal Pain.	Chill.	Sweating.	Vomiting.	Collapse.
1	26	Moderately severe.	Diarrhea not severe.	None.....	Not marked.	14th....	Sudden.....	Severe pain in abdomen.	Yes.....	No..	Profuse cold sweat.	Yes, a dark green material.	No.....
2	30	Mild.....	Constipation.	Two hemor's from nose on day of perforat'n.	Not marked.	16th....	Sudden.....	Severe pain in abdomen.	Yes.....	No..	No..	Yes.....	No.....
3	43	Mild.....	No diarrhea.	None.....	Not marked.	11th....	Sudden.....	Ch.....	Yes, very severe.	Yes..	Yes..	Yes.....	No.....
4	28	Severe, with mental apathy and delirium.	Slight diarrhea.	None.....	Yes.....	17th....	With marked typhoid state; abdomen distended and involuntary bowel movement of small watery stools.	Distention of abdomen; irregular breathing; subjective symptoms concealed.	No, comatose..	No..	No..	Yes, before onset of perforation.	Yes..
5	25	Mild.....	No diarrhea.	From bowels 7 days before perforation; temp. fell 3 degrees.	Not marked.	30th....	During bowel movement sudden severe diffuse pain in abdomen.	Severe cramp-like pain lasting only a few minutes.	Yes, very severe: diffuse at first; later localized in right iliac fossa.	No..	No..	Yes.....	No.....
6	37	Mild, early conval., relapse, complicated with phlebitis.	No diarrhea.	None.....	Yes.....	31st; 8th day of relapse.	Sudden severe abdominal pain; patient cried out in agony; face and extremities cold and clammy; pain in genitals.	Severe pain in abdomen.	Yes, diffuse; referred also to penis and serotum.	No..	Yes..	Yes.....	Yes..
7	24	Severe.....	No diarrhea.	One on day of perforation.	Not marked.	19th....	Gradually increasing distension and tenderness; hemorrhage from bowels	Rigid abdomen, tender on pressure; rapid pulse.	None.....	No..	No..	Yes, late..	No.....
8	20	Severe. Marked mental apathy.	No diarrhea.	Yes, 5 on different days preceding perforat'n.	Yes, marked.	48th....	Sudden.....	Severe pain near McBurney's point; chill.	Yes, severe in right iliac fossa.	Yes..	No..	Yes, late..	No.....
9	30	Severe; high temp. and delirium.	No diarrhea.	None.....	None, until late in disease.	17th....	Sudden; severe abdominal pain; lips pallid; very restless; skin cold and clammy.	Paroxysmal pains in abdomen.	Yes, severe in right iliac fossa.	No..	Yes, on extremities.	No.....	Yes, very marked.
10	24	Mild, rapid conval., relapse severe.	No diarrhea.	None.....	Not marked.	52nd, 10th day of relapse.	Sudden; severe colicky pain; lips pallid; face drawn and expression anxious.	Severe paroxysmal pain; most marked in right iliac fossa.	Yes, severe and diffuse at first; later localized on right side.	No..	Yes, slightly.	No.....	No.....
11	43	Mild; mental condition rather dull.	No diarrhea.	None.....	Yes, marked.	15th....	Sudden; severe pain in abdomen with sigus of collapse.	Severe abdominal pain; chill.	Yes, diffuse at first; later more on right side.	Yes..	Profuse cold sweat.	No.....	Yes.....

As regards the general treatment of the cases, I would say that in this hospital for more than sixteen years we have relied mainly on the tub bath.

The detailed histories and a table of our perforation cases will be given after the treatment.

#### PATHOLOGY OF INTESTINAL ULCERATION AND PERFORATION.

The lesions of the intestine in typhoid fever consist mainly of changes in the lymphoid tissue and these may be divided into four stages: First, the stage of hyperemia; second, that of medullary infiltration; third, that of necrotic destruction and ulceration, and, fourth, that of cicatrization. "In general these anatomic stages correspond with the clinical course of the disease. It is to

be borne in mind that the intestinal lesion does not develop and extend simultaneously and uniformly, but rather in stages, often distributed over a considerable period of time, and it likewise undergoes involution in a corresponding manner" (Curschmann). This, in a measure, will account for the appearance of perforation at varying times in a long list of perforation cases. For a more extended description of the minute anatomic changes of typhoid fever, such authorities as Curschmann, Osler, Mallory and others may be referred to.

The so-called medullary infiltration and consequent coagulation necrosis may only extend to the muscular coat, which would form the base of the ulcer. This is most frequently the case. Or the ulcerative destruction



Temper- ature.	Pulse.	Respira- tion.	Condition of Abdomen.	Liver Dull- ness.	Leuco- cytes.	Opera- tion.	No. Hrs. Aft. Perf.	Result.	Autopsy with Findings.	Condition of Appendix at Operation or Autopsy.	Number and Loca- tion of Perforations at Autopsy or Operation.
Fell from 102.2 to 97.2; then rose to 104.4.	Rose from 92 to 140.	Somewhat quickened.	Tender on right side.	No one noted.	No count	No	.	Death in from 48 to 50 hrs.	No autopsy.....	.....	.....
Rose to 103 then fell to 102.	Rose from 98 to 112.	Not noted..	Extremely tender in right iliac region.	Not mentioned.	No count	Yes	6	Death in 12 hours.	Partial autopsy..	Not reported	Two in ileum 15 and 21 in. above cecum.
Rose to 104.6 then fell to 100.	Rose from 98 to 124.	Rapid violent hic-cough.	Noticeable tenderness in right iliac area.	Not mentioned.	No count	No	.	Death in 55 hours.	No autopsy.....	.....	.....
By axilla; rose 101-104; later fell to 103.2.	Rose from 120 to 144.	Rose from 24 to 44.	Distended...	Abolished.	No count	No	.	Death in about 56 hours.	Partial autopsy showed typical typhoid ulcers; intestines matted together with many adhesions. (One perforation found in ileum 12 in. from cecum.	Very adherent and inflamed.	One in ileum 12 in. above cecum junction.
Fell at first to 99.8; then rose 102.2.	Rose from 84 to 106.	Very rapid and shallow; hic-cough.	Distended and extremely tender.	Obliterated.	No count	Yes	19	Death in 75 hours after perforation & 56 hrs. after operation.	Partial autopsy; bowels covered with deposit of lymph; perforation closed and stitches holding; appendix adherent.	Much inflamed and adherent; not removed at operation. (Patient in bad shape)	One was located in ileum 6 in. from colon. Wound admitted end of finger; only one perforation found; free fecal matter in cavity at operation.
High at first 104; fell quite rapidly to 95.6 before death.	Rose from 106 to 122; very weak.	Shallow and very rapid.	Distended; very rigid.	Obliterated.	No count	No	.	Death in 25 hours.	Partial autopsy; abd. cavity contained free fecal matter and a large amount of turbid fluid; many ulcers with softened bases; one perforating; clot in femoral vein.	Thickened and adherent.	One found at autopsy; located 18 in. from ileocecal valve, large size.
No change . .	Rose from 100 to 150.	Rapid. . .	Board-like; very tender.	Obliterated.	7,894 immediately after onset of symps.	No	.	Death in 30 hours.	No autopsy.....	.....	.....
Rose, then fell; after operation fell to 97, then rose to 105.	Rose slightly before operation; markedly after, to 150.	No change..	Partly distended; hard.	No marked change.	12,223 made just after onset of symps.	Yes	2	Death in 10 days and 4 hrs. after perforation.	Complete autopsy; negative except in abdomen; purulent exudate; catgut suture given way with opening into bowel free. No attempt at repair.	Very adherent, much thickened; removed at operation.	One very small one found 2 in. from ileocecal valve.
Fell from 102 to 98.4.	Almost imperceptible; rose from 90 to 134.	Rapid and shallow; rose to 0.	Very rigid and tender.	Nearly obliterated.	No count	No	.	Death in 55 minutes after perforation (approximately).	No autopsy.....	.....	.....
No marked change.	Rose after operation from 84 to 116; no change before.	Rapid and shallow; thoracic.	Very rigid; moderately distended.	Not obliterated.	No count after perforation.	Yes	23½	Recovery..	.....	Very much inflamed; removed at operation.	Two small pin-point perforations found in ileum close to colon. 1 other large one (½ in. in diam.) 12 in. from colon.
No change before operation; after operation it rose to 101.4 then fell to 97; then vacillated.	No change before operation; after operation it varied between 130 & 148; was between 82 and 90 before perforation.	Rose in frequency; very shallow.	Moderately distended; very rigid; painful on pressure.	Partial obliteration.	No count	Yes	3¼	Death in 75 hrs. after perforation and 71½ hrs. after operation.	No autopsy.....	Much congested and inflamed; removed at operation.	Two perforations found in ileum within 8 in. of colon; and one pin-hole perforation 15 in. above cecum, closed by plastic lymph and adherent omentum and surrounded by old peritonitis. Free pus in peritoneal cavity.

may include the muscular layer and subserous tissue and leave only the peritoneal coat, through which infection may pass and cause a local peritonitis. Again, it may involve the whole thickness of the intestinal wall, and when the slough separates a complete perforation results, varying in size from a pin hole to an opening including a third or more of the circumference of the bowel. The escape of intestinal contents and infective germs may vary from a minute quantity to a sufficient amount to flood a great portion of the peritoneal cavity, depending usually on the size of the perforating ulcer. When the amount of leakage is great, general peritonitis is almost certain to appear in a very short time. When the opening is extremely small and the leakage slight,

there may be only a localized peritonitis. In Case 11 of this series it was disclosed at operation that there had been an early pin-hole perforation with localized peritonitis to the extent of eroding the bowel of its glossy appearance throughout the affected area, and later two large ulcers in other locations had perforated, causing the symptoms which called for operation. The primary perforation had been closed by plastic matter and the adhesion of the neighboring omentum.

In certain cases in which the peritonitis is limited and limiting adhesions and walling off has occurred, abscesses may appear and require to be dealt with weeks and may be months afterward.

In form the perforation may be large and irregular,



large and circular, small and cribriform, or it may be slit-like or oblong. The large circular ulcers are thought to be due to sloughing, the cribriform to ulceration, and the slit-like to mechanical traumatism. They are usually opposite the mesenteric attachment, though rarely they may open between the folds of the mesentery and cause a retroperitoneal abscess.

The perforation, as a rule, is single. In the five patients operated on, however, it was single in only two; in two of the cases there were two perforations, and in one three.

The site of perforations is usually found in the lower end of the ileum within from 12 to 18 inches of the cecum. Infrequently it may occur at any point along the digestive tract. It is not infrequently seen in the cecal region of the colon, including the appendix. Typhoid ulceration (rarely with perforation) may be found widely scattered along the digestive tract. A number of well-authenticated cases of typhoid ulceration of the esophagus and consequent stricture have been reported. Mitchell<sup>5</sup> reports eight cases. I have seen two cases of esophageal stricture following well-authenticated typhoid fever. In neither case could the stricture be charged to traumatism occurring in the course of the disease. In both cases it supervened before convalescence was established. The first case was in a young girl of 20, seen in consultation with Dr. F. J. Campbell of Fargo, N. D., about ten years ago. The stricture was located about the junction of the middle and upper thirds of the esophagus. Soon afterward the patient developed an empyema which so reduced her strength that she could not undergo an operation for the stricture, which still persisted, and she died a few weeks later. The second case, also in a young girl of about 20, was seen in consultation with Dr. John H. Dunn, of St. Cloud, about three years ago. The stricture was located at the junction of the middle and lower thirds. Later it was found necessary to do a gastrostomy to assist in overcoming the stricture. The patient, I am informed, made an excellent recovery.

#### SYMPTOMS.

Perforation in typhoid fever rarely occurs during the first week of the disease; the majority of cases are seen during the second and third weeks; it may occur, however, at any time during the latter part of the disease and convalescence. It is not infrequently seen during a relapse. The so-called preperforative symptoms are usually too vague and indefinite to be of much practical value to the average practitioner doing his work outside of hospitals.

*Pain.*—The earliest reliable symptom of perforation is pain, which usually is complained of in the cecal region; it may be referred, however, to the epigastric or pelvic regions. Occasionally pain is complained of in the genitals. The character of the pain may vary from a severe stabbing nature to more or less of a dull ache. Often its severity will cause the patient to cry out from his suffering. Patients who are irrational may fail to complain of pain. Occasionally with pin-hole perforations and limited peritonitis there may be no complaint of pain (Case 11).

*Rigidity.*—The next most important symptom is rigidity of the abdominal muscles, following quickly after the appearance of pain. This rigidity may be confined to the right internal and external obliques and the recti muscles, or the whole abdomen may be rigid.

*Tenderness.*—This is the next symptom of marked importance and is usually found in the cecal region, though it may also be adduced by pressure toward the epigastric or pelvic regions. All other symptoms are of varying importance.

*Vomiting.*—This is a symptom which may occur coincidentally with, or soon after, the appearance of pain. In some cases of typhoid fever, however, vomiting is a symptom that appears early and frequently throughout the acute stage of the disease. In such a case its value as a symptom of perforation would not be of marked importance.

*Temperature.*—In quite a number of cases of perforation there is often a remarkable drop of temperature, sometimes to near the normal point; with the advent of peritonitis the temperature again rises.

*Pulse and Circulation.*—The shock of perforation and peritonitis usually lowers the force of the pulse, while the rate is greatly increased, often from the usual rate of 90 to the unusual one of 130 or more. The skin of the face and hands may appear pallid and even somewhat cyanosed, and is frequently covered with profuse perspiration.

*Respiration.*—The respiration may be somewhat quickened, but is not likely to become costal in character until peritonitis is established.

*Facial Expression.*—In perforation the expression of the face is often marked by anxiety, suffering and general distress to an extent which might be called characteristic, almost Hippocratic in type.

*Liver and Movable Dullness.*—Liver dullness must have been carefully noted, from time to time, prior to perforation, to be a symptom of important value. Pre-existing tympany may have reduced the area of liver dullness almost to the vanishing point before the admission of free gas into the peritoneal cavity. Movable dullness in the flanks is not likely to be present until peritonitis with effusion has appeared; hence it could only be a symptom of late value.

*Blood.*—Leucocytosis may be mentioned as a symptom of possible value. To be of practical utility, however, a leucocyte count would necessarily have to be made hourly as it (leucocytosis) would not appear until peritonitis had supervened, and to wait for this might be a waste of valuable time.

*Summary of Symptoms.*—Given a case of typhoid fever with clinical symptoms, pathognomonic of the disease, backed up by Widal's serodiagnosis, if possible, and presenting, after the first week, the three cardinal symptoms, pain, rigidity and tenderness in the cecal region, supplemented by some of the less valuable symptoms, and it will not only be expedient, but reasonable to diagnose intestinal perforation.

Osler's schema<sup>1</sup> for the observation of perforation symptoms should always be at hand for the observance of internes and nurses.

#### DIFFERENTIAL DIAGNOSIS.

It may be necessary frequently to differentiate between intestinal perforation of typhoid fever and acute appendicitis, with or without perforation; from intestinal hemorrhage of typhoid; from typhoidal peritonitis without perforation; from peritonitis due to tubal disease; from gangrene or perforation of the gall bladder; from perforating gastric and duodenal ulcers; and from suppurating mesenteric glands.

Time will not permit me to consider the symptoms, conditions and features that might be adduced in differ-

5. Johns Hopkins Hosp. Rep., vol. viii.



entiating each of the above. Cumston,<sup>6</sup> of Boston, in an extended review, terminates his article by saying: "In closing, I think I can sum up in a word all that has been said in this paper, namely, that every time an appendicitis exists, either alone or associated with typhoid fever, an operation is indicated." I believe the same conclusion, namely, operation, would hold good for all the other conditions, with the possible exception of intestinal hemorrhage, and even this has been surgically treated with reported success.

#### PROGNOSIS.

The prognosis in intestinal perforation of typhoid, without operation, is almost hopeless. The chances for recovery do not exceed 5 per cent., under the most sanguine expectations. With operation, the prognosis will depend, in a large measure, on early surgical interference, the extent of the peritonitis, the physical condition of the patient, and the absence of secondary perforation and intestinal hemorrhage. Some writers claim that there should be 50 per cent. of recoveries if the operation is undertaken within the first three hours. With the marked improvements in the treatment of peritonitis, these hopes would not seem to be too sanguine. At Johns Hopkins Hospital 30 per cent. of recoveries were obtained from all operations. In my fatal operative cases, one patient who was operated on 19 hours after symptoms of perforation lived for 55 hours and succumbed to general peritonitis; another lived ten days.

#### TREATMENT.

All patients with typhoid fever who have suffered intestinal perforation, immediately on diagnosis, should be treated by laparotomy, and the only deterrent to operation should be a moribund condition of the patient. Wilson has well said: "The courage to perform it (operation) will come of the knowledge that the only alternative is the patient's death."

*Anesthetic.*—I have used local anesthesia, from cocaine, and general anesthesia, with ether, and my preference is decidedly for the latter.

*The Incision.*—The incision that I have found the most useful and satisfactory is the one made through the right rectus muscle and opposite the cecal region. After gaining entrance to the peritoneal cavity the appendix and cecum—even the ascending colon—should be thoroughly examined; next, the lower portion of the ileum, beginning at the cecum. When the perforation is found, it is best to close it with a suture of linen or silk; if small, it can be readily closed with a purse-string suture; if large, Lembert's, Halstead's mattress, or Cushing's right-angled sutures may be used; in some instances, it will be well to strengthen with a second tier. There is a difference of opinion among writers as to whether the opening should be closed in the longitudinal or transverse direction of the bowel. Probably this is a matter of no particular moment, unless the opening is so large that the necessary suturing may diminish the lumen of the bowel to dangerously narrow proportions, in which case the question of resection may have to be considered. If there are other ulcers presenting a perforating appearance, it would be wise to place reinforcing sutures to prevent future accidents.

If the appendix is inflamed, as it frequently is, it should be removed, even though perforation is not present. In the last three cases it was found decidedly inflamed and in each instance it was removed.

The toilet of the peritoneum is important and probably would be the next step in the progress of the operation. If there has been a considerable escape of fecal matter, irrigation with normal salt solution would be of value. If fecal matter is not present (and the peritonitis is confined to the region of perforation) or has gravitated to the pelvis, the effusion fluid may be withdrawn by a suction syringe or removed by careful sponging. Tubular drainage should be introduced to the bottom of the pelvis, probably through a stab wound on the left, as well as through the operation wound on the right. This should be supplemented with the necessary amount of Penrose and gauze drainage. At this time the sutured portion of the bowel should be brought opposite the operation wound and maintained there by gauze or by a few stitches of ten-day catgut. This position of the bowel will be of decided advantage in case the suturing should yield and leakage result. Such portion of the wound unoccupied by drainage may be closed with through-and-through sutures. After the application of a voluminous dressing and the return of the patient to bed, he should at once, or as quickly as possible, be placed in Fowler's position to allow gravitation of effusion fluid into the pelvis, where the drainage has been placed. The after-treatment will consist of the necessary surgical attention and such general typhoid treatment as may be applicable.

If positive symptoms of postoperative perforation occur, one should not hesitate, if the patient's condition will permit, to reopen the wound or to perform a new laparotomy and deal with the conditions found. Cushing<sup>7</sup> reports a case with recovery in a boy of 9 years, in whom laparotomy was performed three different times: First, for perforation; second, for supposed perforation, and, third, for acute intestinal obstruction, when a new perforation was also found.

I am greatly indebted to Dr. W. H. Buskirk for his valuable and painstaking assistance in the examination and selection of data from our hospital and clinical records for the purposes of this article.

CASE 1.—Male, aged 26, was admitted to the hospital July 29, 1890; diagnosis typhoid fever. Temperature, 102.8; pulse, 80. No history is recorded of condition prior to admission. The course of the disease was moderately severe throughout, temperature running from 101.2 to 102 in the morning and from 103 to 104.8 in the evening; pulse averaging 85 and never going above 98. There was some diarrhea. The patient perspired freely at times.

August 9: At 7:15 a. m. temperature was 102.2; pulse, 92. Patient was suffering severe pain in abdomen. At 10 p. m. temperature was 101; pulse, 104. There was persistent vomiting of dark green material, with undigested milk.

August 10: At 7 a. m. temperature was 97.2; pulse, 100; patient still in great pain. At 4 p. m. temperature was 104; pulse, 130; patient covered with cold sweat. At 6:30 p. m. temperature was 101.4; pulse, 140; still in cold sweat.

August 11: Patient gradually sank and died at 8:45 p. m. Perforation occurred on the fourteenth day after admission, and death in from 48 to 50 hours after perforation. No autopsy.

CASE 2.—Male, aged 30, was admitted to hospital Feb. 4, 1891, having been sick one week; diagnosis typhoid fever. He had a moderate run of fever, with temperature running from 100.8 to 103.2, pulse averaging about 90. There was no diarrhea or hemorrhage; his general condition was good.

March 4: At 8 a. m. there was some pain in the abdomen; two hemorrhages occurred from the nose; there was vomiting during the late afternoon. Temperature was 100 in morning, rising to 103 at 1 p. m. and dropping to 102 at 4 p. m. Pulse was 98 at 8 a. m., 100 at 1 p. m., and 112 at 4 p. m. The symp-

6. "The Clinical Aspect and Differential Diagnosis of Appendicitis and Typhoid Fever," Amer. Jour. of the Med. Sciences, May, 1905.

7. Johns Hopkins Hosp. Rep., vol. viii.



toms grew rapidly worse and perforation was diagnosed. At 9 p. m. laparotomy was performed; median incision was made. Fecal matter was found scattered throughout the peritoneal cavity. A perforation, irregular in shape and nearly three-quarters of an inch in diameter, was found in the ileum about 15 inches from the cecum; an attempt at suturing followed, but was unsuccessful because of the friable and softened condition of the intestinal walls. Patient being in collapse, only drainage was inserted in wound.

He was returned to bed. His condition grew steadily worse and he died at 4 a. m. March 5, 12 hours (estimated) after perforation; on the sixteenth day of the disease. Partial autopsy revealed general peritonitis and a second perforation of the bowel 6 inches above the one found at operation.

CASE 3.—Male, aged 43, was admitted to hospital Oct. 17, 1891. He had been sick 10 days; diagnosis, typhoid fever. His condition was not bad; temperature varied from 101 to 102, and pulse from 80 to 92 on day of admission.

October 18: At 2:15 a. m. he had a chill; temperature, 103.2. At 3 a. m. there was severe pain in the abdomen, continuing during day. At 4 a. m. temperature was 104.6, and pulse 98. At 8 p. m. temperature was 104, and pulse 106.

October 19: At 4 a. m. temperature was 102.4, and pulse 104. At 8 p. m. temperature was 100, and pulse 112. The patient was feeble; he vomited several times during the day and sweated profusely; he had violent hiccough. The pain continued severe during day.

October 20: His condition grew worse during the early part of the night. At 4 p. m. temperature was 100.2, and pulse 124, and was growing more feeble and rapid. At 9:30 a. m. there was vomiting. At 9:38 a. m. death occurred. Perforation occurred on the eleventh day of the disease; death, 55 hours later. There was no operation. No autopsy.

CASE 4.—Male, aged 28, was admitted to the hospital Aug. 23, 1896. He had been sick seven days; diagnosis, typhoid fever. He had a severe run of fever, with temperature from 102 in the morning to 104.8 and 105 in the evening. Pulse from 106 to 126. There was slight diarrhea, some vomiting, and mental apathy with some delirium.

September 2: Patient had been in marked typhoid state and delirious; the abdomen was distended. At 7:30 p. m. respiration was very irregular, and there were involuntary bowel movements. Temperature was 101.2; pulse, 120, and respiration 24. At midnight the axillary temperature was 104; pulse, 132, and respiration, 32.

September 3: Temperature varied from 103 at 4 a. m. to 104 at 4 p. m., pulse ranged from 120 to 130, and respiration from 26 to 30. The patient was delirious, and the abdomen was distended.

September 4: At 4 a. m. the temperature was 102, pulse 120, and respiration 34. At 4 p. m. temperature was 103.2, pulse 144, and respiration 44. Symptoms of previous day were more marked.

September 5: All symptoms were increased in severity, and the patient died at 3:35 a. m. There was no operation. A partial autopsy showed abdominal ulcers, one of which had perforated. There was also considerable peritonitis.

CASE 5.—Male, aged 25, was admitted to hospital Oct. 14, 1897. He had been sick two weeks; diagnosis, typhoid fever. The fever ran a light course, the temperature averaging 103.6 in the evening and pulse not over 80.

October 23: There was hemorrhage from the bowel, but no symptoms of collapse; temperature fell from 101.8 to 98.8, and pulse from 76 to 60. The patient did well for several days after the hemorrhage, temperature and pulse running as before.

October 30: At 5:30 p. m. there was a sharp pain in the abdomen during passage of stool; respiration increased; face became pinched in appearance. The patient lay in bed with his knees drawn up. The temperature fell at first and then rose. Perforation was thought of, but the surgeon was not warned until next morning.

October 31: Operation was performed at 11 a. m., 19 hours after first symptoms of perforation. A median incision was made below the umbilicus. On opening the abdomen a large amount of gas and fecal matter escaped through the wound.

The intestine was covered with lymph deposit, and there were numerous adhesions. In the ileum, about 6 inches from the colon, a large perforation was found, which would admit the end of the fingers; the edges were well defined. Other unperforated ulcers were apparent through the bowel wall. The peritoneal cavity was sponged dry and flushed with normal salt solution; tubal drainage was inserted and the wound partly closed.

November 1: The condition became critical, and there was some vomiting. At 4 a. m. the temperature was 101, pulse 134. At 4 p. m. temperature was 101, pulse 130 and weak.

November 2: At 4 a. m. the temperature was 101, and pulse 144. At 4 p. m. temperature was 104.2, and pulse 160. The patient grew rapidly worse and died at 8:30 p. m.

Autopsy showed very severe general peritonitis, with extensive adhesions. Suturing in the bowel was intact. Perforation occurred on the thirtieth day of the disease; death occurred 75 hours after perforation and 56 hours after operation.

CASE 6.—Male, aged 37, was admitted to hospital Oct. 22, 1898. He had been sick ten days; diagnosis, typhoid fever. At the time of admission there was tympanites and some vomiting; rose spots were also present. The case ran a light course after admission to hospital until convalescence began. The man had a relapse, beginning November 4, but it was not severe. On November 9 he developed a phlebitis.

November 12: During the day the temperature ran high and the pulse increased. At 4 a. m. the temperature was 103.6 and pulse 106. At 4 p. m. the temperature was 104, pulse 108. At 9:30 p. m. there was sudden acute abdominal pain; the patient cried out in agony; the abdomen became rigid; extremities and face were cold and clammy; pulse was rapid, feeble and fluttering. Pain was referred to genitals.

November 13: At 4 a. m. the temperature was 102 and pulse 122. At 4 p. m. temperature was 97, pulse 122. There was severe pain throughout the day, with vomiting, delirium and cold sweat. Temperature was subnormal all day, running as low as 95.6. The condition grew worse, and the patient died at 10:30 p. m.

No operation was performed, because of the severe phlebitis and the low condition of the patient. Autopsy showed perforation of ileum 18 inches from the ileocecal valve, with free fecal matter and turbid fluid in the abdominal cavity. There were numerous ulcers with softened bases, one black and almost perforated, and a clot in the femoral vein extending into the pelvis.

CASE 7.—Male, aged 24, was admitted to the hospital Sept. 23, 1902. He had been sick two weeks; diagnosis, typhoid fever. Rose spots were present on admission. The case ran a severe course after admission, temperature running from 102.6, with pulse 96, in the morning to temperature of 105 and pulse 116 in the evening.

September 29: At 7 a. m. temperature was 102 and pulse 100. At 8 p. m. temperature was 103.2 and pulse 120. The condition of the patient was the same as on former days until 8 p. m., when there was hemorrhage from bowels.

September 30: At 4 a. m. the temperature was 101 and pulse 100. At 3 p. m. temperature was 101 and pulse 144. Blood count showed 7,894 leucocytes. The condition was serious; pulse was rapid and weak. He did not complain of pain; abdomen was rather rigid and somewhat tender on pressure: liver dullness was diminished.

October 1: At 8 a. m. the axillary temperature was 98 and pulse 120. At 8 p. m. the axillary temperature was 101.4 and pulse 150. He vomited during the day. Death occurred at 11:30 p. m. Perforation occurred on the nineteenth day of the disease. No operation (no reason given in clinical history). Death occurred in about 30 hours after perforation. No autopsy.

CASE 8.—Male, aged 20, was admitted to the hospital Jan. 23, 1903. He had been sick one week with prodromal symptoms of typhoid; diagnosis, typhoid fever. The general condition on admission was rather bad; the abdomen was distended and there was pronounced typhoid mental condition. At 7 a. m. the temperature was 103 and pulse 72. At 8 p. m. the temperature was 104 and pulse 94. The patient had two hemorrhages on January 24, one on January 25, another on



January 26; also a slight chill, and another hemorrhage on January 27. During this time the temperature continued high, and pulse ran from 78 to 84. There was no diarrhea.

January 31: The general condition was about the same. At 8:30 p. m. he was taken with sudden severe pain in the abdomen in the right iliac region. He had a chill at 9 p. m. The abdomen became distended and there was general abdominal tenderness more marked at McBurney's point. The pulse was rapid and weak, and the facial expression anxious and drawn. At 10:30 p. m. (diagnosis of perforation having been made) operation was performed under cocaine until bowels were exposed; then ether was given. The incision was made through the right rectus. The bowels were much distended, and there were numerous adhesions around the appendix, which was somewhat thickened and congested. The appendix was ligated and the stump turned in by means of formalized catgut suture. A small pinhole perforation was found in the colon within one inch of the appendix; it was closed with Lembert sutures of silk. An ulcer, with gangrenous look and threatening perforation, was found 4 inches from the ileocecal valve; it was reinforced with suture of silk. There were no signs of peritonitis and no increased amount of fluid in the peritoneal cavity. Only local drainage was used, and the wound was closed up to drain. For several days after operation the patient's condition was quite good.

February 3: At 4 a. m. the axillary temperature was 98.8 and pulse 80. At 8 p. m. the axillary temperature was 98.6 and pulse 92. Some distension was present and there was considerable vomiting on this day.

February 7: The patient's condition was serious. At 4 a. m. the temperature was 100.8 and pulse 120. At 8 p. m. the axillary temperature was 104.6 and pulse 128 and weak. The abdomen was distended and tender; there was no infection of the abdominal wound.

February 8: Condition was still serious. Temperature and pulse were about the same as day before. He had blood in stools twice on this day; there was not much reaction of temperature and pulse. At 4 a. m. temperature was 103.8 and pulse 130. At 8 p. m. temperature was 104 and pulse 130.

February 9: Patient's condition was much worse, temperature being uniformly high and pulse rapid and weak.

February 10: Temperature reached 105 and axillary pulse 150. Patient died at 12:20 a. m. February 11.

Complete autopsy: Examination was negative, except in the abdomen. The bowels were found covered with purulent exudate, but not distended; the catgut suture which had closed the stump of the appendix had been absorbed, and, as there were no attempts at repair, the stump was open. The perforation and ulcer, which had been reinforced with silk sutures, had held firmly. The peritoneal exudate was much more marked in the right iliac fossa than elsewhere. There were no fresh perforations. Perforation occurred on the forty-eighth day of the disease and death in ten days and four hours after operation. A mistake was made in this case in using catgut instead of silk for closing the appendiceal stump, and later in not reopening the wound for exploration.

CASE 9.—Male, aged 30, was admitted to the hospital Oct. 28, 1904. He had been sick ten days; diagnosis, typhoid fever. He had nose bleed, headache and other characteristic symptoms of the disease, which ran a severe course, the temperature ranging from 102, with a pulse of 96 in the morning to 104, with pulse of 104, in the evening. There was slight vomiting, with some delirium. There was no tympanites until November 1.

November 24: Axillary temperature was 98.4 and pulse 132 at 7 a. m.; respirations, 40. Patient was sweating. At 8:45 a. m. there was sudden severe abdominal pain, occurring in paroxysms; the expression was anxious. The patient was very restless; his lips were pallid; his extremities cold and covered with cold sweat. The abdomen was rigid and extremely tender, the tenderness being most marked in the right iliac fossa. The pulse was rapid, thready and almost imperceptible. At 9:40 a. m. death occurred.

Perforation occurred on the seventeenth day of the disease; death after perforation (estimated) in 55 minutes. No operation. No autopsy.

CASE 10.—Male, aged 24, was admitted to hospital Dec. 6,

1904. He was admitted primarily for injury, but complained of having been sick for two or three days. He developed a light run of typhoid; rose spots were present; temperature ran from 100 to 102 and pulse was practically normal; he complained early in the disease of some pain in the right fossa. Blood count, December 9, leucocytes were 10,186, and on December 15, 11,457. He had a typical convalescence, beginning December 24. Temperature was normal all day December 25. Diet was gradually extended. The patient was up and about.

January 17: He had a well-marked relapse, with all symptoms much more severe than during previous illness.

January 19: Temperature was 100.8, with pulse 104 in the morning. Temperature was 100.8, with pulse 110, in the evening. The condition was about the same on January 25.

January 26: Respirations ranged from 20 to 24 and were shallow; there was no delirium, no chills, no diarrhea. This condition continued without change until January 27.

January 27: At 7:30 a. m. the patient was taken with severe abdominal pain, paroxysmal in type and of a colicky nature. His face was drawn and his expression anxious; the lips were slightly pallid; the abdomen was board-like, and there was general diffuse tenderness, most marked in the right iliac fossa. Liver dullness was not obliterated. Perforation was diagnosed, and at 10:15 the patient was taken to the operating room.

Operation.—A lateral incision was made through the right rectus. The appendix was very much inflamed and was removed; the stump was closed with a purse-string suture of silk. The appendix was not gangrenous or perforated. The ileum was examined; two small pin-point perforations were found close to the cecum and were closed with purse-string sutures of silk. Two ulcers were found near the same area with their bases much inflamed; they were reinforced with continuous sutures of silk. About 12 inches from the colon a large perforation was found with well-marked borders and a punched out appearance; it was one-eighth of an inch in diameter. It was turned in with purse-string suture of silk. General peritonitis present; the abdominal cavity was filled with a seropurulent fluid. A tube and three Penrose drains were inserted to the bottom of the pelvis. The upper angle of the wound was closed with three interrupted sutures of silkworm gut. The patient stood the anesthetic well and was placed in bed in Fowler's position. During the evening he received a hypodermoclysis of physiologic salt solution and heart stimulants.

January 28: His condition was fairly good; temperature was 99.2 and pulse 98 in the morning; in the evening the temperature was 101.2 and pulse 116. There was profuse serous drainage from the wound; the abdomen was slightly distended. There was a small bowel movement.

January 29: His condition was fairly good; temperature was 98 and pulse 88 in the morning. Temperature was 99.8 and pulse 100 in the evening. The Penrose drains were removed and glass drains inserted. The discharge became more purulent; there was some tympanites and some flatus was expelled.

From now on improvement continued; there was some infection of the wound, which promptly cleared up. He did not have much temperature after the operation. Diet was extended on February 18. He was sitting up in bed on February 22, and was up and about on February 28. He had a slight relapse, not severe, on February 28, which only lasted eight days. Improvement in all respects followed. He was discharged, cured, on April 12, 1905. Perforation occurred on the fifty-second day of the disease and the tenth day of the relapse. He was operated on 2 hours and 45 minutes after perforation occurred.

CASE 11.—Male, aged 43, was admitted to the hospital Feb. 16, 1905, on the tenth day of the disease. He had a light run of typhoid; there was enlarged spleen, and rose spots were present. Temperature ranged from 100.8 in the morning to 101.6 in the evening; the pulse varied from 80 in the morning to 88 in the evening. There was considerable tympanites, but no diarrhea. There was no delirium, but the mental condition was dull throughout.

February 21: His condition in the morning was similar to



that of the last few days, but at noon he was taken with severe abdominal pain; there were symptoms of collapse; the pulse became more rapid and weak; the patient was covered with profuse cold sweat; face was pinched; lips were pallid; abdomen was rigid and very painful on pressure; there was partial obliteration of the liver dullness. At 12:30 he had a chill; at 3:15 he was operated on. A lateral incision was made through the right rectus. On opening the abdomen a large amount of pus was found between coils of intestine; the appendix was inflamed and congested and was removed. Two perforations were found within 8 inches of the colon; they were closed with a purse-string suture of linen. About seven inches above this was found a small pin-hole perforation which had been closed by plastic matter and adhesion of the neighboring omentum. All the bowel in this area showed signs of old peritonitis, which must have existed for some days, as the surface of the intestine was eroded and roughened. Pus and other effusions were wiped out carefully with moist gauze, and the peritoneal cavity made apparently clean. One rubber tube drain was inserted to the bottom of the pelvis and five Penrose drains were inserted in various directions. The upper angle of the wound was closed with through-and-through sutures of silkworm gut. The patient was placed in Fowler's position after return to bed. During the afternoon his condition was very critical. At 7 p. m. his temperature was 101.4, pulse 130 and weak. Stimulants were administered, such as enemata of coffee, whisky and normal salt solution, by hypodermoclysis. The wound was dressed in the evening; there was profuse drainage.

February 22: The condition was not so good; at 7 a. m. the temperature was 98 and pulse 134; at 7 p. m. temperature was 98.6 and pulse 140. Some gas was expelled following an enema of turpentine and asafetida. There was profuse seropurulent discharge from drains.

February 23: The condition was worse. At 7 a. m. the temperature by axilla was 102 and pulse 148; at 7 p. m. the temperature by axilla was 100 and pulse 134. He gradually grew weaker. Some gas was expelled following an enema; at 6 p. m. a large amount of blood was passed in the stool.

February 24: Condition was still very bad. At 12:45 a. m. there was more blood in stools; at 2:15 a. m. there was an extensive hemorrhage from bowels; at 7 a. m., axillary temperature was 102, pulse 148 and almost imperceptible. Death at 2:45 p. m.

Perforation occurred on the fifteenth day of the disease; death occurred 74 hours and 45 minutes after perforation and 71 hours and 30 minutes after operation. No autopsy.

### THE IMPORTANCE OF THE FIRST STEPS IN ARTIFICIAL FEEDING OF INFANTS, WITH PRACTICAL POINTS ON THE USE OF TOP MILK MIXTURES.

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There is probably no cause of chronic digestive disturbances in infancy which can be more easily avoided than improper methods of artificial feeding during the first few months of the infant's life, for this is the time when the average infant receives little, if any, of the physician's attention. Most of the ills of this period are ascribed to immaturity or to innate depravity, and the newborn one is left to work out his salvation with the aid of the attendant nurse and family.

Holt has repeatedly affirmed that under favorable conditions, when he can have entire charge of the infant's feeding from the start, it is exceptional for him to encounter any real difficulty in carrying out the infant's nutrition. This, he thinks, is due as much to the first steps as to his constant subsequent management of the case. Even a brief survey of the subject will reveal cer-

tain undeniable facts. The nutrition of the infant, as Chapin points out, should be divided into the preplacental, the placental and the mammary stages, during all of which the infant should be regarded as attached to the mother. At the beginning of the mammary stage the infant's stomach is only rudimentary. The newborn infant is undoubtedly best adapted to its own mother's milk. The nearest approach to this is the milk of another woman, but when we attempt to make use of cow's milk we are at once dealing with a foreign substance, and no amount of modification will make it anything else. This can be well demonstrated by reference to a table published by Heubner.<sup>1</sup>

Time by which Weight is doubled.		Analyses of Milk.			
Days.		Proteid.	Ash.	Lime.	Phosphoric Acid.
Human.....	180	1.0	0.2	0.032	0.047
Horse .....	60	2.0	0.4	0.124	0.131
Calf .....	47	3.5	0.7	0.160	0.197
Goat .....	19	4.2	0.8	0.210	0.322
Pig .....	18	5.9	..	..	..
Sheep .....	10	6.5	0.9	0.272	0.412
Cat .....	9.0	7.0	1.0	..	..
Dog .....	8.0	7.3	1.3	0.43	0.493
Rabbit .....	7	10.4	2.4	0.891	0.996

It would seem that the rapidity of growth is in direct proportion to the amount of proteid in the milk, and that the natural process of growth in the human species is very slow. The coincidence of a low proteid and a slow growth can mean only that the infant's powers of digestion are unsuited to a stronger, tougher nutriment, and are but slowly developed. Additional proof that growth in the infant is intended to be slow is found in the fact that the proteid of the mother's milk, low as it is, is yet sufficient for the needs of the infant, not only during the whole of the period, during which the weight is doubled—a period varying from four to seven months—but also for a longer time until weaning may be demanded.

The physical characteristics of human milk and cow's milk, when they are introduced into the infant's stomach, have been so often stated as to make repetition unnecessary. No one can overlook the fact that the mechanical action of the curd of cow's milk, apart from the complicated question of its chemical properties, is fundamentally different from the action of the curd of human milk, and, as Chapin well expresses it, this points strongly to the fact that the stomach of each species depends largely for its development on the stimulus afforded by the proteid content of its own proper milk. An absolute liquid diet offers no such stimulus, but in the case of the infant the soft flocculent curd is evidently sufficient for the purpose, which, in the case of the calf, demands coarser excitation for its accomplishment. Of the so-called "vital characteristics" of milk by which we understand that each milk shall be best suited to the young for which Nature intended it, too little is definitely known to make discussion profitable. Statistics are so overwhelming in proof of the fact that the breast-fed infant far surpasses the artificially fed infant in expectancy of life that further comment is unnecessary. The causes for the high mortality of artificially fed infants are undoubtedly the disturbances which may properly be classified as gastrointestinal, originating in the inability of the infant to digest its food. It is impossible to compute the part

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1. Ziet. für Diät. u. Physik. Therapie, vol. ili, p. 1, 1899. Abst. from Archives of Pediatrics.



played by bacteria in this high mortality, but the underlying cause has probably much to do with physiologico-chemical conditions. Of these ills innumerable pages have been written; and since Rotch first drew attention to the science of percentage feeding it would seem that, from the mechanical standpoint, we have almost exhausted the possibilities of the modification of milk to suit the varying powers of the infant's digestion. Sufficient stress, however, has not been laid on the importance of the gradual education of the newborn infant's digestive apparatus to accustom it to the foreign material which it is so often called on to receive.

This problem of the artificial nourishment of the infant often confronts us at the start; or the maternal secretion may suffice for a few days or weeks, but soon has to be aided and, later, substituted, by some hand-made mixture. At any period in infancy such substitution of an unnatural for a natural food requires a gradation in the steps of the process. Such a gradation is exceedingly important in the case of the newborn infant. Let us take a concrete example of what often happens in a case in which the nurse is untrained. The mother's supply of milk fails within the first week of the puerperium. The nurse on her own initiative adopts her favorite method of feeding, usually cow's milk and water in equal parts; or perhaps a mixture made with condensed milk. In the haste of the moment and the security engendered by the fact that millions of infants have survived haphazard methods of feeding, the physician may at once dismiss the subject from his mind. Provided there are no undeniably bad results, these feedings are continued at the discretion of the nurse or mother. If this discretion be tempered with common sense or useful experience, all may be well, or the infant may belong to the fortunate class which can digest anything. Frequently, however, the sequence of events will be somewhat as follows: The infant soon begins to exhibit signs of indigestion and is designated by the nurse as a colicky baby. The frequent use of carminatives, with or without opium; mainly, however, the fact that the infant sleeps most of its first days and therefore takes little of the indigestible mixture, will probably tide the case safely over the two or three weeks usually allotted to the puerperium. The baby has grown, the mother is satisfied, the physician is busy and unsuspecting, and the nurse departs more than ever convinced of her ability to feed the newborn. In the absence of any training to the contrary, she is certainly not blameworthy.

Within a few weeks or less the signs of disturbed digestion become too marked to be overlooked. Then will begin the endless succession of infant foods, or the physician will be called. Careful questioning at this time will elicit the fact that the departure from the normal condition of digestion has been present almost from the start. The disturbances may have been ascribed to various recent exciting causes, while the underlying predisposing cause of an unsuitable diet at the outset has been overlooked. Depending on the length of time the mother has persisted in her efforts to feed the child will be its condition when the physician's advice is first asked. There is apt to be fretfulness, if not actual crying. The child is restless, constantly craving, and usually constantly receiving, its nourishment. The degree of disturbance as evidenced by the gastrointestinal symptoms varies, but the stools almost invariably give evidence of indigestion, if not of actual enteritis. There is more or less atrophy, the muscles are flabby, and, in a very

large proportion of protracted cases, the signs of rickets are present in a well-marked degree.

The outcome in such a case is uncertain and will depend largely on the child's surroundings and the care it receives. The infant is doubly exposed to the danger of progressive atrophy, of intercurrent disease, especially bronchopneumonia, the acute gastroenteric disorders arising from infected milk or other unsuitable dietary, and the exhaustion incident to the heated term which predisposes to these disorders. Even with the most careful and painstaking treatment, it may be weeks or months before the stools present a normal appearance.

Such types are constantly seen in dispensary practice, although the number among the more fortunate classes is by no means small. The ultimate fate of many of these infants who recover after a protracted attack of indigestion is open to conjecture, as they often pass out of the experience of the individual physician. An interesting field for statistics here presents itself. It is reasonable to suppose that they are at least handicapped in the race of life, even though all traces of their former ill health shall have disappeared within a few years.

The disadvantages of such protracted attacks of indigestion are obvious, but the difficulty of correcting them is equally so. Apart from cases of congenital disease or the ills attendant on the pauperism of many of the city's poor, many of these difficulties may be avoided by proper care at the start of the infant's feeding. It may also be well to call attention to the fact that by no means all the maternal milk secreted is fit for the infants who receive it. Analyses of specimens of milk in many cases in which the maternal supply fails in the first few months of the infant's life will show disturbances in the normal proportions of the ingredients of the milk, which may easily prove to be the starting point of digestive disturbances even before artificial feeding has been attempted. Persistence of indigestion in the case of an infant fed solely on breast milk, therefore, should demand an investigation of that milk.

As is often the case, it is easier to point the moral than to explain how the necessity for it may be avoided. The difficulty for the general practitioner lies in (a) the time it takes to instruct the mother, (b) the failure of the mother to co-operate, and (c) the difficulty in obtaining milk of the necessary purity and of known strength. For the fortunate few who can command laboratory milk, these objections are reduced to a minimum. While there are many useful formulæ for the preparation of milk mixtures they are difficult to memorize or to apply. Into the present discussion these objections do not enter, as the use of scientifically accurate percentage modifications is demanded chiefly as a curative, not necessarily as a preventive measure. To take up, first, the question of the milk supply, it may be stated that unless cream of known composition and of unimpeachable purity can be obtained, nothing can exceed the usefulness of top milk, i. e., the milk and cream which are removed from the top of a quart bottle of milk on which the cream has thoroughly "raised." If it is possible to use certified milk of a definite fat percentage, excellent results can be obtained in the vast majority of cases. The expense of a single quart of certified milk daily, an amount sufficient during the greater part of infancy, is not so prohibitive as it often seems. So much of the ordinary market milk is now provided in jars bottled at the dairy under fairly good conditions of hygiene that, even without the aid of pasteurization, good



results may usually be obtained with it. Whenever it is feasible, the personal investigation by the physician of one or more dairies will often enable him to recommend a useful product at market rates. The methods of obtaining the desired percentages in the milk mixtures can be made extremely simple, so as to demand no more time than ordinary prescription writing. The only requirement is the knowledge of the percentages of ingredients in varying amounts of top milk.

According to the analyses published by Holt, the upper portions of quart bottles of good average milk which have stood undisturbed for at least eight hours after bottling, will contain approximately the following percentages:

HOLT'S TABLE.			
	Fat.	Sugar.	Proteid.
Upper 16 oz. or 1/2 bottle:.....	7	4.40	3.40
Upper 11 oz. or 1/3 bottle:.....	10	4.30	3.30
Upper 8 oz. or 1/4 bottle:.....	13	4.15	3.25
Upper 6 oz. or 1/5 bottle:.....	16	4.05	3.20

With Mr. Walter Cuthbert in 1902 and 1904 I made numerous tests of top milk from bottles of a milk which receives the certificate of the Philadelphia Pediatric Society.

Fat in Whole Milk.	Fat in Top of Milk.		
	Min. Fat. Per ct.	Max. Fat. Per ct.	Average Fat. Per ct.
4 to 4.2 per cent.	9.7	10.8	10.0 In 12 oz. of top milk.
5.1 to 5.4 per cent.	12.6	13.2	12.9 In 12 oz. of top milk.
4.1 to 4.5 per cent.	8.4	10.2	9.63 In 14 oz. of top milk.
4.7 to 5.5 per cent.	9.9	12.3	11.57 In 14 oz. of top milk.
4.2 to 4.5 per cent.	7.4	9.0	8.16 In 16 oz. of top milk.
4.7 to 5.5 per cent.	8.5	10.8	9.64 In 16 oz. of top milk.

While the quantities of top milk taken for most of our examinations did not correspond with those given by Holt, our test of a whole milk of a fat percentage of 4.2 gave 7.4 per cent. of fat in the upper 16 ounces—a result which is sufficiently close to prove his point when we consider that the average milk to which he alludes probably ran as much below as it did above 4 per cent. of fat. In an isolated test of an average market milk of a fat percentage of 3.8, we found 12.6 per cent. fat in the upper eight ounces, which again substantiates Holt's figures.

The great variability of the fat percentage in top milk is well known. Even the advocates of cream-milk mixtures, however, can not claim immunity from this variation, for this ingredient fat is notoriously uncertain. The dilution of top milk necessary for young infants will materially reduce this variation in the fat content, and the healthy infant will usually experience no difficulty with it.

It is with the proteid, however, that there is need of greater accuracy, and with this ingredient of milk we fortunately find much less liability to variation than is the case with the fat. In many of the analyses of former years the proportion of proteid in cow's milk was always given at approximately 4 per cent. More recent works have stated that this percentage is nearer 3.5 than 4 per cent.

The sugar in cow's milk will approximately equal 4.5 per cent. In dealing with top milk, while it must be remembered that the percentage of proteid and sugar will decrease as the percentage of fat increases (see Holt's table), for practical purposes allowance need

only be made for this when we use 13 or 16 per cent. cream. For whole milk, skimmed milk, 7 per cent. cream and 10 per cent. cream, the sugar may be calculated as 4.5 per cent. and the proteid as 3.5 per cent.

Of equal importance with the strength of the milk is the knowledge of certain other data in regard to the actual feeding of the infant. The amount and frequency of the meals, as well as the strength of the mixture, are usually left to the nurse or to the mother, whereas the former count quite as much toward success as the latter. When an infant is to be taught to take cow's milk it is as easy to accustom it to the proper amount and to the proper interval between feedings as to the milk mixture itself. The rules for the strength of the mixture, the total amount of the mixture and the frequency of the meals are necessarily somewhat arbitrary and are subject to frequent revision. The proper interval should be more strictly adhered to than the amount or strength of the mixture. For example: A three-months-old infant may be taking three ounces of a 3-6-1 mixture every two and one-half hours, but it may show by evident dissatisfaction after each meal and by failure to gain in weight that both the amount and strength of the mixture need to be increased, while the interval may usually be bridged over with plain drinking water or barley water given in the bottle. Only in exceptional instances, such as illness, should the interval be lessened. The number of feedings will depend largely on the initial training of the child and on the appropriateness of the mixture to its nutritional needs. Much depends on the manner of training, and for the sake of the mother as well as the child, it would be well at least to attempt a strict adherence to rule. During the first two months of the child's life two night feedings will probably be necessary; from the third to the fifth year one night feeding should be sufficient. Often before the fifth month and always after it night feedings should be abolished; that is to say, any meal taken later than 9 p. m. or earlier than 6 a. m., except in cases of illness when the amount of nourishment taken by day may be insufficient to tide the child over the nine-hour period. In the case of the healthy infant, however, there can be no more reason for dispensing with a proper interval of rest for the digestive function than there is in the adult. Frequently will it be found that the stopping of an injudicious prolongation of the habit of night feeding will at once control an indigestion which no amount of care expended on the day feeding has checked. The number of day feedings will obviously depend also on the sleeping propensities of the child, as will the intervals between the feedings. Persistent habits of sleeping by day and waking at night can only be broken by arousing the infant at the proper intervals.

As an aid to memory, the following condensation of facts may be advocated: During the first two months of life the interval between feedings should be two hours; during the second two months the interval should be two and one-half hours. After the fourth month the interval should be three hours. The amount of mixture to be given at different ages may be stated approximately as follows: First week, 1 ounce; second and third weeks, 1½ ounces; fourth week, 2 ounces. From the second to the seventh month, inclusive, the amount of mixture in ounces varies from the number of the month to one in advance of it; for example, third month, from 3 to 4 ounces; fifth month, from 5 to 6 ounces, etc. Rarely will it be advisable or necessary to administer more than 8 ounces at one feeding. Finally, there should be considered the strength of the milk mixture.



It may be assumed that the average healthy infant can digest whole cow's milk at the age of from 8 to 12 months. Infants above the normal may, and certainly do, accomplish this at an earlier age, but the risk of such forcing is not justified by the results, and, indeed, is often disastrous. For certain infants, the digestion of whole milk at any time during the first two years of life may prove to be a hopeless attainment. For such the limits of top-milk mixtures and of this discussion are alike insufficient. For the average, however, the end to be attained in milk modification is a 4-4.5—3.5 basis (whole milk) at the age of from 8 to 12 months.

The first three months are the crucial period and the mistake most commonly made is when the artificial feeding is begun. During this period the strength of the first milk mixtures should be as follows: Fat, 1.5 to 2 per cent.; sugar, from 4 to 5 per cent.; proteid, from 0.5 to 0.75 per cent. The strength of this mixture must naturally be increased quite rapidly at first as compared with later mixtures. By the third or fourth month, the fat should have been increased to from 2.5 to 3.5 per cent. sugar to 6 per cent. and the proteid to from 1.5 to 2.5 per cent. From the eighth to the twelfth month the strength of whole milk should have been reached.

The cardinal points for guidance in increasing the strength of the mixtures are the condition of the child's digestion, the gain in weight and what may be called the "subjective needs" of the child itself. The latter, that is, the hunger of the child may safely be consulted provided the digestive function is not impaired. The spurious hunger of infants with chronic gastroenteric disorders must not be confounded with the healthy appetite.

In this connection it is important to remember that the good or bad effects of any given formula must not be judged too hastily. Except in the presence of an active diarrhea or the result of a purgative, the appearance of a stool gives evidence of a meal taken at least twenty-four hours before, or even longer. It is also important to remember that no single stool, but a succession of stools, is necessary to prove a point. A change in the milk formula must, therefore, not be made too hastily.

The importance of weighing the child can safely be reiterated. Stated roughly, a healthy child should gain from 5 to 7 ounces a week during the first four months of life, from 3 to 5 ounces during the fifth, sixth and seventh months, and from 2 to 4 ounces from the eighth to the twelfth month. Daily weighings are apt to be misleading. At first bi-weekly, and later weekly weighings are sufficient. The clothing factor must be the same at each observation or else strict allowance must be made for it; weighings should be made as nearly as possible at corresponding times, both as to the hour of the day and the interval that has elapsed since the last feeding.

As has been said, one of the greatest difficulties in the application of our knowledge of infant feeding lies in the time required to expound the essentials of this knowledge in an intelligible form to the mother. The knowledge of the strength of the top milks to be used is requisite. To repeat, the upper sixteen ounces of average milk (4 per cent. fat), contains, approximately, 7 per cent. fat; the upper 11 ounces, 10 per cent. fat; the upper 8 ounces, 13 per cent. fat, and the upper 6 ounces, 16 per cent. fat.

Speaking of the different top milks as 16 per cent. cream, 13 per cent. cream, 10 per cent. cream, etc., it

is interesting to note that the proportion of fat to proteid in 7 per cent. cream is approximately, as 2 to 1; in 10 per cent. cream as 3 to 1; in 13 per cent. cream as 4 to 1, and in 16 per cent. cream as 5 to 1. In whole milk, which contains 4 per cent. fat, the proportion is approximately 1 to 1.

The determination of the proportion of ingredients of a mixture to be made with the above-described top milks becomes merely a matter of simple division. For example, diluting 7 per cent. cream with equal parts of water will give us a mixture of half the strength or fat 3.5 per cent., sugar 2.25 per cent., proteid 1.75 per cent. One part of 7 per cent. cream with two parts of diluent will yield a mixture of one-third strength, or fat 2.3 per cent., sugar 1.50 per cent., proteid 1.1 per cent. In both of these instances the proportion of fat to proteid is as 2 to 1. The same dilutions of 10 per cent. cream with one or two parts of water would give, respectively, 5 per cent. and 3.3 per cent. of fat, the sugar and proteid remaining the same. In like manner, a number of mixtures may be devised, working only on the few elemental figures given. Refinements in the method may be introduced with the use of skimmed milk or that portion of the contents of the quart bottle which is left after all the cream has been removed with the top milk. Skimmed milk is practically fat free, the sugar and proteid being approximately the same as in top milk.

It remains to consider the question of the sugar. The amount of this ingredient necessary to bring the proportion up to the amount required for the proper nourishment of the infant is from 5 to 7 per cent., and to obtain this we need only employ a 3, 4 or 5 per cent. sugar solution as a diluent instead of plain water. A 5 per cent. sugar solution obviously would consist of 1 ounce of sugar with 20 ounces of water, or fractions thereof. A 4 per cent. sugar solution consists of 1 ounce of sugar in 25 ounces of water; a 3 per cent. of sugar solution consists of 1 ounce of sugar in 33 ounces of water. Three level tablespoonsful of lactose approximately will equal 1 ounce. With these data at our command we may best demonstrate the method of using them by citing a concrete instance. Suppose an infant of normal development is to be fed artificially at the end of the first week of its life. The proportion of fat in the mixture should be about 1.5 per cent., sugar 4 per cent., and the proteid .75 per cent. The amount of the mixture to be given at each feeding should be about 1 ounce, and there should be prepared from ten to twelve feedings for the twenty-four hours' consumption.

For the preparation of the mixture, beside the quart bottle of milk on which the cream has been left undisturbed, there will be needed a supply of lactose or milk sugar, a six or eight-ounce graduate or other receptacle of known capacity, a supply of boiled water, a quart fruit jar and a bowl for mixing. With care it is possible to pour off the upper 10 to 16 ounces of a quart bottle of milk in such a manner as to secure practically all the cream, but more desirable, and for smaller quantities indispensable, is the 1-ounce milk dipper, of which there are several designs on the market. To obviate the possible danger of the milk dipper it should be scalded immediately after, as well as before, its use. All the other utensils should likewise be scalded before being used.

In the case above noted, our instructions to the nurse or mother would be given in writing as follows:

Remove the upper sixteen ounces of top milk. Dissolve one



level tablespoonful of milk sugar in eleven ounces of boiled water. Put three ounces of top milk and nine ounces of sugar water into a scalded jar, cover and set on ice. Feed one ounce of this mixture every two hours.

In explanation of this, we must remember that the desired feeding for twenty-four hours must consist of 12 ounces of mixture containing approximately 1.50 per cent. fat, 4 per cent. sugar and 0.75 per cent. proteid. The fat-proteid proportion in this being 2 to 1, we may use 7 per cent. cream (upper 16 ounces), which contains 7 per cent. fat, 4.5 per cent. sugar and 3.5 per cent. proteid. A dilution of this four times, or 3 ounces of 7 per cent. cream and 9 ounces of diluent, obviously will give us 1.75 per cent. fat, 1.12 per cent. sugar and 0.87 per cent. proteid; the use of 3 per cent. sugar solution as the diluent will supply the deficiency of sugar.

When we desire to increase the strength of this mixture it may be done conveniently by simply shifting the proportion of cream and sugar solution. For example, three parts of cream and nine parts of diluent (one in four) equals 1.75 per cent. fat, 1.12 per cent. sugar and

	Fat.	Sugar.	Proteid.
One part of 4 per cent. milk with one part of diluent (1 in 2).....	2.00	2.75	1.75
One part of 5 per cent milk with one part of diluent (1 in 2).....	2.50	2.75	1.75
One part of 7 per cent. cream with one part of diluent (1 in 2).....	3.50	2.75	1.75
One part of 4 per cent. milk with two parts of diluent (1 in 3).....	1.33	1.50	1.16
One part of 5 per cent. milk with two parts of diluent (1 in 3).....	1.66	1.50	1.16
One part of 7 per cent cream with two parts of diluent (1 in 3).....	2.33	1.50	1.16
One part of 10 per cent cream with two parts of diluent (1 in 3).....	3.33	1.50	1.16
One part of 4 per cent. milk with three parts of diluent (1 in 4).....	1.00	1.16	.87
One part of 5 per cent. milk with three parts of diluent (1 in 4).....	1/25	1.16	.87
One part of 7 per cent. cream with three parts of diluent (1 in 4).....	1/75	1.16	.87
One part of 10 per cent. cream with three parts of diluent (1 in 4).....	2.50	1.16	.87
One part of 13 per cent. cream in two parts of diluent (1 in 3).....	4.33	1.38	1.08
One part of 10 per cent. cream, one part of skimmed milk, one part of diluent (1/3 fat, 2/3 sugar and proteid).....	3.30	3.00	2.33
One part of 13 per cent. cream, one part of skimmed milk, one part of diluent (1/3 fat, 2/3 sugar and proteid).....	4.30	3.00	2.33
One part of 10 per cent. cream, two parts of skimmed milk (1/3 fat, sugar and proteid same as in milk.) (None.).....	3.9	4.50	3.50

0.87 per cent. proteid. Four parts of cream and eight parts of diluent (one in three) equals 2.30 per cent. fat, 1.50 per cent. sugar and 1.16 proteid. By increasing the cream half an ounce (one tablespoonful) at a time and decreasing the sugar solution by the same amount, we would gradually pass from a 1.75, 1.12, 0.87 basis to a 2.33, 1.50, 1.16 basis. The fat-proteid proportion remains the same. When we deal with larger quantities of mixture the change can be made more gradually. For example, in the second week of life the total quantity of mixture becomes 18 ounces instead of 12 (11½ ounces at a feeding). One part of cream and three parts of diluent becomes, therefore, 4½ ounces of cream and 13½ ounces of sugar solution (fat 1.75 per cent. sugar, 1.12 per cent. proteid, 0.87 per cent.). Six ounces of cream and 12 ounces of sugar solution (one in three) would give us 2.33 per cent. 1.50 per cent. sugar and 1.16 per cent. proteid. By increasing the cream half an ounce at a time and decreasing the sugar solution by the same amount we would pass during the second and third week to the latter strength. By the fourth week, when 2 ounces are generally needed at a feeding, the total quantity of mixture becomes 24 ounces instead of 18. Eight ounces of cream and 16 ounces of sugar

solution (one in three) still gives us the 2.33, 1.50, 1.16 basis, which will probably be sufficient for the second month. By the third month, when the interval between feedings will be increased to two and a half hours with 3 ounces at a feeding, the total feedings will not exceed ten; and 30 ounces of mixture will be sufficient. Ten ounces of cream and 20 ounces of sugar solution (one in three) may then be gradually increased, one-half ounce at a time, to 15 ounces each of cream and sugar solution, which would represent 3.5 per cent. fat, 2.25 per cent. sugar and 1.75 per cent. proteid. As an example of some of the formulæ which can be obtained with milk and top milk the table in the preceding column may be cited.

The mother must be instructed to thoroughly mix the contents of the jar by shaking before pouring out the feeding and to warm the latter by standing the feeding bottle in hot water before administering the milk. The preparation of all the bottles necessary for the day's feeding at the time of making the mixture is distinctly desirable, but can only be advocated in the case of enthusiastic co-operation on the part of the mother.

If the foregoing instructions seem complicated at first reading a few moment's reflection will surely prove the reverse to be true. The data to be memorized are the fundamental strengths of milk and certain creams; the rest is simple division.

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### IMPROVED OPERATION FOR HYPOSPADIAS INVOLVING THE GLANS AND PENILE PORTION OF THE URETHRA.

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Hypospadias is a condition due to want of fusion of the lips of the urogenital sinus which go to form the urethra and varies in degree from an unduly large meatus to a completely cleft urethra. This deformity, unlike the somewhat similar condition of epispadias, never extends into the bladder, and incontinence of urine is, therefore, not one of its complications.

In hypospadias affecting the glans the inconvenience may be so slight as to be almost unnoticeable, but it increases the further back the cleft extends. There are two troubles in connection with hypospadias: In the first place the urethral opening is always unduly narrow, sometimes extremely so, and there is, therefore, a certain amount of back pressure from which serious results may follow. The second trouble is that the penis is always curved downward when the cleft in the urethra extends any distance back, and this incurvation is greater the further back the cleft extends. Attempts to straighten the organ are resisted by a fibrous band or bands corresponding to the remains of the urogenital groove and lying in the position of the normal urethral roof. This incurvation produces much inconvenience, as the urine is projected against the down-curved organ, the stream is broken up and the patient may be constantly wetted. In children this often gives rise to troublesome eczema in addition to the offensive ammoniacal decomposition of the urine on the clothes. When the urethral orifice is situated further back than the glans, coitus is often practically impossible, as proper erection is prevented by the incurvation. When the cleft extends still further back and is associated with a cleft scrotum, the condition closely resembles hermaphroditism and the rudimentary organ is quite useless.

The cases met with may be divided into three groups:



(1) Those in which the fissure is limited to the glans; (2) those in which the cleft is in the penile portion and the orifice of the urethra opens anteriorly to the scrotum, and (3) those in which the scrotum is cleft and the urine issues from an opening in the perineum. The first two groups of hypospadias are considered here. I have reviewed the articles of Cheyne and Burgland, Duplay, R. Hamilton, C. Beck and others on this subject, but do not intend to review their methods. I wish, however, to acknowledge many valuable points taken from these writers and used in the construction of this paper.

Treatment is of much avail when the urethral orifice is in front of the scrotum. When the hypospadias simply consists of an unduly large meatus it is often unnecessary to interfere at all. The only point of importance is to make sure that there is no constriction at the orifice of the urethra; should one exist it must be dilated or slit up in the manner used for stricture of the meatus.

When, however, the condition is one either of complete hypospadias of the glans or of a cleft urethra anywhere between the glans and the scrotum, it is necessary

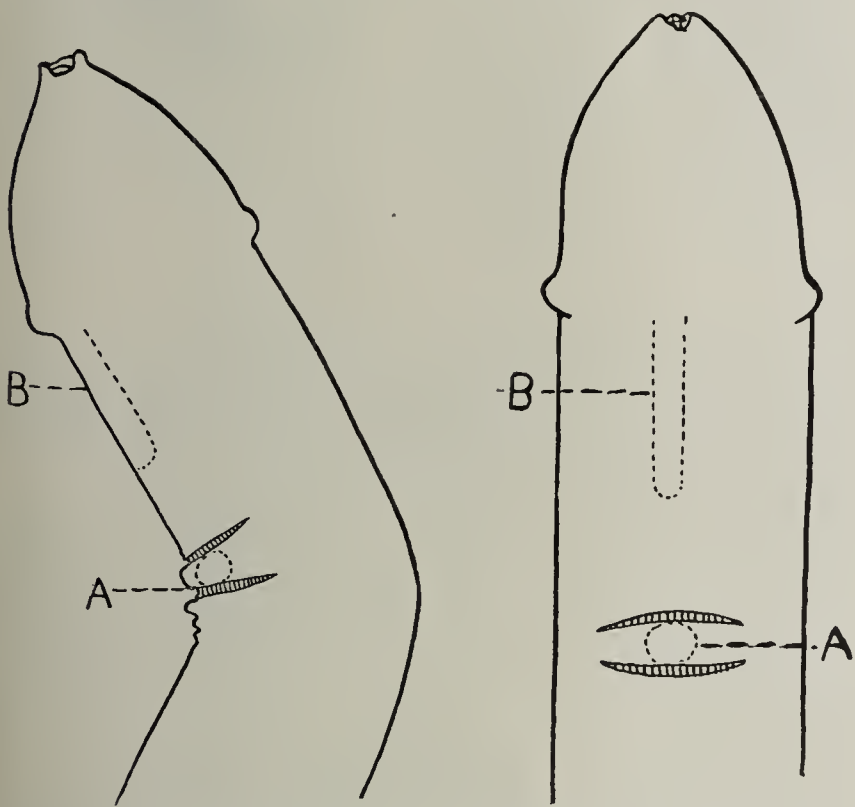


Figure 1.

Figure 2.

Figs. 1 and 2 show incurvation, prepuce over glans. A shows urinary orifice in body of penis. B shows short blind groove in body back of glans penis, in particular case reported.

to repair the urethral canal. The best time to operate seems to be from 6 to 12 years of age. By that time the patient is amenable to discipline, and there is also plenty of time for the genital organs to develop after the operation, and, moreover, there is not so much likelihood of trouble from erections as there is later. Erections are very likely to be fatal to the success of such an operation.

#### METHOD OF TREATMENT.

Several points have to be attended to in treating a case of hypospadias. The curvature of the penis must be remedied; the natural orifice of the urethra must be made of normal size, and a fresh urethra must be made from this orifice to the end of the glans. The satisfactory way of fulfilling these indications is: 1. To perform an external perineal urethrotomy and insert a large tube into the bladder, thus draining away every drop of urine so that the plastic operations which are done later will heal primarily.

For this the patient is anesthetized and a Syme's staff

is introduced. The staff is passed through the urethra into the bladder, the handle is intrusted to an assistant, and the patient is brought down to the end of the table and put in the lithotomy position. The assistant should hold the staff perfectly vertical and pull the scrotum out of the way. The surgeon makes an inch and one-half median incision about an inch in front of the anus. After the superficial structures have been divided, a forefinger, introduced into the wound, feels for the staff in the urethra. Some blunt dissection and a few touches of the knife expose the urethra, the groove in the narrow

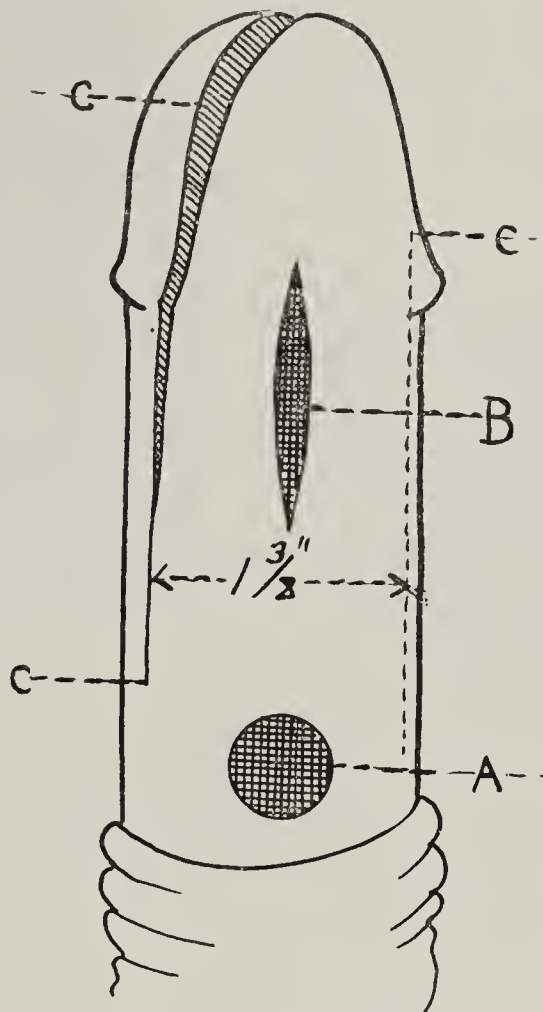


Fig. 3 shows urethral orifice (A) slit up to 33 French separated from its surroundings and edges trimmed evenly. B shows blind groove as in Figs. 1 and 2, but with prepuce well retracted. C shows incisions made for the formation of the new urethra.

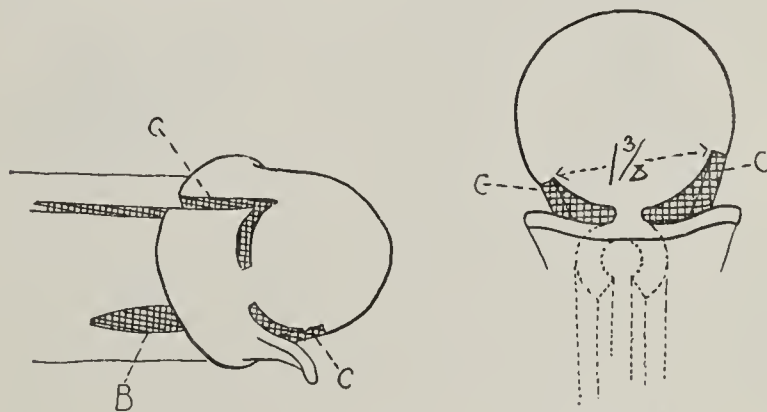


Figure 4.

Figure 5.

Fig. 4 shows incisions made and flaps of mucous membrane and skin being dissected up, for new urethra in the glans and body of the penis. C shows raw surface of the glans after lifting flaps. Fig. 5 is the same as Fig. 4, except that dotted lines (D) show flaps brought edge to edge.

portion is felt for, and the point of the knife is slipped along the finger until its point perforates the urethra and engages in the groove. The knife is now made to cut the urethra and an opening is made just sufficient to introduce a 32 French soft rubber catheter. The handle of the staff may now be depressed and the point of the instrument pushed on into the bladder. The staff is withdrawn and a 32 rubber catheter is passed through the wound into the bladder and held there by an adjustable tube holder.



It is sometimes difficult to pass the catheter into the bladder, and the easiest plan to insure the instrument passing readily is to slip a Teale's gorget along the groove in the staff before the latter is withdrawn. The gorget passes from the perineal wound into the bladder and serves as a guide along which the point of the catheter is directed. Sometimes the caliber of the urethra is small at the neck of the bladder and has to

the same anesthesia, viz.: Correcting the incurvation; enlarging and freeing the old meatus; making a new urethra extending from the end of the glans to the old meatus in the body (Figs. 3, 4, 5 and 6); joining by absorbable sutures the new and the old urethral canals (Fig. 7); closing and covering over the raw surfaces on the under surface of the glans and the body of the penis by taking flaps from the rudimentary hood of the pre-

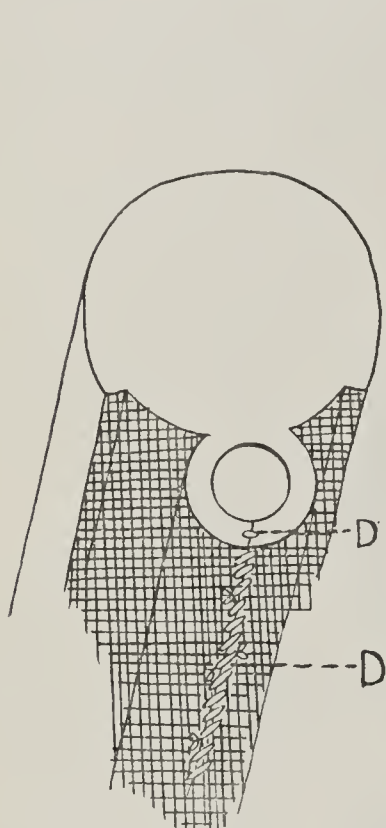


Figure 6.

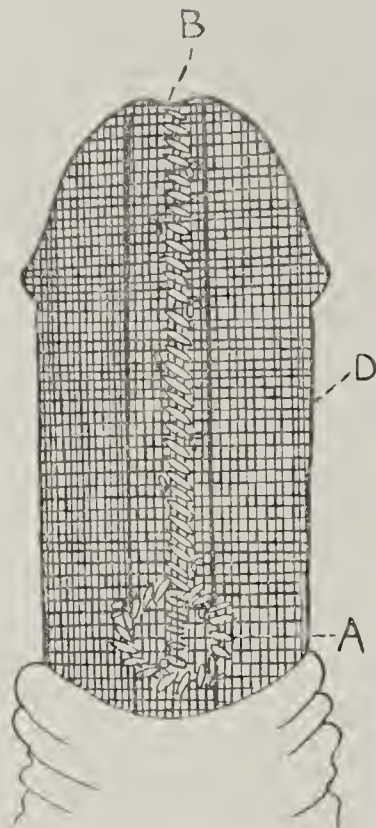


Figure 7.

Fig. 6 shows the edges of the flaps taken from the glans and body sutured to each other to form new urethra (D). Fig. 7 shows same as Fig. 6, and anastomosis made between the new and old urethral orifices. B shows the end of the new urethra in glans penis. D shows raw surfaces of glans and body whence the flaps have been taken.

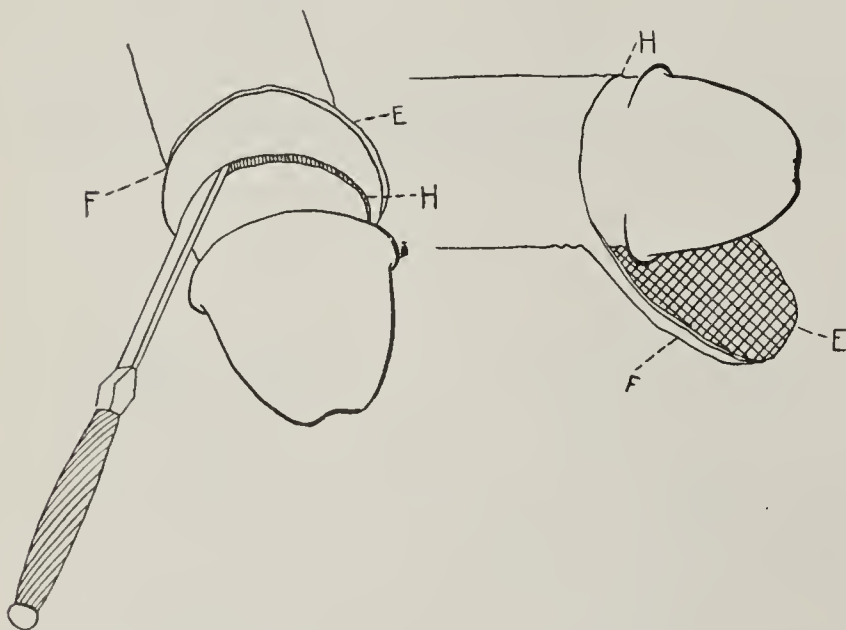


Figure 8.

Figure 9.

Fig. 8 shows separation of prepuceal hood (F), which consists of two layers, skin (E) and mucous membrane (H). Fig. 9 shows the prepuceal hood brought down underneath the glans by carrying the glans through the transverse opening in the prepuce. E shows layer of mucous membrane. F shows layer of skin.

be dilated to the proper size. This is readily done with a small uterine dilator or a rubber-covered Kohlman's dilator when the tube, held in place with a tube holder, is introduced and the bladder properly drained. The wound is dusted with odorless iodoform, and dressings are applied and kept in position by a T bandage.

The patient's legs are now extended and the following steps of the operation on the glans and penile portions of the urethra are done, one after the other, under

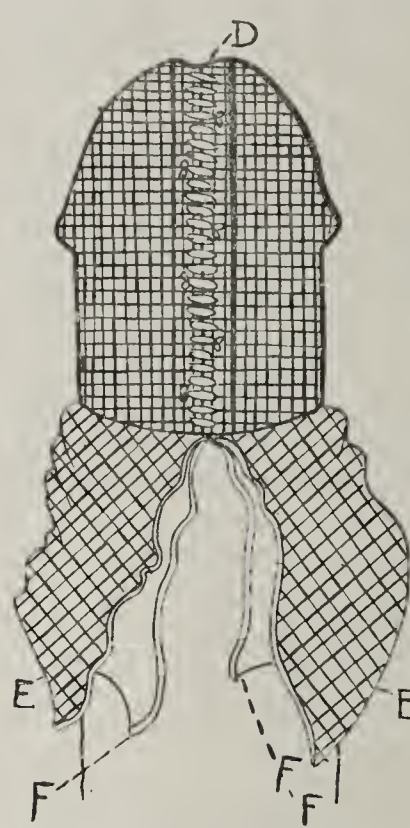


Figure 10.

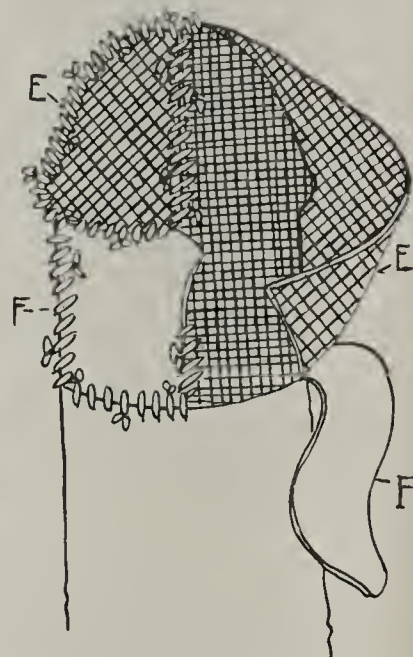


Figure 11.

Fig. 10 shows the newly placed prepuce, cut down the median line and its layers of mucous membrane (E) and skin (F) being dissected from each other ready to be used to cover completely the raw under surfaces of the glans and body of the penis and also to bury the stitches uniting the edges of new urethra and forming anastomosis between the new and old urethras.

Fig. 11 shows layers of mucous membrane (E) and skin (F) separated from each other (shown on the right side of figure) trimmed, put in place in their respective positions and sutured to the vertical cut edges of the glans and body whence the layers were taken to form new urethra (E and F) (shown on left side of figure). The raw surface on left side is completely covered by the mucous and skin layers which are also sutured transversely to each other.

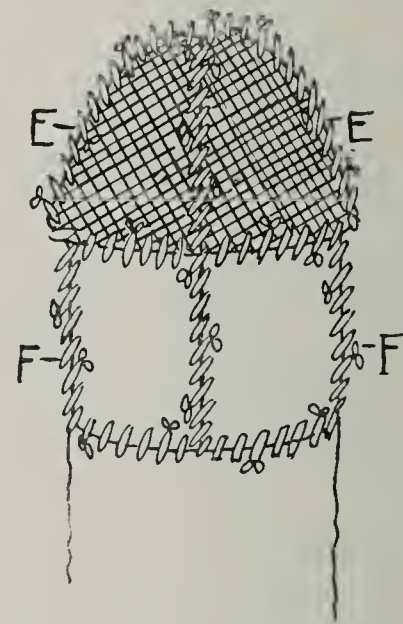


Fig. 12 shows the layers of mucous membrane and skin as in Fig. 11, sutured in their new positions, to the vertical edges, transversely to each other, the cut down the median line sutured, and the skin flaps at their lower parts sutured transversely to the skin of the body of the penis, thus completely covering all raw surfaces on the under aspect of the glans and body of the penis. While the cut down the median line was made in this case, usually this should not be done.

prepuce which covers the anterior surface of the glans and body (Figs. 8, 9, 10, 11 and 12); correcting the deformity of the convexity or anterior surface of the body by



making a suitable vertical incision backward from the middle of the incision made to utilize the hood; bringing forward this vertical incision at its angle and suturing it in the same line and continuous with the prepuce or transverse incision, thus eliminating the convexity by shortening the antero-posterior measurement and overcoming the existing lateral constriction by increasing the transverse measurement (Figs. 13, 14 and 15). These steps are, in detail, as follows:

2. To remedy the incurvation (Figs. 1, 2, 3, 13, 14 and 15), the prepuce is drawn back and the urinary orifice in the body usually shows it much narrowed. This is slit up to admit a 33 French sound, and the urethra is dissected from its surroundings, thereby usually exposing the ends of the corpora cavernosa for an inch or so. All constricting fibrous bands are divided by transverse incisions so as thoroughly to straighten the organ (Fig. 3). Care should be taken not to injure the corpora, as it produces free bleeding.

3. Formation of a new urethra in the glans and body and its anastomosis with the dissected up old urethral orifice (Figs. 3, 4, 5, 6 and 7). A 33 French sound is introduced into the slit urinary orifice as a guide, and flaps  $1\frac{3}{8}$  inches wide of mucous membrane and submucous tissues and sometimes skin and subcutaneous tissues are dissected and taken from the under surface of the glans and body. These flaps are taken by making two vertical parallel incisions  $1\frac{3}{8}$  inches apart and ex-

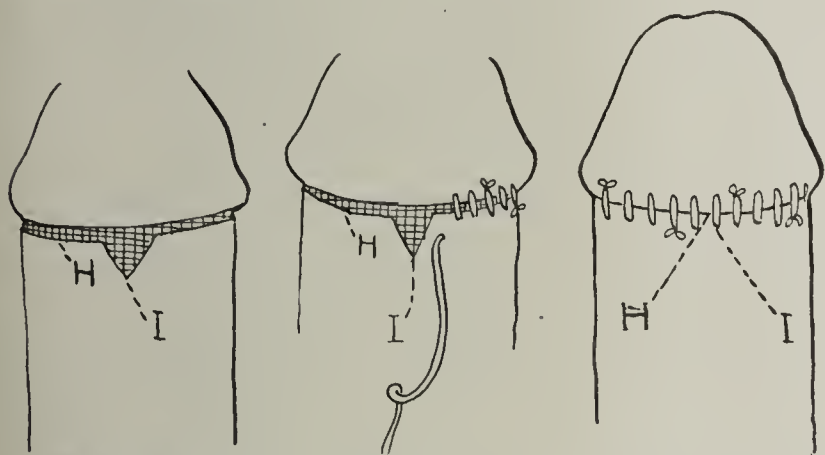


Figure 13.

Figure 14.

Figure 15.

Figs. 13, 14, 15 show the correction of the convexity and the transverse constrictions on the upper surface of the body by making about an inch long vertical incision in the median line backward from the transverse incision made in separating hood and the dissecting up and bringing forward and suturing it in the same line continuous with the transverse incision. This shortens the antero-posterior measurements and increases the transverse measurement.

tending from the end of the glans backward to the level of the dissected urethral orifice. The flaps are dissected loose so that they can be made to meet in the median line without tension over the sound. At each end short transverse incisions are made so as to enable the flaps to be raised. The edges of the flaps are united to each other in the middle line with fine continuous catgut sutures, using the sound as a guide in sewing. These stitches are inserted about eight to an inch and about every fourth is tied with a reef knot. The old urethra is dissected backward for about an inch, and an anastomosis is made between the ends of the new and the old urethras, using fine catgut sutures. Thus a complete canal is formed and in most cases is lined with mucous membrane. In other cases, where the urethra opens further back on the body in front of or shortly in front of the scrotum, skin flaps have to be utilized and substituted to restore the urethral canal in this region. These skin flaps are continuous with the mucous membrane flaps and are in like manner dissected and united in median line to each other so that skin forms the

urethral canal where mucous membrane can not be obtained. These skin flaps must be hairless, as otherwise hairs grow in the urethra and cause trouble from their mere presence and the deposit on them of concretions from the urine. When hairs are present on these skin flaps, they should be permanently removed with the electric needle before the operation is undertaken. This must be done to insure satisfactory results, and applies equally in the somewhat similar plastic operations for epispadias (Figs. 3, 4, 5, 6 and 7).

4. To cover over the raw surfaces on the glans and body, the hood is utilized (Figs. 8, 9, 10, 11 and 12). The prepuce is put on the stretch and enough of its mucous membrane and skin layers is measured to cover these raw surfaces. A knife is made to cut transversely through both layers of the prepuce about half an inch back of the corona. The incision is enlarged laterally, separating it from the penis for about three-fifths of its extent (Fig. 8). This leaves a transverse opening in the prepuce through which the glans is passed so that the prepuce is brought down underneath to cover the raw area on the under surface of the glans and body (Fig. 9). The newly placed prepuce is cut down the median line and its layers of mucous membrane and skin are dissected from each other and, in turn, are trimmed as required, adjusted and sutured with fine catgut to the vertical cut edges of the glans and body so as to cover the raw surfaces accurately. The cut down the median line and the other edges are sutured accurately in their places with fine catgut stitches (Figs. 10, 11 and 12). It is usually not necessary to make the incision down the median line, but it was done in this case to trim up flaps and remove excess tissue. When the urethra opens in front of or near the scrotum, the raw surface in this area of the body is covered in by a flap taken from the adjacent anterior surface of the scrotum, and twisted on its axis and sutured accurately in place to the edges of the raw surface on this portion of the body so as to cover it completely. The scrotal wound being in loose tissues is readily sutured and thus closed without tension.

5. Correction of the hump or convexity and the transverse constriction on the anterior or upper surface of the body (Figs. 13, 14 and 15) is done by making an inch long vertical incision backward in the median line through the skin and subcutaneous tissues. This incision is at right angles to the transverse one made in separating the hood, and is made long enough so that when its angle is dissected it can be drawn forward and sutured in the same line and continuous with the stitching of the prepuce or transverse incision. This eliminates the convexity by diminishing the antero-posterior measurement of the penis and overcomes the existing lateral constriction in this region by increasing the transverse measurement to the normal condition.

#### ADVANTAGES OF THE METHOD.

This surgery takes a short time, healing is durable in two to four weeks, all the surgery is done at one sitting, the new canal retains its normal caliber, and its coverings remain in their new positions. The operation is simple, easy to follow, offers every advantage and is followed by the best results—better than any operation hitherto described. The preliminary external urethrotomy and drainage of the bladder allow the plastic surgery to heal without the least trouble. The time of healing in this operation as compared with the other methods is shortened from a year or more to a couple of weeks, it overcomes the necessity of operating in



stages as done heretofore, thus avoiding several anesthetics, operations, saving time for both patient and surgeon and avoiding subsequent small operations due to failures by the older methods. In the old methods contractions sometimes occur which render the steps of the operations futile. In this operation the dressings are kept clean and dry, there is no soiling with urine, and it is not necessary to pass any instruments; there is no tension on the wound, no skin grafting, and the method is applicable to all cases.

The deeper structures are sutured separately and accurately with burned absorbable stitches so as to get perfect union. This layer of sutures forms a firm barrier, while the superficial layer forms an additional aid to healing. The character of the buried suture materials is of importance. Sterilized fine catgut or tendon is the most suitable material for burned sutures. If the animal sutures are aseptic the healing is usually satisfactory. Silk or other non-absorbable materials or too heavily chromicized catgut or tendon should not be used as buried sutures, for, although the wounds may heal primarily, yet later sinus or sinuses form and keep discharging until the suture or suturings are thrown off or removed surgically. Such healing also interferes with nice clean union.

I first performed the operation as above described in San Francisco in November, 1904. The patient was about 30 years of age and was referred to me by Dr. Alfred Sander, of San Francisco. The urethra opened anteriorly to the scrotum, about  $2\frac{1}{2}$  inches back of the glans on the under surface of the body and a little to the left of the median line. There was a marked incurvation of the penis which produced considerable inconvenience on urinating as the stream was broken and the patient usually wetted. Coitus was practically impossible, as proper erection and entrance were prevented by the incurvations. Surgery was of great avail; healing was primary and durable; the incurvation was overcome; a new urethra was formed; the glandular and penile urethra were built and anastomosis was made between the ends of the new and old urethras; all raw surfaces were covered over; the operation was finished successfully at one sitting and gave perfect functional results. Examination made a couple of months after the operation showed everything satisfactory and canal of normal caliber. After the operation the patient was kept sufficiently under bromids and chloral to control erections, thus greatly favoring primary healing.

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## ERRORS IN THE DETERMINATION OF FREE HYDROCHLORIC ACID.\*

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Since Kuhne demonstrated the necessity for free hydrochloric acid in peptic digestion many methods have been devised for its detection and determination. This multiplicity of tests is a good indication that none of them exactly fills the requirements. The tests chiefly recommended for the detection of free hydrochloric acid may be divided into two classes, those depending on the change in color produced in some indicator, such as congo-red, dimethyl-amido-azo-benzol, benzopurpurin, tropeolin 00 and others of similar character, and those

depending on the coloration produced by the acid on certain organic materials, such as the phloroglucin-vanillin test of Günzberg and the sugar-resorcin test of Boaz.

Against the class of indicators as a whole we may state that, almost without exception, they give a reaction with the organic acids when present in sufficient concentration, as can be easily shown by testing the solutions of the various organic acids with them, the intensity of the reaction varying, of course, with the strength of the acid employed and the degree of delicacy of the end point of the indicator employed. The effect of the acid salts on the indicators is best shown by attempting to titrate a solution of orthophosphoric acid with decinormal alkali, using any of the indicators. According to theory were they not affected by acid salts, the end point should be reached when exactly one-third of the calculated amount of alkali necessary to neutralize all the hydrogen has been added, a condition by no means fulfilled by any of the indicators with which I have experimented. The same test can also be applied by titrating decinormal sulphuric acid with any of these indicators. Were they actually not affected by an acid salt the amount of decinormal alkali required would be exactly half the amount of decinormal sulphuric acid taken, while the result of the experiment shows that an amount of alkali too great for the formation of the acid salt and not enough for the complete neutralization of the acid hydrogen is required. An added disadvantage is that with many of these indicators the end point is frequently obscure, the operator even when trained in chemical work being unable to state definitely the end point.

For qualitative work no fault can be found with the tests of Günzberg and Boaz which give absolutely accurate results.

For quantitative purposes the use of the various indicators is even less reliable than their qualitative indications. As stated under their uses as qualitative tests, they all react to a certain extent with the various organic acids and acid salts and have an indefinite end point. What is still more important with them is their behavior with the so-called combined hydrochloric acid, which is split up as the titration proceeds, the hydrochloric acid and the proteid with which it is combined undergoing a cleavage, the hydrochloric acid thus liberated being also titrated as free hydrochloric. The hydrochloric acid shown by these indicators must, therefore, be composed of the true free hydrochloric acid, varying proportions of the acid salts, and organic acids, and also of a portion of the hydrochloric acid which was originally in combination with the proteids of the gastric contents.

Titration with either the Boaz or Günzberg reagent as an outside indicator requires at least three titrations to insure accurate results, as a considerable amount of the fluid will be used in the preliminary tests outside. In addition they will also show probably at least a small part of the combined hydrochloric acid which splits up as the titration proceeds.

In several years' use of the various indicators I became convinced of the serious errors at times occurring in the ordinary titrations for free hydrochloric acid, titrations showing, for example, a hyperchlorhydria, while the results of treatment did not bear out the results of the titration. When in search of a method which would be free from these sources of error, my attention was called to a method worked out by Hoffmann at Ostwald's suggestion, which seemed to give promise

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



of better results, based, as it was, on an entirely different principle. Hoffmann's method was based on the effect of free hydrogen ions in saponifying methyl or ethyl acetate with the formation of free methyl or ethyl alcohol and acetic acid, the amount of the latter being proportional, other things being equal, to the amount of free hydrogen ion present, and readily titrated with decinormal alkali and an indicator such as phenolphthalein.

Considerable experience with this method has led me to make slight changes in it which, I think, give greater accuracy, though the actual difference is not great. As I carry out the method it may be described thus: Four small, clean, dry flasks are prepared and filled as follows:

No. 1. 10 c.c. gastric juice alone.

No. 2. 10 c.c. gastric juice and 2 c.c. of methyl acetate.

No. 3. 10 c.c. distilled water and 2 c.c. methyl acetate.

No. 4. 10 c.c. N/40 HCl and 2 c.c. methyl acetate.

These are tightly stoppered and placed for at least four hours in a hot air bath at a temperature of between 50 and 55 degrees Centigrade, not at any time exceeding 56, the boiling point of methyl acetate. At the end of at least four hours they are removed and the contents titrated with decinormal alkali, using phenolphthalein as an indicator to the first pink tinge.

No. 1 shows the original acidity plus any increase in the acidity due to standing at a high temperature. This increase does not usually occur, but, as it has taken place in a few cases in my work, it seems to me a reasonable precaution.

No. 2 shows the original acidity plus the increase in acidity due to the formation of acetic acid from the methyl acetate.

No. 3 shows the acetic acid produced by the saponifying action of the distilled water and the small amount of acid which is often present in commercial methyl acetate.

No. 4 shows the acidity of the original N/40 HCl plus the acetic acid liberated from the methyl acetate by the hydrochloric acid.

The calculations from these four determinations are simple and may be illustrated by an example from my notebook:

1. 10 c.c. of gastric juice allowed to stand for five hours at a temperature of 55 degrees required 6.2 c.c. of N/10 KOH to give the first pink tinge with phenolphthalein as an indicator.

2. 10 c.c. of gastric juice plus 2 c.c. of methyl acetate under exactly the same conditions required 64.9 c.c. N/10 KOH.

3. 10 c.c. distilled water plus 2 c.c. methyl acetate under the same conditions required 8.4 c.c. N/10 KOH.

4. 10 c.c. N/40 HCl plus 2 c.c. methyl acetate under the same conditions required 45.85 c.c. N/10 KOH.

5. 10 c.c. of the N/40 HCl, standardized by weighing the amount of silver chlorid produced, required 2.6 c.c. N/10 KOH to neutralize.

Hence:

$$64.99 - (6.2 + 8.4) = 50.3.$$

$$45.85 - (2.6 + 8.4) = 34.85.$$

$$34.85 : 50.3 :: 0.091 : x.$$

$$x = 0.1313 = \text{per cent. of free HCl.}$$

The sources of error in the Hoffmann method are probably only the following, excluding, of course, the allowable limits of error:

1. Very dilute solutions of hydrochloric acid will give results that are slightly too high on account of the greater dissociation of the acid in dilute solution.

2. The organic acids will also act on the methyl ace-

tate to a slight extent, liberating acetic acid, but this will be at most a very slight error, as the relative strength of acetic acid to hydrochloric is as 0.004 to 1. Lactic acid is as 0.009 to 1.

3. Neutral salts increase slightly the saponifying power of water, the increase, however, falling within the limits of error.

A table is appended showing the results of a number of comparative tests in which a comparison was made between the results afforded by dimethyl and tropeolin 00, with the percentage error based on the saponification number as the correct one.

COMPARATIVE TABLE OF TESTS.\*

	Dimethyl Titration.	Tropeo- lin 00. Titration.	Saponifi- cation.	Dimethyl Error %	Tropeo- lin 00. Error %
1.	0.1292	.....	0.1063	+21.54	.....
2.	0.1456	.....	0.1233	+18.08	.....
3.	0.05096	.....	0.03387	+50.16	.....
4.	0.1147	.....	0.1007	+13.90	.....
5.	0.3722	.....	0.3145	+18.34	.....
6.	0.3640	.....	0.2614	+39.25	.....
7.	0.08372	.....	0.03819	+119.2	.....
8.	0.02912	.....	0.02113	+37.81	.....
9.	0.1583	.....	0.1035	+52.98	.....
10.	0.1729	0.1092	0.1112	+55.48	-1.79
11.	0.07644	0.06183	0.05154	+48.31	+20.06
12.	0.1565	0.091	0.0923	+69.61	-1.14
13.	0.2621	0.1784	0.1577	+66.22	+13.73
14.	0.0723	0.0364	0.03832	+89.98	-5.01
15.	0.1565	0.09823	0.1132	+38.25	-13.16
16.	0.1820	0.1602	0.1313	+38.61	+22.01
17.	0.2038	0.1201	0.1470	+38.64	-18.3
18.	0.2348	0.1911	0.1469	+59.83	+30.09
19.	0.1966	0.1656	0.1364	+44.13	+21.41
20.	0.09828	0.0637	0.0489	+100.9	+30.27
21.	0.1383	0.0582	0.0973	+42.14	-40.19
22.	0.1966	0.1529	0.1374	+43.08	+11.28
23.	0.0546	0.04368	0.0339	+61.06	+28.85
24.	0.0728	0.03276	0.0232	+213.80	+41.21
25.	0.2621	0.2475	0.2140	+22.48	+15.65
26.	0.2366	0.2002	0.1630	+45.15	+22.82
27.	0.1511	0.1183	0.1076	+40.42	+9.94
28.	0.2912	0.1711	0.1919	+51.75	-10.84
29.	0.1165	0.0728	0.08302	+40.32	-12.31
30.	0.2621	0.2330	0.1866	+40.46	+24.86
31.	0.1241	0.0584	0.06615	+87.62	-11.71
32.	0.0546	.....	0.01433	+281.00	.....
33.	0.1529	0.08008	0.09272	+64.91	-13.63
34.	0.1674	0.091	0.1347	+24.28	-32.44
35.	0.1820	0.1274	0.1256	+44.90	+1.43
36.	0.3349	.....	0.1960	+70.87	.....
37.	0.1674	0.1274	0.099	+69.10	+28.69
38.	0.2330	0.1820	0.1486	+56.73	+22.47
39.	0.1674	0.1602	0.1313	+27.49	+22.01

## A CASE OF CHOLESTERIN STONES IN THE BRAIN AND CORD.\*

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Following is a case of multiple cholesterol concretions found at autopsy in the brain and cord of a man who showed in life no signs referable thereto. About the masses there was a fibrillary overgrowth of neuroglia.

The patient was under clinical observation at the Boston City Hospital for a little over three weeks in the spring of 1904, on the medical service of Dr. C. F. Withington, whom I wish to thank for the use of his records. The patient was a man of 56, with extensive peripheral arteriosclerosis. For the most part he presented a plain history of cardiac disease growing worse: orthopnea, dyspnea, cyanosis, edema, all coming on in irregular spells, together with gradual enlargement of the heart area and feebleness of heart action, slight albuminuria, a fairly constant demonstration of a soft blowing systolic murmur at the apex transmitted to the axilla, and gradual development of dullness in lower

\* From the Pathological Laboratory of the Boston City Hospital.

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



backs. There were no signs directly referable to lesion of the nervous system. A frost-bite of the previous winter had failed to heal well in the right foot. He died a little unexpectedly during a slight apparent improvement in his cardiac symptoms.

The autopsy showed general and extensive arteriosclerosis. The coronary arteries were extensively yellowed and stiffened. The aorta showed diffuse sclerosis with calcification. The sclerosis of the circle of Willis was unusually extensive; and its primary and secondary branches were involved. The heart showed considerable hypertrophy (weight, 615 grams) and diffuse yellowish thickenings of the mitral leaflets. The mitral orifice measured 11.5 cm.; the other valves were not abnormal. The heart muscle showed fine fat droplets in a very few fibers by the Seharaich R. method. Fresh extensive infarctions of the kidney were found, due either to thrombosis or to emboli, which had become in part organized. A hemorrhagic wedge-shaped area in the lower lobe of the right lung was covered with fresh fibrin. The lungs in general were edematous and congested. The trunk showed little else abnormal save a fibrous pleurisy of the left side and chronic thickenings about the spleen and the liver. The organs of the trunk were examined by Dr. C. J. Duval, whom I wish to thank for his records.

The findings in the head were as follows:

Scalp, calvarium, dura normal. Sinuses contain fluid blood. Pia edematous, notably over vertex. Strips readily. Superficial veins contain no great amount of blood. Carotids yellow and stiff almost uniformly. Circle of Willis, with primary and sometimes secondary branches, focally yellow and stiff. Substance shows on external palpation no great variety of consistence. The brain is slightly moister posteriorly. The gyri are fairly firm. On section the substance of the anterior portions of the centrum semiovale in both hemispheres is of normal consistence. The posterior portions of the centrum semiovale are moister and softer than in front; brain substance clings to the knife on section. The edema and softening are more marked on the right hemisphere. At the junction of the gray and white matter of the posterior portion of the left middle temporo-sphenoidal convolution is a coherent, gritty, solid sliver of yellowish-gray material 1.5x1.0x0.3 cm., tightly adherent to the surrounding tissue. There is a similar spheroidal mass about 1 cm. in diameter, imbedded in the gray matter of the right inferior frontal convolution. Adjacent to this inferiorly about 1 cm. distant is a purplish-red, slightly translucent, smoothly cutting and slightly bulging area 1 cm. in diameter, in the inner zone of the cortex. Next this is a small indefinitely bounded area of moist, grumous, opaque, yellowish-gray material, possibly the product of occlusion of a medullary branch of the cortical arterial system; no embolus was found. No similar areas elsewhere. Ventricles contain more than a tablespoonful each of a clear fluid. Choroid plexuses slightly cystiform. Ependyma normal.

Basal ganglia normal and of the usual consistence, except in the middle of the left lenticular nucleus, which presents a stony mass 2 cm. in diameter and slightly flattened from before backward. The mass is closely invested by a thin fibrous capsule and does not shell out. On sawing the middle is found to contain soft opaque grayish material.

Isthmus, bulb and cerebellum normal. Cord: Pia edematous in the middle of the posterior columns of the lower cervical region are small, symmetrical gray areas, suggesting sclerosis. Gray matter everywhere retracts slightly from section surface. On the pia of lower dorsal cord is a single minute white calcified plaque.

Microscopic examination of the organs of the trunk showed a slight brown atrophy of the heart muscle, a hemorrhagic infarct in the lung surrounded by a zone of cocci, chronic passive congestion of liver (extreme) and spleen, infarction of the kidney with zone of congestion and leucocyte invasion, an adrenal with high blood content, and a pancreas without notable lesion. There was evidence of arteriosclerosis throughout the organs.

Microscopic examination of the brain and cord showed a moderate subpial gliosis in several places examined. The cortex cerebri, except near the cholesterol masses, was not greatly altered. The tissue of the cord showed very numerous corpora amylacea.

The reaction about the cholesterol masses in the gray matter is slight. A teased specimen from the capsule about the mass in the lenticular nucleus was fixed in formalin and mordanted with picric acid, followed by ammonium bichromate and showed hairlike masses of neuroglia fibrils.

More notable is the reaction about the miliary muscles in the white substance of the cord. These foci are grossly evident in sections of the cord fixed in Zenker's fluid, mounted in paraffin, and stained with phosphotungstic acid hematin. The cholesterol masses have become dissolved away; all that remains of a lesion is the cavity surrounded by a narrow zone in which nerve fibers and myelin sheaths are absent and replaced with a fine felt-work of neuroglia fibrils.

Flakes from various masses and from different portions of the large mass in the lenticular nucleus were found to consist

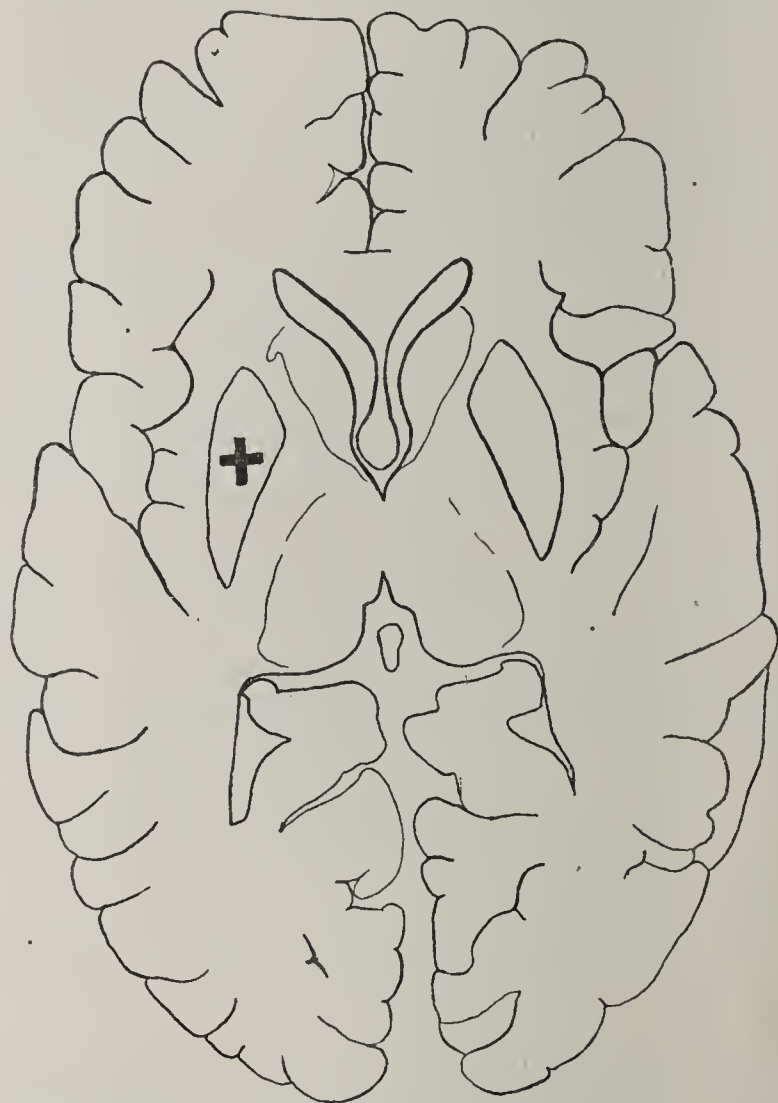


Fig. 1.—Diagram (Dalton, 1885, Series B, Plate vii) to show position of large cholesterol mass.

chiefly of smaller and larger cholesterol crystals. No tubercle bacilli could be demonstrated among the crystals. One-half gram of material from the middle of the largest mass was injected into the groin of a guinea-pig, but tuberculosis did not follow.

It is not possible at present to give an adequate explanation of this finding. The condition has nothing in common with cholesteatoma, excepting cholesterol, and fails to show the essential element of cholesteatoma, viz., an accumulation of desquamated epidermal cells. It is not possible to prove a relationship of the deposits with the remains of tubercles, of gummata or of multiple abscesses. It is possible that the deposits are related with old lesions of the blood vessels, perhaps with occlusions or with changes in the vessel walls; at any rate, there is unusually widespread arteriosclerosis in the case. Whatever their origin, it is harder to account for their accumulation in solid tissues than in a cavity like the gall bladder.



The chief interest of the deposits must for the present remain in their association with multiple foci of sclerosis. Deposits like those in the cord may readily be overlooked in routine examinations, and the small spaces occupied by the crystals may be taken for artefacts in preparation. A more careful fresh inspection of central nerve tissues, and especially of the cord, may bring out more of such miliary or larger glioses, to which the attention was drawn in the present case only by the presence of large masses in the gray matter of the cerebrum. The case can hardly be unique. With more cases the relationship of the cholesterin with old foci of suppuration or with vascular lesions may be demonstrated.

## SUMMARY.

Male of 56 years. General and extensive arteriosclerosis, extending to gross involvement of some secondary branches of the circle of Willis. Death from heart failure. Small masses of pure or almost pure cholesterin crystals in several parts of the cortical and central ganglionic gray matter and in the white matter of the spinal cord. Largest mass, 2 cm. in diameter, in middle of left lenticular nucleus. Thin capsules due to fibrillary overgrowth of neuroglia surround the masses. The relation of cholesterin to miliary glioses in the spinal cord may readily escape attention.

## Special Article

## IMMUNITY.

## CHAPTER XXXIV.

## BACILLUS OF FRIEDLANDER AND OTHER MEMBERS OF THE CAPSULE-FORMING GROUP.

The bacillus of Friedlander, or *Bacillus pneumoniae*, is the type of a rather large group of bacteria, called the Friedlander group, or the group of *Bacillus mucosus capsulatus*. In addition to the ability to produce a mucus-like capsule or envelope, they have in general the following characteristics (Abel): short, plump rods, varying in their proportions, having no motion, no flagellæ, no spore formation, and not staining by Gram's method. They form mucus-like masses in cultures, do not liquefy gelatin and are facultative anaërobes. They are widely distributed in nature, vary from innocuousness to extreme pathogenicity for animals, are rarely found in the mouth, nose and bronchi normally (bacillus of Friedlander), one type being a normal inhabitant of the intestines, especially in children (*B. aërogenes capsulatus*). In man three members of the group—they may be the same organism or variations of a type—are of interest from the standpoint of infection: Bacillus of Friedlander, the bacillus of rhinoscleroma and the ozena bacillus.

In 129 cases of acute inflammation of the lungs, Weichselbaum found the bacillus of pneumonia nine times, twice with streptococci and once with the diplococcus of pneumonia. The organism causes lobular pneumonia more frequently than lobar. The homogeneous non-granular surface, and the large amount of fluid of a viscid or mucous consistence, are characteristic anatomic features. The alveoli contain massive numbers of the bacilli. The bacillus of Friedlander is found also as the cause of pyelitis, cystitis, pyelonephritis, serous or purulent pericarditis, and pleuritis and meningitis, which may be accompanied by brain abscesses. Meningitis when produced by this organism usually or always is secondary to infection in other parts of the body by the same organism (middle ear and accessory sinuses of the nose).

An organism of the Friedlander type is found with few exceptions in the tissues in rhinoscleroma, and by many is con-

sidered as the cause of the condition. A similar organism is found constantly in the secretions and crusts in ozena. Antiscrums of distinct power have not been obtained for members of the group. Prolonged immunization with some strains yields an agglutinating serum of low value. The agglutination reaction is of no value for identification of the different members of the group, nor for clinical diagnosis.

## EPIDEMIC CEREBROSPINAL MENINGITIS.

Acute inflammation of the meninges may be caused by a number of micro-organisms: *Micrococcus meningitidis*, also called the *Diplococcus intracellularis meningitidis*, or briefly the meningococcus; *Diplococcus pneumoniae*; *Streptococcus pyogenes*; *Staphylococcus pyogenes*; *Bacillus influenzae*; *Bacillus pneumoniae*; *Bacillus typhosus*; *Bacillus coli communis*; *Bacillus mallei*; *Bacillus pestis*. The first two of this number, the meningococcus and the pneumococcus, in addition to causing sporadic cases, also produce more or less extensive epidemics of so-called primary meningitis. That the pneumococcus may also cause meningitis secondary to pneumococcus infections in other parts of the body has been mentioned. Also the meningitis caused by the other pyogenic cocci usually is secondary to some other suppurative focus, often the middle ear; that caused by the organisms of typhoid, glanders, plague and influenza occurs during the course of the diseases caused by the corresponding micro-organisms.

Previous to 1887 diplococci resembling the pneumococcus had been found in the exudate in cases of cerebrospinal meningitis by Foà and Bordoni-Uffreduzzi, by Fraenkel and others. Weichselbaum made similar observations during the same year, and in addition described six cases in which a diplococcus of another nature was present in pure cultures. To the latter he gave the name of *Diplococcus intracellularis meningitidis*. Extensive observations by others, both in Europe and America (Councilman, Mallory and Wright, and others), revealed the presence of the last named organism in many instances, and showed that it is the most common cause of epidemic cerebrospinal meningitis.

The meningococcus resembles the gonococcus closely in that it is usually found in biscuit-shaped pairs, nearly always within pus cells, and does not stain by Gram's method (Weichselbaum). It is properly to be called a micrococcus since it divides in two transverse directions (Albrecht and Gohn); tetrads, small groups and short chains are sometimes seen. However, it forms no striking chains, is non-motile and produces no spores. Growth may be obtained on some of the ordinary media (glycerin agar), in which the organism differs from the gonococcus, but a medium which contains blood or serum is much more favorable. It is an obligate aërobe, grows best at the body temperature and virulence is soon lost under artificial conditions.

It produces a membrane on meat broth with clouding of the medium. Viability is retained for only a few days at room temperature. When dried on paper and exposed to the sunlight it lives no longer than twenty-four hours, in a dark room seventy-two hours (Councilman, Malory and Wright). It is killed by a temperature of 65° C. for thirty minutes (Albrecht and Gohn).

The meningococcus has little virulence for animals. When injected in sufficient quantity into the peritoneal or pleural cavity of white mice death results in from twenty-four to forty-eight hours, but not when given subcutaneously. Meningitis may be produced by subdural injections, but the disease does not resemble the epidemic meningitis of man. So far as is known at the present time the organism does not produce a soluble toxin, but possesses rather an endotoxin.

Although the disease is usually spoken of as a primary meningitis, there is reason to believe that it is secondary to an acute rhinitis or acute inflammation of the accessory sinuses or middle ear, at least in many instances. From these places the coccus may readily reach the meninges by way of the lym-

Rhinoscleroma  
and Ozena.

Microbes  
Causing  
Meningitis.

Micrococcus  
Meningitidis.

Virulence;  
Endotoxin.

Infection  
Atria.



phatic channels. The organisms have been found repeatedly in the noses of those who were associated with cases of the disease; in such cases an acute rhinitis may be present without the subsequent development of meningitis. Clinical histories of the cases show that the infection commonly is preceded by acute rhinitis. The inflammation in the meninges is always cerebrospinal in its distribution and is characterized by a purulent or fibrino-purulent exudate in which the diplococci are present in varying quantities. Diagnosis may often be established clinically by the microscopic or cultural examination of the cerebrospinal fluid which is removed by lumbar puncture.

Acute encephalitis, acute bronchitis, lobar pneumonia and acute arthritis have been observed as complications, in which

**Complications and Other Infections.** organisms resembling the meningococcus have been found in a number of instances. An accompanying bronchitis, lobar or lobular pneumonia may be caused by mixed infection with other organisms (pneumococcus, streptococcus, staphylococcus). Since it would be difficult to explain some of these complications except on the basis of metastasis, it seems very probable that the organism reaches the blood stream. Micrococci resembling the meningococcus have been found in acute bronchitis, rhinitis, lobular pneumonia and conjunctivitis, in the absence of cerebral involvement, and it is possible that it may be the cause of independent inflammations in these tissues. Weichselbaum, however, is inclined to doubt the identity of such organisms with the meningococcus. Particularly in cases of bronchitis and lobular pneumonia the coccus may be confused with the *Micrococcus catarrhalis* of Pfeiffer, with which it is identical morphologically.

The extent to which the meningococcus is a normal inhabitant of the nasal mucous membrane is unknown. Since the organism seems to be excreted chiefly or only with the nasal discharges, the latter probably are important for transmission of the infection. Because of the low resistance of the organism to desiccation and light, transmission probably is a fairly direct one. This is suggested also by the occasional occurrence of epidemics in institutions. Contagiousness probably is of a rather low order; this is indicated by the distribution of the 111 cases observed by Councilman, Mallory and Wright in Boston, the city being somewhat diffusely infected with very little tendency of the disease to occur in groups of individuals or in several members of a family.

The desirability of avoiding contact with the infected is evident; special prophylactic measures are not known. In the presence of an epidemic the treatment of rhinitis with local antiseptics would suggest itself.

Children and young people are particularly susceptible to both epidemic and sporadic infections with the meningococcus. Exposure incident to the cold and variable weather of the winter and spring, in which seasons the disease prevails, may be influential in lowering resistance. Second attacks are rare, Councilman, Mallory and Wright collecting only five such examples from the literature. Lipierre immunized animals with cultures and with a toxin, the latter being a glycerin extract of old cultures. Their resistance to infection was said to be increased, and the serum of highly immunized animals was antitoxic, preventive and curative for other animals. Corroborative work is lacking. It is learned from Dr. D. J. Davis privately that the serum in cases of epidemic meningitis shows an increased bactericidal power on the thirteenth day of the disease, and that the agglutinins which develop probably persist for some time, but are little above the normal after two and one-half years.<sup>1</sup> Fairly

**Susceptibility and Immunity.** The desirability of avoiding contact with the infected is evident; special prophylactic measures are not known. In the presence of an epidemic the treatment of rhinitis with local antiseptics would suggest itself.

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1. The conclusions of Dr. Davis, in part, are as follows: In five cases of epidemic cerebrospinal meningitis, the meningococcus (Weichselbaum type), was obtained in every case from the cerebrospinal fluid, and in one case from the nose and sputum by cultures. In the other four cases Gram-negative diplococci suggestive of either meningococcus or *Micrococcus catarrhalis* were seen in smears, but were not recovered in cultures. Agglutination of meningococcus by the serum of patients with meningitis occurs in a

strong agglutinins may be obtained by the immunization of rabbits (Jäger and Albrecht and Gohn).

#### MICROCOCCUS CATARRHALIS.

For some years diplococci resembling the gonococcus and the meningococcus morphologically and in staining reactions have been found in the sputum by a number of observers, and to this coccus Pfeiffer gave the name of *Micrococcus catarrhalis*. It is frequently found in the respiratory passages in influenza-like infections and other inflammatory conditions, and occasionally in lobular pneumonia. It may be associated with the influenza bacillus or the pneumococcus. Among 140 cases of diseases of the respiratory passages Gohn and H. Pfeiffer found it eighty-one times, and M. Neisser demonstrated it in sixteen cases of whooping-cough, in one of measles and scarlet fever, and in two of diphtheria. It loses significance in relation to these diseases, however, since Jündell found it frequently in the mucus of the normal trachea, and Weichselbaum cultivated it frequently from the healthy nasal fossæ. According to Gohn, Pfeiffer and Sederl, "The *Micrococcus catarrhalis*, without the association of other microbes, is able to cause bronchitis and pneumonia with the clinical type of pneumonia due to the pneumococcus. The symptoms caused by the *Micrococcus catarrhalis* do not form a clinical type. They resemble infections by the pneumococcus or the bacillus of Pfeiffer (Influenza)" (Cited by Bezanson and de Jong). Others are not so positive concerning the pathogenic properties of the organism. Its etiologic rôle is not yet well established. It has little pathogenicity for animals, although peritoneal and pleural infection is possible in guinea-pigs.

It differs from the gonococcus and meningococcus in certain cultural characters.

#### GONORRHEAL INFECTIONS.

A. Neisser discovered the gonococcus in 1879, cultivated it in 1884, and demonstrated its specific relation to gonorrhea by

**The Gonococcus.** the inoculation of pure cultures into the human urethra. It is a diplococcus, young pairs having a figure-of-eight contour, whereas older pairs show a typical biscuit or coffee-bean shape. The organism is non-motile, has no flagellæ and forms no spores. It can be cultivated only on media which contain serum, ascitic or a similar fluid. Its failure to stain by Gram's method is of great diagnostic importance in the examination of urethral discharges; other organisms resembling the gonococcus are found in the urethra and vagina with great rarity. The reaction loses its differential value in the examination of secretions of the nose, mouth, and, to some extent, of the conjunctiva, where the meningococcus and the *Micrococcus catarrhalis* may be encountered.

In the purulent stage of a gonorrheal infection the cocci are found almost entirely within the leucocytes, whereas in earlier stages, when the discharge is slight and of a

**Phagocytosis.** mucous character, and also during convalescence, when the secretion again becomes mucous, they are largely extracellular. They are never within the nuclei. The process is one of active phagocytosis in which the cocci play a passive rôle. They occur not only on the surface of the epithelium, but penetrate between and beneath the epithelial cells, and even into the adjacent connective tissue.

In culture media growth is slow and scant, and cultures rarely live longer than one or two weeks, unless they are transplanted to fresh media. On the latter they may be carried through many generations without losing their virulence. When dried they die very quickly, but may live for some hours on linen (towels) or the skin, and for twenty-four

hours. The meningococcus grows in some defibrinated normal bloods, but not in others, there being thus an interesting individual variation. In the blood of three meningitis cases it did not grow. Normal human serum is distinctly bactericidal toward the meningococcus. This property is increased in the sera of meningitis cases, and is diminished but not entirely destroyed by heating to 60 C. for thirty minutes. Cerebrospinal fluid acts in much the same way as heated serum. The opsonin content of the blood does not appear to be altered during the course of epidemic meningitis. Normal cerebrospinal fluid does not contain opsonin for meningococci.

The paper of Dr. Davis will be published in full in the forthcoming number of The Journal of Infectious Diseases.



hours in warm water. They are very susceptible to temperatures above 42 to 43° C. and show very little resistance to anti-septics, particularly the silver salts.

The gonococcus secretes no soluble toxin, but contains an endotoxin or toxic "protein" which causes local and general symptoms in both man and animals. Dead

**Toxicity and Virulence.** cultures produce an inflammatory exudate in the peritoneal cavity of guinea-pigs and mice,

resulting in death if the dose is sufficiently large, and when injected into the urethra of man a temporary inflammation results. An actual infection of any sort can not be produced in animals; the cocci are killed without being permitted to proliferate. The endotoxin is fairly resistant to heat, being destroyed only after prolonged exposure to a temperature of 100° C.

In man the mucous membranes and endothelial surfaces are more susceptible to infection than other tissues. The urethra

**Susceptible Tissues.**

of male and female at all ages, the conjunctiva in the new-born, the vagina, uterus and tubes are probably the most susceptible. Less susceptible are the vagina in older women, especially those who have borne children; the bladder, and in adults the conjunctiva. It is remarkable that there are so few cases of gonorrheal ophthalmia in adults, considering the opportunities for infection. Infection of the mouth, nose and tear sacs is extremely rare. Extension from the urethra to adjacent structures takes place either by way of the surfaces, as in involvement of the prostate, epididymis, glands of Bartholin, uterus, tubes, ovaries, peritoneum, bladder and kidneys, or by way of the lymphatics as in infections of the periurethral tissue or cellular tissue of the pelvis. Infections of the bladder and kidney, and not infrequently the prostate, Fallopian tubes and pelvic tissue are of a mixed character (staphylococcus, streptococcus), but not necessarily so. Arthritis, tendovaginitis, endocarditis, which usually is vegetative but may be ulcerative, are the more common metastatic complications. Less frequent are pericarditis, pleuritis, subcutaneous abscesses and iritis. As to whether the cutaneous phenomena sometimes seen are due to metastases or are of purely toxic origin seems to be undetermined. The blood stream may be infected by way of the lymphatics or local blood vessels (gonorrheal thrombosis).

The influence of the enormous phagocytosis of the cocci on the course of gonorrhea is unknown. Since the ingested cocci usually have a typical form and stain well, it would seem that they resist the action of the leucocytic ferments. Likewise the nuclei of the leucocytes usually stain well, hence there is no evidence of a marked toxicity of the cocci for these cells. The mechanical imprisonment of the organisms by the leucocytes may be of influence in localizing the infection.

During the course of gonorrhea "there takes place a pronounced metaplasia of the epithelium in which the cylindrical cells are changed into a more cuboidal and even pavement form." Following this change the gonococci are limited to the surface of the altered epithelium and penetrate more deeply only in the vicinity of the glands and crypts. "Eventually the gonorrheal process is limited to such isolated points and the gonorrhea thereby enters into a chronic stage" (Observations of Finger, cited by Neisser and Scholtz).

The conditions which cause the subsidence of acute gonorrhea and allow it to persist as a chronic infection have been the subject of much speculation, unproductive for the most part. It is not due to a decrease in the virulence of the cocci since their original infectiousness is retained for others;

**Chronic Gonorrhea.**

nor does the local resistance of the mucous membrane reach a high point, since reinfection, or better "superinfection" is possible at any time. A man suffering from chronic gonorrhea and having infected his wife, may again be infected by his wife when the gonorrhea of the latter has become subacute or chronic. It has been suggested that the condition in chronic gonorrhea may be one of "mutual habituation between the mucous membrane and the gonococcus," i. e., a habituation between this particular mucous membrane and this particular gonococcus. Because of prolonged existence under unvarying

conditions, the growth energy of the organism may have become less, whereas, if it is placed in a slightly different medium (transference to another individual), its growth energy (ability to proliferate), becomes augmented, and reinfection of the original host with the same strain becomes possible.

It has often been noted that subsequent attacks run a milder course than the primary infection, but susceptibility is always present.

Mendez, Calvino, and also de Christmas have immunized with the coccus or toxic substances prepared from it. By

**Immunity.** growing the organism in serum bouillon de Christmas prepared a toxin, the toxicity of which was tested by intracerebral injections in the guinea-pig. Immunization of the guinea-pig resulted in a serum with antitoxic properties. Corroborative work has not been published.

[This series of articles closes with this issue. During the time that they have been appearing in "The Journal" we have received repeated requests to have them reproduced in book form, and the book is now in press. In addition to the subjects considered in the series, the book will contain chapters on infections with the streptococcus, staphylococcus, the diseases of protozoon etiology, and those of doubtful or unknown etiology, including among the latter, smallpox, vaccinia, chickenpox, scarlet fever, measles, German measles, typhus, syphilis, yellow fever, hydrophobia and whooping-cough. The articles, revised and collected in book form, will include a consideration of these diseases from the standpoints of infection and immunity. The book will be ready for delivery in January. The price will be \$1.50.]

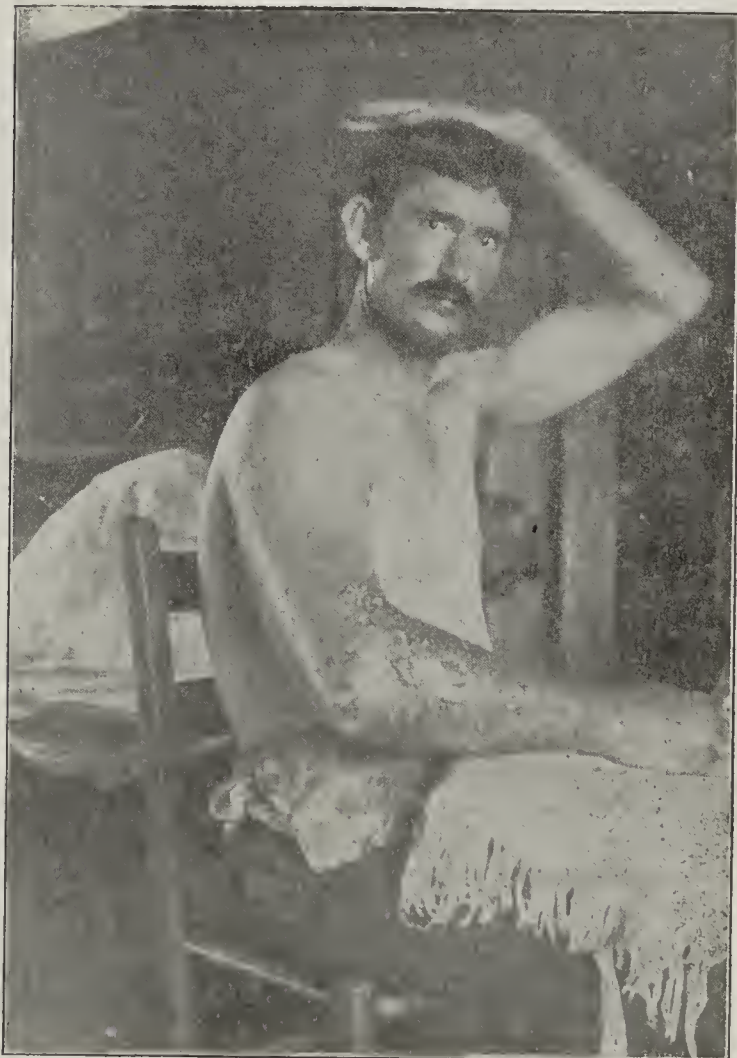
## Clinical Notes

### RATTLESNAKE BITE.

W. A. GRESHAM, M.D.

RUSSELLVILLE, ALA.

A man was bitten August 14 by a very large rattlesnake. For about thirty hours it seemed that he was about to suc-



cumb at any time, but he suddenly began to improve. He suffered intensely for twenty-four hours. The accompanying



photograph was taken August 17, about eighty-two hours after the injury. There was only a little sloughing at the point of injection of the poison, but the man was incapacitated for work about thirty days. As to treatment, the arm was corded tightly, an abundance of whisky was given, and hypodermic injections of strychnin 1/40 g. ever forty-five minutes. He has gone to work and has a good arm.

### FATAL CASE OF BLACKWATER FEVER SUPERVENING ON AMEBIC DYSENTERY AND SHOWING MALARIAL PARASITES IN THE BLOOD.\*

F. CREIGHTON WELLMAN, M.D.  
BENGUELLA, WEST AFRICA.

*Patient.*—Lieutenant M. de G., aged 26, Portuguese, was first seen Dec. 20, 1904.

*History.*—The patient had been in Africa two years. The first year and a half of this time were spent on the coast, the last six months in the interior. He has never suffered much from malaria nor blackwater fever. Recently he was again sent to the coast, where he spent three weeks. As he was leaving to return to the interior he was attacked with a sharp diarrhea and passed some blood. He recovered in a few days and continued his journey. He has had some looseness of the bowels, with occasional pains, ever since. After his arrival at Bihi fort he had a relapse of the "diarrhea" and was in considerable distress and very weak. He thought he also had some fever, so he came to me for advice.

*General Condition.*—The patient was thin, weak and feverish. He had no appetite. His tongue was foul. Temperature was 102.4 F., pulse 93, respiration 28. The spleen was slightly enlarged. There was tenderness over the lower bowels. The other organs were normal. At stool there was moderate tenesmus. He had taken no medicine except a diarrhea mixture, ingredients unknown. He considered this the second day of his disease (relapse).

*Examination of Feces.*—The stools were small and unformed, consisting almost entirely of blood and mucus. There was one moderate-sized slough. Under the microscope many amebæ morphologically identical with *Amœba coli* (Lösch) were seen.

*Examination of Blood.*—Both fresh and stained specimens were examined, one of each. In the latter two malarial parasites were seen; both were small intracapsular forms. The result of a differential leucocyte count was as follows (about 50 cells counted):

Polymorphonuclears	51.5	per cent.
Lymphocytes	26.	per cent.
Large mononuclear	17	per cent.
Transitional	3	per cent.
Eosinophiles	2	per cent.

The initial and succeeding erythrocyte counts are shown in the chart.

*Examination of Urine.*—The urine was dark but clear. The spectroscope revealed none of the compounds of hemoglobin. There was a trace of albumin.

*Course of the Disease.*—The patient was placed in bed (11 a. m.), and small doses of Epsom salts in solution every hour were prescribed. He was placed on liquid diet with a little brandy. In spite of frequent sponging of the body the temperature steadily rose until 5 p. m., when the hemoglobinuria set in.

*Re-examination of Urine.*—After the hemoglobinuria set in, the urine was re-examined; the color was about like that of porter or stout. There was a dirty-gray sediment, showing under the microscope debris, masses of hemoglobin, and some hyaline and granular casts. The urine was not spectroscoped at first. In later specimens the bands of both oxyhemoglobin and reduced hemoglobin could be seen by shaking up the urine, examining it, adding ammonium sulphid and examining again.

*Further Course of the Disease.*—*Amœba coli* persisted in the stools (which showed some improvement) throughout the attack, but malarial parasites were not demonstrated in three successive blood examinations. On the morning of the sixth day of the disease the temperature was found to have spontaneously fallen to 101 F. The following day severe hiccoughs set in which nothing availed to control. The patient died at 4:20 p. m. on the twelfth day.

*Treatment.*—The treatment pursued was entirely symptomatic and expectant. The saline routine for the dysentery, liquid nourishment and stimulants were administered for the weakness and the usual ineffectual gamut of sedatives and other devices were tried to control the hiccoughs. Quinin was not administered at any period of the attack as hemoglobinuria was feared from the first.

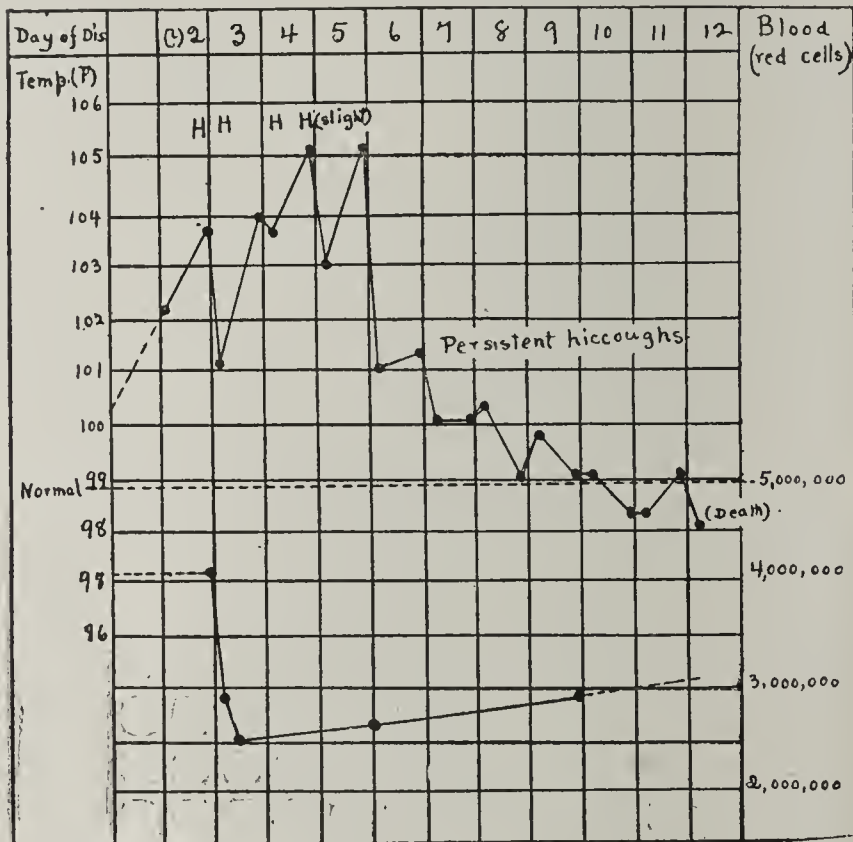


Chart 1.—The blood counts were made on the Thoma-Zeiss hemocytometer. In the first two counts, the blood was also centrifuged and the reading on the hematocrit compared with the result of the actual count. II = hemoglobinuria.

#### REMARKS.

1. This is the thirty-fourth case which I have studied more or less carefully in West Africa. Of this series 29 patients recovered.

2. The case just recorded is the only instance in which death occurred during the first attack. This may be explained by the previous and synchronous dysentery.

3. In three cases malarial parasites were seen in the blood immediately preceding the hemoglobinuria. In the present case the return of the dysentery probably brought about an explosion of latent malaria, and the two conditions combined were able to produce the physiologic depression and hypotonicity of the blood that invited the intercurrent hemoglobinuria.

4. The question of the relation between malaria and blackwater fever is of great interest, but too intricate to be discussed in a paper of this kind. I believe that they are related in some way, and I have shown that in southern Angola the geographical distribution of *Myzomyia funesta*, Giles (the principal carrier of *H. præcox* in West Africa), severe malaria and hemoglobinuric fever closely coincide. The precise character of the relation between the two diseases (which is disputed by some) has not yet been shown.

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## CLIMATIC TREATMENT OF CIRCULATORY DISEASE.

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NEW YORK.

During the past four years it has been my good fortune to witness the beneficial effect of certain climatic conditions on certain forms of circulatory disease. It has, indeed, been a surprise to myself, accustomed to city conditions, to see how much is accomplished by treatment of certain cases of secondary low arterial tension, even when accompanied by such accidents as hemiplegia, in the climate of the lower Maine coast.

My observations were made at York. The first case was one of secondary low arterial tension following high tension in a man who had had a prolonged and anxious business strain. While under this strain this man suddenly developed hemiplegia and aphasia. When I saw him he was suffering from these conditions. The heart was dilated; there were loud murmurs at the base and apex. He could not make any exertion without shortness of breath, and was extremely depressed. In other words, he was suffering from all signs of a marked deterioration of the circulatory apparatus. The improvement in this case was very marked, so that by the end of the summer the man was able to take long walks, his paralysis and aphasia were much improved, and a process was checked which had every indication of progressing to a fatal termination.

Another case was that of a woman, also suffering from right hemiplegia and slight aphasia, in whom the secondary low arterial tension was just commencing. She also made vast improvement by the end of the summer, and had even for the time being recovered from the tendency to high tension.

The third was a case of a woman with low arterial tension secondary to an exhausted nervous system and the high tension of nervous strain. She also improved very much, but, the cause not being removed, the improvement was not so marked.

Now, it may not seem that climate had much to do with these cases, but a study of the effect of the climate and an analysis of its characteristics make it evident that for this class of cases the summer climate of lower Maine coast is particularly beneficial. The climate of the lower Maine coast has a remarkable combination of dryness with sea air and low temperature in summer. It is beneficial in all cases of physical exhaustion and to patients who require a restoration of the vitality after disease. The climate is wonderfully stimulating to nutrition. On the other hand, it is not beneficial to patients suffering from purely functional nervous diseases requiring rest. These patients are overstimulated and are apt to suffer from restlessness and insomnia. Still, patients with a tendency to melancholia and depressed conditions are much improved. The physical effect of the transition from the climate of New York to the climate of the lower Maine coast is really remarkable. Those unaccustomed to the change find a longer stay than six weeks too stimulating. So that many persons who make their summer home there find it beneficial to go inland to a less exciting climate for a rest in the middle of the season.

We all know how difficult is the task of restoring what we call vitality. This is a word so frequently on the lips of physicians that I have noticed that when first used to a new client it often excites a smile on the part of the patient. One said the other day: "Please do not talk any more about that thing you call vitality." Whether we talk about it or not, it is an important element with most chronic invalids, and it is the element that has seemed to me most benefited by this particular climate. The drawback with most seashore climates is the great dampness. The lower Maine coast escapes the fogs which are so prevalent to the north and south. The ocean is very shallow and the shore recedes here so that the fog bank lays off the coast, within sight, but seldom reaches the land.

**The Survival of the Fittest.**—Modern medicine has been accused of helping to deteriorate the human race, by preserving the weaklings, and thus arresting the law of the survival of the fittest; but surely preventive medicine is enabling the nations that are intellectually fit, to survive, while those steeped in ignorance, are decimated by preventable diseases.—Hanbridge, in *Albany Med. Ann.*

## A METHOD FOR THE RAPID PREPARATION OF FRESH TISSUES FOR THE MICROSCOPE.

LOUIS B. WILSON, M.D.

Pathologist St. Mary's Hospital.

ROCHESTER, MINN.

While engaged in general pathologic work I shared the common distrust of frozen sections of fresh tissues for microscopic diagnosis. On taking charge recently of the laboratories of the Drs. Mayo, surgeons, I carefully tested the various methods hitherto published and found them either too slow for results while the patient waits under the anesthetic or else giving poorly differentiated cell detail. After considerable experimentation the following technic was discovered, and for the last six months it has given uniformly excellent preparations:

1. Bits of fresh tissue not more than 2x10x10 mm. are frozen in dextrin solution and cut in sections of from 10 to 15 microns thick.
2. The sections are removed from the knife with the tip of the finger and allowed to thaw thereon.
3. The sections are unrolled with camel's-hair brushes in 1 per cent. NaCl solution.
4. The sections are stained from 10 to 20 seconds in neutral Unna's polychrome methylene blue.
5. They are washed out in 1 per cent. NaCl solution.
6. They are mounted in Brun's glucose medium.

The microtome which I use is the Spencer automatic with a CO<sub>2</sub> attachment in which vulcanite is substituted for brass in the wall of the freezing chamber, thus insulating the freezing plate. Thawing the section on the finger prevents to a great extent the formation of bubbles. The well-made camel's-hair brushes used by artists are much more useful for handling tissues than those usually furnished by laboratory supply houses. A heavy, shallow watch glass over a black surface is the best receptacle in which to unroll sections. Sections are best handled in the stain folded over a lifter made of a small glass rod drawn out and bent at convenient angle. The section is kept constantly moving while it is in the stain. The stain is contained in a minute cup to facilitate the rapid recovery of the section should it slip from the lifter. Washing out is done in several ounces of salt solution in a white porcelain dish and is continued only while the stain comes away freely. Brun's glucose medium (which is made by mixing distilled water 140 c.c., glucose 40 c.c., and glycerin 10 c.c., then adding camphorated spirit 10 c.c. and filtering), is held in an oval dish of porcelain (an "undecorated match safe") of such a size that a three-inch slide will rest in a slanting position, with one end in the bottom of the dish and the other on its edge. The section is spread out on the slide while it is in this position. The slide is then carefully withdrawn from the dish, the excess fluid removed, a cover-slip dropped over the section and the specimen is ready for the microscope.

The whole process can be gone through in one and a half minutes from the time the tissue is placed on the freezing plate of the microtome until the stained specimen is on the stage of the microscope. The resulting coloring is uniformly good with the tissue elements sharply contrasted in red, purple and dark blue.

A diagnosis may be made from such preparations in a large percentage of surgical cases in which a diagnosis is possible by a study of sections of the same thickness cut from fixed tissues and stained with hematoxylin and eosin.

## FRACTURE OF BOTH CLAVICLES.

SCHUYLER W. HAMMOND, M.D.

RUTLAND, VT.

On Oct. 17, 1905, Mrs. H. W. H., aged 54, while running clothing from a second-story window out on an endless rope, was precipitated 15 feet below by the breaking of the rope.

Careful examination revealed fracture of the right clavicle at its outer angle and of the left clavicle at its middle. The patient also suffered separation of the os innominatum from the sacrum at the right sacroiliac synchondrosis, with some traumatism to the sacral plexus of nerves.



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SATURDAY, DECEMBER 2, 1905.

## COUGHS AND COLDS.

The sudden changes in the weather during the period when fall is gradually passing into winter are likely to be the occasion for a number of ordinary colds. Because of the presence of these, it not infrequently happens that pulmonary affections of serious significance are thought to be no more than a simple cold. The cough, it is true, is likely to be much more persistent, but then, according to an old popular tradition, midseason coughs are supposed to be more liable to persist. It is easy to understand, then, how too little may be made of a cough, and, as a result, a patient may be allowed to lose precious time at the beginning of active pulmonary tuberculosis, each day of whose progress makes the ultimate prognosis a little less favorable. Tuberculous patients who continue their ordinary occupations are almost sure to have their symptoms gradually grow worse and their tuberculosis more active, and the possibility of an incipient case becoming fairly well advanced during the delay can be readily understood.

Those in charge of large sanatoria for the treatment of tuberculosis insist that the ordinary general practitioner does not recognize pulmonary tuberculosis soon enough for a cure to be possible in most cases in which the patients are sent away for sanatorium treatment. The physical signs and symptoms for which he waits before pronouncing the case certainly tuberculous are those of advanced and not of incipient tuberculosis. Dr. Trudeau, whose opinion in this matter is to be respected, said: "The average medical man's idea of tuberculosis only relates to the disease after the rational and physical signs have become well marked."

In a recent article, Dr. Willson<sup>1</sup> has collected the first subjective symptoms of 86 cases of tuberculosis that had been studied with special relation to the subject. As it is because of subjective symptoms that the patients present themselves for treatment, the importance of this method of viewing the question can be readily understood. In nearly all the cases, the first symptom noted was a persistent cough without a recognized cause. This often had its origin in what seemed to be an ordinary cold, and not infrequently disappeared after a time, only to be renewed on what seemed some trivial provocation. Usually in the intervals when there was no genuine cough, there was a frequent necessity of clear-

ing the throat and a little hacking cough utterly unproductive and apparently due only to some irritation of the larynx was noted. It is these forms of unproductive cough for which there are so many and various names. We have all heard of a stomach cough, the gynecologists occasionally speak of the uterine cough, some have not hesitated even to use the term ovarian cough, there is a laryngeal cough, of course, a kidney and nervous cough, and then the ophthalmologists sometimes speak of a cough due to the lack of correction of some error of vision.

It seems clear that in most cases the use of these special designations for unproductive coughs that hang on is fraught with serious danger. In nearly all cases, a persistent cough is due to irritation of the lungs or of the larynx consequent on the presence of the tubercle bacillus. Long before there is any question of the presence of tubercle bacilli in the expectoration, this cough will manifest itself and will not disappear completely under any ordinary treatment that does not recognize the necessity for out-door air and constitutional upbuilding. The so-called stomach cough is especially deceptive, since not infrequently the presence of tuberculosis in the system is manifested very early by a disturbance of the digestive function.

It is clear, then, that far from its being advisable to make little of a persistent cough, it is our duty to emphasize the necessity for finding out exactly what is the cause of it. Not infrequently it will be comparatively easy to find some other symptoms or physical signs that will add to the suspicion of tuberculosis in the case. Sometimes there will be no more than a tendency to rapid pulse on very little exertion, or a slight rise of temperature or a temperature normal in the afternoon, but distinctly subnormal in the morning. If any of these symptoms are present then the suspicion is more than confirmed, and until the cough can be relieved the question of tuberculosis must be allowed to remain open. At times such patients will say that they have cold hands and feet, with a tendency to perspire rather freely, either after slight exertion or after becoming thoroughly warmed in bed. Indeed, it is rather surprising how many important details can sometimes be brought out by careful questioning in what at first seemed to be "only an ordinary cold."

It is better to be frank with tuberculous patients rather than to follow the old policy of euphemistically glossing over conditions in order to save the patient a shock. For those who have not tuberculosis, frankness will have no bad effect, even if it should not be quite justified, and if it leads them to improve their physical condition so as to remove the suspicions that have been aroused, it will surely do good. Our best phthisiologists insist that this policy would save many lives every year, which is indeed a consummation to be devoutly wished.

1. International Clinics, vol. ii, 15th series, p. 50.



### THE DIAGNOSIS AND TREATMENT OF RENAL TUBERCULOSIS.

In these days of indiscriminate surgery, when the advent of asepsis allows and encourages the use of the knife by those who are not prepared to use it, the thinking internist is in danger of taking too conservative a view as to the necessity of operative procedures in certain classes of cases. Among the conditions which stand on debatable ground so far as operative indications are concerned, renal tuberculosis must be mentioned. There are many who believe that this condition is essentially a medical problem, and that operative treatment is to be resorted to only as a last chance, and this view is held even by genitourinary surgeons of note. In a paper before the recent Congress on Tuberculosis, Albarran,<sup>1</sup> who has certainly earned the right to speak authoritatively on this subject, discusses the problem in a very lucid manner. The decision as to whether a given condition is to be considered in the province of the physician or of the surgeon depends on a variety of circumstances. In dealing with tuberculosis in paired organs, like the kidneys, the problem is simplified by the fact that one can be removed with relative impunity provided that the other be intact. The main questions to be answered, then, are these: How frequently are the kidneys unilaterally affected in this condition? What is the usual outcome in cases treated expectantly on purely medical lines? How does the mortality under surgical treatment compare with that under medical?

These questions are taken up seriatim by Albarran, and are answered by quotations from his own statistics and from those of other observers of experience. Unilateral involvement in renal tuberculosis is the rule rather than the exception, it occurs in at least 85 per cent. of the cases, and in the majority there is no serious involvement of other organs, a point of great importance. It is true that in most cases there are symptoms which would lead the inexperienced to believe that the bladder also is infected, but the use of the cystoscope has shown conclusively that, at any rate early in the disease, the bladder lesion is of an irritative character, and is not a true cystitis. Even when signs of early lung involvement are present, a not unusual complication, experience has shown that operative intervention is rather of benefit than otherwise. The history of these cases under medical treatment is far from encouraging. Spontaneous healing is known, but is rare, and when it occurs is always due to the blocking of the ureter by the inflammatory process, a condition which throws the affected kidney out of function just as effectively as surgical removal, but is less satisfactory than the latter procedure on account of the length of time it consumes and the fact that it still leaves in the body a latent focus of disease which at any time, even years after the ureteral blocking, may again become active and cause the death of the patient. In most cases the progress under

medical treatment is a slow but a steady downhill progression. Tuberculosis of the bladder, with its long-drawn agony, is followed by ascending infection of the sound kidney, or generalization of the disease, and the patient dies a lingering and painful death. In competent hands, the removal of the kidney is in itself an operation with slight mortality. Albarran lost but 3 per cent. of his cases, and the combined mortality of the six operators who have reported the largest series of cases totals 7 per cent. This is certainly a vast improvement over the mortality under medical treatment.

As in other conditions in which surgical intervention is of aid, its value often depends, in part at least, on the early recognition of the disease. This means that the general practitioner must learn to recognize, or at any rate to suspect, the presence of this condition at an early date. The specialist has at its command methods of diagnosis which, of necessity, are not available to the average physician. Catheterization of the ureters, of which the genitourinary surgeon speaks so glibly, is an operation requiring a good deal of skill, a large amount of experience, expensive instruments, and an amount of time which the ordinary physician does not possess. Yet it is the procedure *par excellence* in the diagnosis of early kidney tuberculosis. The practitioner must rely on other and more common methods of observation, and Albarran briefly sketches what he considers the more important of these. The history of vesical irritation, with more or less pain on urination, and the passage of a pale, slightly cloudy urine, is of importance. If a definite cystitis is present, its occurrence without definite cause, its aggravation under local treatment, and the absence of the ordinary micro-organisms from the urine are all suspicious circumstances. Attacks of spontaneous hematuria should be looked at askance, especially if they are not modified with rest, are painless, or are at most accompanied by vague painful sensations in the region of the kidneys. Naturally an examination of the urine for tubercle bacilli is called for, and it is to be remembered that the fresher the specimen the better the chance of finding the bacilli. The finer methods of diagnosis must often be left to the specialist. Early diagnosis is the key to success.

### BALANTIDIUM COLI.

The infusorium, *Balantidium coli*, as the cause of human intestinal infection, was described first by Malmsten of Stockholm in 1857. Since then, something like 117 cases have been recorded, according to the recent summary by Strong,<sup>1</sup> and there seems all reason to believe that this parasite may give rise to diarrhea, sometimes serious and often persistent. It is an oval-shaped, ciliated organism, from .07 to 0.1 mm. in length by from .05 to .07 mm. wide, capable of motion and of some change in form; reproduction may take place in

1. Presse Médicale, 1905, No. 80. Abstract in THE JOURNAL on page 1526.

1. Bulletin of Government Laboratories, Manila, No. 26, Dec. 1904.



three ways, viz., by division, the most frequent; by budding, and by conjugation. It may undergo encystation.

*Balantidium coli* occurs with great frequency in the colon and cecum of the hog, which is regarded as its proper host, and in which it appears to be a harmless commensal. It is not known how human infection takes place; water, in which the organism may live for a long time, may be the means and perhaps also uncooked sausage meat and other forms of food.

The majority of the reported human cases are from Russia (51); in proportion to the population, a relatively large number of cases have been described in Sweden (30) and Finland (13). Only one case<sup>2</sup> is credited to North America, and this occurred in a German farmer in Iowa, engaged in hog raising and sausage making; the diagnosis was made in Germany, the patient having returned home for treatment for fatigue, weakness, and pain in the abdomen to the left and below the navel. He had no diarrhea, but the feces contained undigested food. Strong and Musgrave have described a fatal case from Manila.

In the 117 cases collected by Musgrave, diarrhea or dysentery existed in all but 2, the feces often containing mucus and blood. Colic, tenesmus, abdominal swelling, nausea and vomiting may occur. Only two of the cases were in children. Twenty-five per cent of the patients gave a history that pointed to infection from the hog. When the intestinal lesions are not far advanced and the strength of the patient permits it, continued local treatment may drive away the parasites. Quinin and other substances have been used in enemas with success in the hands of some observers, while others report failure.

Of 111 patients 32 (29 per cent.) recovered, 30 per cent. died, and in a number of these other diseases were present. There have been 32 autopsies on patients known to harbor *Balantidium coli* and to suffer from diarrhea and other symptoms, and in 28 there were ulcerations of the large intestine, but the type of ulcer does not appear distinctive. Parasites were found post-mortem in 21 cases, and histologic studies were made in only 7. In Strong and Musgrave's case living parasites were found in all parts of the large intestine and in the lower 4 or 5 cm. of the ileum, and in this case, as well in Solojew's case, the parasites had invaded the coats and vessels of the large intestine. Polynuclear eosinophiles were numerous about the parasites. In an outbreak of dysentery among the orang-outangs in the New York Zoological Garden, Harlow Brooks demonstrated balantidia in the feces, as well as in the coats of the large bowel, which presented the same changes as in the recently studied human cases. In order that the parasites may be recognized in the tissues it is necessary to secure early postmortems, as dead parasites disinte-

grate quickly, so that they can not be recognized in the sections.

There are many points in connection with the pathogenesis of balantidium infection that require further study. Thus the question whether the balantidium by itself can penetrate the normal mucous membrane is still an open one. Furthermore, the meaning of the presence of the infusoria in the blood vessels of the intestine, now noted in several cases, raises some interesting problems. Strong's summary gives a good basis for further work along these lines.

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#### SUICIDE PREVENTION.

The enterprising mayor of Cleveland, who has achieved a national reputation by his advanced ideas on sociologic matters, has appointed, it is said, an anti-suicide commission, that is, a body of experts who shall devise ways and means of preventing the despondent and destitute from self-destruction. Suicide is increasing and is becoming more than ever a matter for concern to the well-wishers of the race. Many suicides can undoubtedly be accounted for by mental aberration, either actual insanity or temporary morbid impulse. With the increase of insanity suicide would also naturally increase. It seems doubtful, however, that we can properly attribute the very notable increase of self-destruction to these causes alone. The too prevalent pessimistic tendencies of the present time are probably still more responsible. To a despondent and suffering individual who can see no prospect of betterment, suicide often appears to be a rational—though not at all a heroic or praiseworthy—procedure, and the impulse may easily overcome both the natural instinct of self-preservation, and the inherent fear of consequences in a future life. Purely ethical considerations alone will not prevent it, though they have their influence. While the actual pathologic causal factors above mentioned mainly interest us as medical men, we can not altogether overlook the social disease that we believe is the main cause of the growing evil of to-day.

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#### POLITICAL INFLUENCE.

In the organization of modern society the currents and counter-currents of interest and prejudice are not always easy of determination. The profession of medicine should present to society active evidence of absolute solidarity on all questions affecting the public health. Of course, we are at times unable to agree on a line of conduct on some particular topic, but one of the great benefits of organization is the opportunity afforded to thrash out debatable points among ourselves and then to present to the world the digested result. Frequently it becomes necessary for the professional units to make their influence felt on some particular problem. In many cases all that the organization need do is to disseminate the facts, leaving to the individual the decision as to the part he will play, while in others it is necessary for the profession openly to declare itself. In the elections this year, so far as known, there was no instance of medical societies acting officially, but there

2. Reported by Mitter, Inaug. Diss., Kiel, 1891.



is reason to believe that in several states medical men had a share in bringing about the election of independent and reform candidates. In Philadelphia the medical men were in the front in the fight against the boodlers. In Ohio it is reported that professional sentiment was so strongly crystallized that five thousand physicians voted and worked against Governor Herrick, who was a candidate for re-election. The one chief reason for this unanimity of sentiment was the matter of the management of the Ohio Hospital for Epileptics, concerning which our readers were at the time kept fully informed. The governor gave aid and comfort to the politicians who wanted the "rake-offs" on contracts, even after the medical profession had in various ways urged him to an opposite course. The affront he put on the profession, however explained, could have but one result. As a sequence of this election it is hoped that all the charitable institutions of the state will receive a thorough investigation, following which better conditions seem assured. Probably also the unselfish counsel of the profession will not again be so lightly estimated. The result in Ohio should be an encouragement for physicians in other states to make every legitimate effort to bring about reforms, when necessary, in the conduct of state institutions.

#### THE NOSTRUM EVIL.<sup>1</sup>

When the program of the Section on Practice of Medicine for the Portland session announced that a paper was to be read on nostrums, the manufacturers and exploiters of these preparations became anxious. It was an innovation for one of the largest and most important sections to take up such a subject as this. The Section on Pharmacology and Therapeutics on several occasions had discussed the matter in a kind of a semi-official way; but this was different. What did it mean? Stenographers were engaged to find out and to report the paper in full, so that something might be done if it were possible and necessary. Pretty soon something was done. Evidently the paper hurt, for Dr. Billings and *THE JOURNAL* began to receive letters, some of them from lawyers, threatening all kinds of trouble if the paper should be published. Since the paper seemed to be so dangerous to the nostrum men, it was thought that it ought to have a larger circulation than it would if published in this journal only, and the state society journals were asked to aid in the publicity movement. This, too, came to the knowledge of those especially interested, and at least one of them sent an intimidating letter to the editors of the journals which it was believed might publish the paper. We rather think that few of the editors were sufficiently intimidated to prevent them from carrying out their original intention. Consequently, the paper on the nostrum evil will have about as wide circulation as any paper ever had. In this connection we wish to thank those journals which have expressed such grave anxiety lest we get into trouble by printing matter that would in any way injure the nostrum manufacturers. We realize that it is an awful thing to do, but it's done.

1. The word "secret" in the title of Dr. Billings' paper—see first article in this issue—was marked to be omitted, but through an oversight this was not done.

#### THE YELLOW-FEVER CONTROVERSY.

"Whose fault was it?" This is the question New Orleans is endeavoring to answer. We have already referred to Dr. Joseph Holt's charges against the health officials. These have been followed by a most extraordinary occurrence. The Mississippi State Board of Health, it is reported, has adopted a resolution expressing its hope that Louisiana will retire the president of its State Board of Health and the health officer of New Orleans, Dr. Souchon and Dr. Kohnke, respectively. Dr. Kohnke has published a very full reply to Dr. Holt and to the Mississippi officials, in which he shows conclusively that there are two sides to the question, and that impartial decision will hardly be possible until there has been thorough, unprejudiced investigation of the facts. He makes the telling point that, while it since has seemed probable that yellow fever existed in New Orleans since April or May, there was nothing to arouse suspicion. The first case was reported on July 12, and inspection and fumigation were at once begun. The early cases were very mild and were not recognized as yellow fever by the attending physicians. It should not be overlooked that the early cases of an epidemic of any infectious disease are frequently so atypical and mild that even the expert diagnostician is misled, and hence that the first cases pass unrecognized, though no one can be held at fault. Those who hold the other view contend that the cases were recognized, but were concealed. Here is where nothing but knowledge of the facts can quiet the controversy or afford the outsider any opportunity for reaching conclusions. Until such knowledge is available, physicians will prefer to believe that mild unsuspected cases of yellow fever were unrecognized rather than that undoubted cases were deliberately concealed. Certainly, all will hope that such will prove to be the case. The chief count in the indictment against Dr. Souchon and Dr. Kohnke is that they gave no warning of the danger until after July 19, a date on which all the railroads ran cheap popular excursions into New Orleans from Mississippi, Louisiana, Alabama and Florida. It has been declared that this excursion was the chief factor in the wide simultaneous dissemination of the infection. At present one conclusion has emerged from the controversy—the old one that every city needs a stringently enforced and effective ordinance compelling physicians to report all infections. Without effective notification ordinances, heartily supported by professional opinion and action, similar calamities will from time to time recur.

**The Profession's Future.**—President Faunce of Brown University, addressing the Rhode Island Medical Society, said that the medical profession will advance in the next twenty-five years in toleration and breadth of horizon. "Not only intensively will the profession advance in mastery of its present instruments and methods, but extensively as well it must progress in fashioning new instruments, in recognizing new methods, and exercising genuine intellectual hospitality. A hospitable mind is the peculiar product of the scientific era. In the prescientific age, hospitality was a sign of weakness and source of danger. . . . We now see that intolerance is the child of uncertainty. The man who is not sure of his position is afraid to meet the men who differ from him; the man who is quite certain of his own established faith is glad to listen to voices that speak from any quarter of the horizon."



## Medical News

### ILLINOIS.

**Will Have Wisconsin Society for Guest.**—The Winnebago County Medical Society at its meeting in Rockford, Jan. 9, 1906, will entertain the Central Wisconsin Medical Society. It is expected that more than fifty physicians from Wisconsin will be present.

**Change in Classification.**—The state civil service commission on November 22 rescinded its recent action dividing the classified service into seven branches and enacted a new rule embodying ten classes of employes. Under the medical service the following are included: Assistant physicians in insane hospitals, physicians, surgeons, pathologists, oculists, pharmacists, apothecaries and druggists.

**Diphtheria.**—A number of cases are reported in Moline.—The secretary of the State Board of Health has announced that promiscuous use of slate and lead pencils in public schools is responsible for the spread of contagious diseases, with especial reference to diphtheria.—Diphtheria is prevalent at Metcalf and the schools and outbuildings have been thoroughly disinfected.—There is said to be much diphtheria in Granville and Ladd, but the epidemic in Spring Valley is now declared to be under control.

**Tent Colony to be Dedicated.**—The Ottawa tent colony, which was established a little more than a year ago, to demonstrate the possibility of cure of tuberculosis in this climate, has been quite successful, as was anticipated. Extensive improvements have been made to meet the increased demand and to make the treatment more attractive. To increase the educational value of this colony the dedicatory exercises will be held at Ottawa December 12. The program will include short addresses by physicians and laymen. Excursion rates will be in force from all points in Illinois.

**Per Capita Cost at State Institutions.**—The report of the Illinois Commissioners of Public Charities for the quarter ended September 30 gives the following as the per capita cost of the various state institutions: Illinois Western Hospital for the Insane, Watertown, \$26.21; Illinois Eastern Hospital for the Insane, Hospital, \$30.05; Illinois Hospital for the Incurable Insane, South Bartonville, \$30.32; Illinois Central Hospital for the Insane, Jacksonville, \$31.27; Illinois Southern Hospital for the Insane, Anna, \$35.13; Illinois and Northern Hospital for the Insane, Elgin, \$38.67, and Illinois Asylum for Insane Criminals, Menard, \$50.43.

**Evanston Hospital.**—At the annual meeting of the Evanston Hospital Association, November 14, the president began his report by quoting the notice which appears on the gate of the London Hospital: "The passport for admission is sickness or injury combined with poverty. No letters required." The records of the Evanston Hospital show that during the fiscal year 85 free patients were admitted, or more than 25 per cent. of the total number of patients received during the year. In the children's ward 22 patients were admitted, 14 of whom were free patients. The total number of days' service during the year was 7,561, or 622 days more than last year.

**Society Indorses New Army Medical Bill.**—The Adams County Medical Society, at its meeting November 13, adopted the following resolution, which concluded with an indorsement of the bill to increase the efficiency of the Medical Department of the United States Army as drawn up by the surgeon general of the Army and approved by the President:

WHEREAS, Seven years have elapsed since the country was shocked by the disgraceful sanitary conditions which prevailed at Chickamauga, Jacksonville and Camp Alger during the Spanish War, and yet no successful effort has been made to remedy the inadequacy and faulty organization of the medical department of the United States Army to which this utter failure of military sanitation was chargeable, and,

WHEREAS, The continuance of these discouraging conditions is depleting the army medical service of its best men by resignation, and deterring the brightest minds of the profession from seeking a future in so promising a field, therefore,

Resolved, That in the judgment of this society the situation is so critical as to demand immediate measures for relief.

### Chicago.

**Personal.**—Dr. Albert Goldspohn has donated \$25,000 for the erection of a science hall at the Northwestern College, Naperville.

**Hospital Permit.**—A building permit was issued November 22 for the Chicago Polyclinic to erect a six-story brick hospital at 319 to 331 La Salle Avenue.

**Sale of Dangerous Drugs Prohibited.**—The city council at its meeting November 20 passed the amendment to the ordinance prohibiting the sale of morphin and similar drugs, so that

they can be obtained only on the prescriptions of physicians or dentists.

**Hospital Dedicated.**—The St. Bernard's Hotel Dieu in Englewood was dedicated with impressive ceremony November 21 by Archbishop Quigley. The building is five stories high, as nearly fireproof as modern science can make it, and will accommodate 280 patients.

**Expenditures for the Poor.**—At the forty-eighth annual meeting of the Chicago Relief and Aid Society, held November 13, the president reported that the society had spent \$26,400 in the direct relief of the poor during the fiscal year. A new feature of the work was the fresh air station for sick babies and the visiting nurse association. The society now controls 160 hospital beds.

**Secures One Dollar Verdict.**—In Judge Gary's court November 17 a jury awarded Mrs. J. Jessen one dollar damages from Dr. Henry J. Burwash, whom she had sued, together with the Hospital of St. Mary of Nazareth, for \$10,000 damages, alleging that an unnecessary operation had taken place resulting in the death of her son two years ago, and that the body of her son had been mutilated.

**Deaths of the Week.**—The total deaths from all causes for the week ended November 25 were 471, equivalent to an annual death rate of 12.34 per 1,000. The number of deaths is 39 less than for the preceding week, and 46 more than for the corresponding week of 1904. Pneumonia continues to lead the death causes with 73, followed by consumption, with 60; nephritis, with 49; heart diseases, with 42; violence, including suicide, with 39; acute intestinal diseases, with 25, and cancer, with 20.

### IOWA.

**Do Not Wish Names Mentioned.**—At a recent meeting of the Scott County Medical Society resolutions were adopted to the effect that the editorial departments of the various papers be requested not to mention the names of physicians in connection with medical services, operations or accidents.

**Hospital Notes.**—St. Joseph's Mercy Hospital, Webster City, was dedicated and opened November 16.—Mrs. E. Tillotson, Highlands, N. J., has given \$1,000 to the Ottumwa Hospital Association in memory of her father, the late Dr. William M. Murdock of Urbana, Ohio.—Dr. William H. Corrigan is about to open an emergency hospital in Rockwell.

**Personal.**—Dr. Frank W. Smith and family, Red Oak, returned October 29 from a trip to the Pacific Coast.—Dr. Cassius C. Cottle and family, Marshalltown, will spend the winter in southern California.—Dr. Thomas E. Livingston Bode expects to spend the winter in California.—Dr. E. R. Wallizer, Des Moines, has been committed to the Clarinda State Hospital.

**Illegal Practitioner Found Guilty.**—J. C. Wilhite, Fort Dodge, a so-called "doctor of neurology," was found guilty November 18 of the illegal practice of medicine. The defendant admitted that he did not attempt to treat diseases, but that he had advised patients how to treat themselves. Notice of appeal to the supreme court was filed. The heaviest penalty possible is a fine of \$3,000.

**Epidemic Diseases.**—The Board of Health of Dubuque has ordered all the schools and churches of that city to be fumigated because of an epidemic of typhoid fever.—Since October 1 more than sixty homes in Sioux City have been placed in quarantine on account of diphtheria and scarlet fever.—A large number of cases of typhoid fever have developed in and around Ames in the last few weeks.—A mild epidemic of diphtheria and scarlet fever exists in Waterloo.—Typhoid fever has assumed alarming proportions in Estherville.—An epidemic of typhoid fever exists in the Iowa Institution for the Feeble-minded, Glenwood.

### KANSAS.

**Loss by Fire.**—The office of Dr. Silas A. Boam, Topeka, was destroyed by fire, supposed to be of incendiary origin, October 23.

**Personal.**—Dr. Ambrose Weber has purchased the practice of Dr. D. H. Horner, Perth.—Dr. William C. Bower, Lebanon, has been appointed local surgeon for the Rock Island Railway system.

**Kansas University.**—The contract for the hospital building for the State University Medical School, Rosedale, has been let. The estimated expense of the building will be \$100,000.—The clinical department of the school, located in Kansas City, Kan., is now in good working order and the hos-



pitals of Kansas City, Mo., have opened their doors to the students.—A free eye clinic has been opened by the college at the German Hospital, Kansas City, Mo.

**Diphtheria.**—The public school at Stone City has been closed on account of diphtheria.—During October, four deaths resulted from diphtheria and 60 cases were reported in Leavenworth.—The public schools in Abilene have been closed on account of diphtheria.—The public schools at Arkansas City have been closed indefinitely in the hope of preventing an epidemic of diphtheria.—More than 50 cases of diphtheria are under treatment at Moline.—The schools at Mound Valley have been closed on account of an epidemic of diphtheria.

#### MARYLAND.

**Personal.**—Dr. Richard C. Harley has resigned as health officer of Laurel.—Dr. John Mace, Cambridge, has been appointed lieutenant in the Maryland Naval Reserves and assigned to duty with the Cambridge division.—Dr. James M. Spear, Cumberland, has been appointed local surgeon for the Western Maryland Railroad.—Dr. Washington G. Tuck, Annapolis, has resigned the chairmanship of the Republican state central committee.—Dr. John E. Bolte, Harrisonville, resigned as sanitary physician for the second district of Baltimore County November 21, and Dr. Harry F. Shipley has been appointed in his place.—Dr. John W. Lacy, Lisbon, returned from Europe on the *Oceanic*, arriving in New York October 25.

#### Baltimore.

**A Poor Response.**—In answer to the appeal for \$6,000 by the Maryland Association for the Prevention and Relief of Tuberculosis for a year's campaign against the "white death", \$627 have been received to date.

**Matriculants.**—The number of matriculants in the University of Maryland School of Medicine for the present session is 331, not 99 as erroneously stated in *THE JOURNAL* last week.—At the Johns Hopkins University there is a total enrollment of 293 in the medical department.

**Died in Prison.**—Mrs. Emma O. Lewis, who was sentenced on June 30 to three years' imprisonment in the state penitentiary for performing a criminal operation and for whose pardon a petition was being circulated, died in the penitentiary October 25 from the results of despondency.

**Vital Statistics.**—The number of deaths for the week ended November 25 was 220, a number larger than for the same period for several years, the annual death rate represented being 19.95 per 1,000. The chief causes of death were: Consumption, 30; pneumonia, 29; Bright's disease and organic heart disease, each 19; bronchitis, 9, and typhoid fever, 8. There were 2 deaths attributed to gripe and only 2 to cancer.

**Home from Europe.**—Dr. and Mrs. William Green have returned from Europe.—Dr. and Mrs. T. Caspar Gilchrist have returned after a summer in Europe.—Dr. William H. Welch, who spent the summer abroad, has returned.—Dr. William Whitridge has returned from Europe.—Dr. John M. T. Finney, surgeon general of the state, has returned after a summer in Europe.—Dr. and Mrs. Maurice Bloomfield have returned after a summer abroad.

**Personal.**—Health Commissioner Bosley has announced the following appointments: Medical inspectors of public schools (reappointed), Drs. Isham R. Page, J. Hal Pleasants, (new appointments), Drs. J. Howard Iglehart, A. Duvall Atkinson and W. H. Clendenin Teal. The appointments take effect December 1, the salaries being about \$900 per annum.—Dr. Eugene F. Cordell read a paper by invitation before the historical section of the College of Physicians of Philadelphia, November 29, on "Joseph Roby, the Anatomist."—Dr. G. R. Holden has resigned as resident gynecologist at Johns Hopkins Hospital and Dr. Stephen Rushjore has been elected in his place. Dr. H. M. Little, resident obstetrician at the same institution, has resigned and Dr. F. C. Goldsborough has been elected his successor.—Dr. Fannie E. Hoopes sailed for Europe early this month.—Dr. Robert T. Wilson has been elected president of the Hospital Relief Association of Maryland.

**Dr. Hemmeter Honored.**—A number of prominent physicians met in the home of Dr. John C. Hemmeter, November 15, and presented him with a handsome oil painting of himself in commemoration of the twentieth anniversary of his doctorate. Supervising Surgeon-General Walter Wyman, United States Public Health and Marine-Hospital Service, in behalf of the ninety-five subscribers, made the address of presentation, in

which he stated that Dr. Hemmeter had demonstrated in his life the great truth that a man may be a great physician and yet eminent in other walks of life, cultivating to a high degree a love of the beautiful and good as well as the true, and that in appreciation of intellect and broad manhood alike, his friends had been prompted to present to him this testimonial. Drs. Thomas A. Ashby and Charles G. Hill also spoke in praise of Dr. Hemmeter and of his work. In Dr. Hemmeter's reply he made an appeal for idealism in medicine because of his conviction, as he expressed it, that:

The sphere of action of the medical man is threatening to become too narrow and disregard for high ideals in medicine has led to the temptation of too narrow an exclusiveness for the applied feature of this art of science; a disregard for ideals can not fail to develop commercialism in medicine, a vice already strongly raising its head through the multiplicity of medical schools in this country.

Dr. Hemmeter further said:

Scholars and practitioners in medicine have been keenly alive to law and knowledge and material fact, but they have been occasionally blind to art, to poetry, to emotion, to the philosophy of the classics and to the higher mental and spiritual environment which inspires and glorifies the realms of their magnificent science.

One of my cherished wishes is for the reduction of the number of medical schools by consolidation of three of the leading institutions. Those of us who have the conduct of these schools as part of our duties should not be hopeless of attaining this end, for reason and the collective wisdom of our representative medical colleagues should soon find some effective means of bearing down those obstacles, which individual shortsightedness, selfishness and passion oppose to all improvements and by which the highest hopes are continually blighted and the fairest prospects marred.

After the presentation those present were entertained at a luncheon supper by Dr. and Mrs. Hemmeter.

#### NEW JERSEY.

**Personal.**—Dr. John P. Henry, Jersey City, has resigned as a member of the board of health.—Dr. Edward J. Ill, Newark, who was operated on November 12, is convalescing.

**Medical Examinations Inaugurated.**—The Atlantic City Medical Examining Board began its work in the public schools October 22, under the direction of the city health officer, Dr. Edward Guion.

**Medical Library Association.**—Physicians of Newark are putting into working shape the plans for the medical library association which was organized November 18. The librarian of the Newark Public Library announces that there will be no abridgment of the rights or privileges of the public, and that while the Medical Library Association will be a distinct organization, the books purchased by it will be free for the use of the general public. He states that so far as the library is concerned the new association will merely be a medical department of the institution. The association has adopted a constitution providing for an initiation fee of \$3 and dues of \$3 per year. Dr. Charles J. Kipp was elected president; Dr. Henry L. Coit, vice-president, and Dr. Frank W. Pinneo, secretary and treasurer.

#### NEW YORK.

**Epidemic Diseases.**—Scarlet fever is prevalent among the pupils at the Robinson street school, Binghamton.—The South street school, Utica, has been ordered closed on account of scarlet fever and diphtheria.

**Utica Has New Hospital.**—The new St. Luke's Hospital, Utica, the gift of Mr. and Mrs. Frederick F. Proctor, has been handed over to the board of trustees, paid for and completely furnished with modern medical and surgical appliances.

**Personal.**—Mayor-elect Adams has appointed Dr. Ernest Wende, who was for eight years health commissioner of Buffalo, health commissioner, to take effect Jan. 1, 1906. Dr. Francis E. Franczak was appointed assistant health commissioner.—Dr. and Mrs. Daniel B. Hardenbergh, Middletown, reached New York from Liverpool on the *Baltic*, Nov. 10.—Dr. Alfred Mercer, Syracuse, celebrated his eighty-fifth birthday anniversary Nov. 14.

**Hospital News.**—The German Hospital fair, at Buffalo, is believed to have netted about \$15,000 for the institution.—Ellis Hospital, Schenectady, received \$2,531.30 as the annual contribution from the churches of the city.—The Binghamton State Hospital asks for an appropriation for improvements amounting to \$125,000. This includes the erection of a hospital building for acute cases.—The W. C. A. Hospital, Jamestown, has been bequeathed \$1,000 by the will of the late Fred A. Bentley.—The dedicatory exercises of the Little Falls Hospital occurred Nov. 13 in the new hospital building.



## New York City.

**Same Death-Rate.**—The death-rate for the week ended November 18 was exactly the same as in the corresponding week of 1904, namely, 16.48 per 1,000. Cold weather increased the number of deaths from pneumonia.

**Pure Food Legislation.**—The New York section of the Council of Jewish Women held a mass meeting in support of pure food, December 2, at Mendelssohn Hall, at which United States Senators W. B. Heyburn and P. J. McCumber, Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, Department of Agriculture, and others, delivered addresses.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended November 18, 419 cases of tuberculosis, with 174 deaths; 286 cases of diphtheria, with 17 deaths; 253 cases of measles, with 6 deaths; 132 cases of scarlet fever, with 4 deaths; 84 cases of typhoid fever, with 16 deaths; 10 cases of cerebrospinal meningitis, with 9 deaths, and 137 cases of varicella.

**Personal.**—A reception to Dr. Suzuki, surgeon-general of the Imperial Japanese navy, was given in the Farmington rooms of the New York Exchange for Women's Work, November 24.—Dr. E. C. Podvin has been elected a member of the staff of the new Philanthropic Hospital at Williamsbridge.—Dr. Robert F. McDonald has been elected a member of the Board of Coroners of the Bronx.—Dr. G. A. Hare has gone to Fresno, Cal.

**For New Jewish Hospital.**—A large fair for the benefit of this institution was opened on November 27. The entire cost of the hospital was \$311,000, and there is still a shortage of \$111,000. It will cost \$100,000 a year to run the hospital at its full capacity of 175 beds. Six thousand dollars has already been contributed toward an endowment fund. During the past year there have been 20,767 persons treated at the dispensary connected with this hospital.

**To Admit Non-Sectarians.**—A resolution has been formulated by members of the Medical Society of the County of Kings looking to the admission of others than those connected with the so-called regular school. It considers the advisability of admitting to membership graduates of eclectic and homeopathic schools who agree to practice non-sectarian medicine. It is announced that a board of censors will see to it that any man admitted to the society shall be morally and medically fit.

## OHIO.

**District Society Meeting.**—The second annual meeting of the First Councilor District Medical Society was held in Cincinnati November 17. Dr. John C. Larkin, Hillsboro, was elected president; Dr. Robert Carothers, Cincinnati, secretary, and Dr. Walter E. Murphy, Cincinnati, treasurer.

**Hospital Dedicated.**—The Memorial Hospital, Piqua, was formally dedicated November 30. Drs. Asa S. Ashton, Kesley W. Beauchamp, Francis M. Hunt, Ramsey L. Hyde, Robert L. Kunkle, Ada L. Malick, Levi E. Reck, Parker L. Snorf, Lloyd D. Trowbridge, William N. Unkefer and H. H. Gravitt made up the reception committee.

**Personal.**—Dr. Charles Biers, Painter Creek, has gone to Jacksonville, Fla., for his health.—Dr. Alexander M. Steinfeldt, Columbus, who is studying in Vienna, has been appointed voluntary assistant in the ambulatorium of Dr. Lorenz.—Dr. George H. Wilson has been appointed local surgeon of the Baltimore & Ohio Railroad at Painesville.—Dr. Orville A. Rhodes, Salem, has started for the Pacific Coast.

## PENNSYLVANIA.

**Married Many Years.**—Dr. and Mrs. Philip S. P. Walter, Nazareth, celebrated their golden wedding anniversary November 6.

**Epidemics.**—Diphtheria is said to be epidemic at McKinley.—Four deaths have occurred from diphtheria in Hamburg.—Measles is reported to be epidemic in the Soho district of Pittsburgh.

**Practiced Without License.**—Dr. H. O. Sampsel, Scottdale, convicted November 19 of practicing medicine without a license, was sentenced to pay a fine of \$50 and costs. On account of the prisoner's inability to pay he was committed to jail.

**The Vaccination Question.**—The Department of Health dismissed 511 unvaccinated pupils from the public schools of Chambersburg November 1.—The Pottsville Board of Health has barred out 300 pupils from the public schools because of lack of vaccination.—At Selinsgrove 60 children were dismissed from the public schools November 13 on account of not having vaccination certificates.—Because she refused to al-

low her son to be vaccinated, according to the provision of the compulsory school law, Mrs. Victoria Moulton, East Lemon, has been twice imprisoned by order of court, the first time for two days and the second for five.

**Personal.**—Dr. Charles Rae, York, fractured one of the small bones of his foot while exercising at a gymnasium November 3.—Dr. George H. Halberstadt, Third Brigade, N. G. Pa., while returning from Philadelphia to his home in Pottsville, was struck on the head by a large stone which was thrown through the window of a car in which he was seated. He was rendered unconscious and a deep gash was inflicted.—Dr. William R. Brothers, Tamaqua, has been placed in charge of a new medical examiner's district of the Reading Railway System at Harrisburg.—Dr. Oliver L. Blachly, Wilkinsburg, and family, have gone to Pasadena, Cal.—Dr. Henry W. Saul, Kutztown, has been appointed physician to the Keystone State Normal School in that place.

**Hospital News.**—The medical staff of the Chester Hospital held a meeting November 11 and reorganized, re-electing Dr. Jonathan L. Forwood president of the staff and Dr. Leon Gottschalk, secretary. Dr. Forwood was also made chief of the surgical staff, which comprises Drs. F. Farwell Long, Samuel R. Crothers, Lewis H. Crothers and Leon Gottschalk. Dr. Daniel W. Jefferies was chosen chief of the medical staff, which includes Drs. Ellen E. Brown, Katherine W. Ulrich, Edward W. Bing and Frederick H. Evans.—The directors of the Chambersburg Hospital have elected the following staff: Dr. Charles F. Palmer, Henry X. Bonebrake, Robert W. Ramsey, David Maclay, W. Frank Skinner, Henry C. Devilbiss, John C. Greenewalt, P. Brough Montgomery, L. Frederick Suesseprott, Johnston McLanahan and John P. Seibert.

**Communicable Diseases Designated.**—The state commissioner of health has sent a circular letter of instructions to every physician in the state, calling attention to the regulation of the department of health requiring a report of all contagious diseases to the secretary of the board of health of the city or borough in which the case occurs. The following is the list of diseases: Actinomycosis, anthrax, bubonic plague, cerebrospinal meningitis, chickenpox, cholera, diphtheria, epidemic dysentery, erysipelas, German measles, glanders, hydrophobia, leprosy, malarial fever, measles, pneumonia, puerperal fever, relapsing fever, scarlet fever, smallpox, tetanus, trachoma, trichiniasis, tuberculosis, typhoid fever, typhus fever, whooping cough and yellow fever. The so-called "membranous croup," "diphtheritic croup," or "putrid sore throat," is to be reported as diphtheria, and the so-called "scarlatina" and "the scarlet rash" as scarlet fever. The department of health will furnish blank notices for reporting contagious diseases, and the state pays for the postage on these notices.

## Philadelphia.

**Martin's Successor.**—On November 27 Dr. William M. Late Coplin, professor of pathology and bacteriology, Jefferson Medical College, and director of the Jefferson Hospital laboratories, was appointed by Mayor Weaver, director of health and charities of Philadelphia, vice Dr. Edward Martin resigned. Dr. Coplin served as a member of the commission to organize the bureau of bacteriology, and later as a member of the Civil Service Commission. During the cholera epidemic in 1892 he was appointed an officer in the United States Marine-Hospital Service and acted as inspector of immigrants. At this time he established an emergency service in large industrial establishments where cases of communicable disease, heat stroke, etc., might be early diagnosed and promptly treated. He was bacteriologist to the State Board of Health, and is at present a member of the non-partisan commission to formulate laws to govern the disposal of tuberculous animals. He is a member of the American Medical Association, American Public Health Association, all the more important medical societies, and is president of the Philadelphia Pathological Society. He has served on the staffs of four hospitals and has held chairs in three medical colleges. His contributions to medical literature have been many and varied. His "Manual of Pathology" has reached a fourth edition, and a second edition of his "Manual of Practical Hygiene" is in process of preparation.

## TENNESSEE.

**College Opens.**—The seventeenth annual session of the Tennessee Medical College, Knoxville, opened November 1. The Lincoln Memorial Hospital, in connection with the college, will be ready to receive patients early in December.

**Commencement.**—The commencement exercises of the Medical Department of the University of the South, Sewanee, were held October 26. Dr. Hampton L. Fancher, Orme, delivered the charge to the graduating class, which consisted of 27 members.



**New College.**—Drs. Heber Jones, J. C. Elliot, J. A. Crisler and Maximilian Goltman made applications for a charter November 15 for the College of Physicians and Surgeons of Memphis. The capital stock of the corporation is fixed at \$40,000. The building is planned to cost not less than \$60,000.

**Middle Tennessee Physicians Meet.**—The Middle Tennessee Medical Association held its annual session in Lebanon November 17-18, and elected the following officers: Dr. Charles N. Cowden, Fayetteville, president; Dr. Lynn B. Graddy, Nashville, vice-president, and Dr. William Litterer, Nashville, secretary and treasurer.

**Personal.**—Dr. Heber Jones, president of the Memphis Board of Health, has been presented with a purse of \$10,000 in appreciation of his successful efforts in maintaining a prohibitive quarantine during the recent epidemic of yellow fever in the South.—Dr. Philander D. Sims, recently appointed city physician of Chattanooga, has selected as his assistant, Dr. John B. Steele.

#### TEXAS.

**Personal.**—Dr. Edmund B. Parsons, Palestine, has been made physician for the jail and county camps, and Dr. Henry R. Link for the county farm.

**Colored Physicians Meet.**—The Lone Star Medical Association convened November 15 in Houston and remained in session two days. The following officers were elected: President, Dr. Benjamin R. Bluitt, Dallas; vice-president, Dr. Gordon Phipps, Corsicana; secretary, Dr. Benjamin J. Covington, Houston, and treasurer, Dr. J. H. Wilkins, Victoria. The association will meet in Dallas next year.

**Hospital News.**—The All Saints' Hospital Association, Fort Worth, has opened its recently completed hospital building. —A new hospital and sanatorium is being planned for San Angelo, to be conducted by Sisters of Charity.—The Charity Hospital endowment fund, Houston, has received \$30,000 of the \$40,000 required for the erection of the building. The site and \$20,000 have been given by Mr. George Herman.

#### VIRGINIA.

**Board of Health.**—The thirty-third annual report shows that the total number of deaths for 1904 was 1,876; white, 858; colored, 1,018, a decrease over the previous year of 59 from all causes. The annual rate of mortality on the whole population was 18.76 per 1,000. The death rate of the white population was 13.76 per 1,000, and that of the colored 24.49 per 1,000.

**Tuberculosis Sanitarium at Ironville.**—At a recent meeting held in Richmond of the officers of the Virginia Sanitarium for Consumptives, it was decided if possible to consolidate this society with the organizations of the Associated Charities and of the Medical Society of Virginia. It was contended that there was little use for three societies working for the same ends, but along different lines. It is now the object to bring about co-operative effort and harmony in order that the legislature may be petitioned to take the matter in hand and erect a state sanitarium.

#### GENERAL.

**American Tuberculosis Exhibition.**—This exhibition is now being held in New York, as announced in THE JOURNAL last week.

**Yellow Fever in Cuba.**—The health department hopes to stamp out the yellow fever infection and is disinfecting all places where fever cases have occurred. The plague of mosquitoes which was present all summer continues.

**N. S. Davis District Medical Association.**—The Northeast Missouri Medical Association, which has been reorganized as the N. S. Davis District Medical Association in honor of the late Dr. N. S. Davis, held its second annual meeting in Keokuk, Iowa, November 14. The following officers were elected: President, Dr. William B. Sisson, Kahoka, Mo.; vice-presidents, Drs. Charles L. Russell, Keosauqua, Iowa, and Robert M. Lapsley, Keokuk, Iowa, and secretary and treasurer, Dr. John E. Parrish, Memphis, Mo.

**Railway Surgeons Meet.**—The Cincinnati, Hamilton & Dayton Railway Surgeons' Association held its annual meeting in Dayton, November 14. The question of merging the association with the Association of Surgeons of the Erie Railway was discussed, but no definite action was taken. The election of officers resulted as follows: President, Dr. Frederick D. Barker, Dayton, Ohio; vice-presidents, Drs. Frederick W. Robbins, Detroit, Mich.; Samuel E. Munson, Springfield, Ill., and William S. Hoy, Wellston, Ohio; secretary, Dr. Mark Millikin, Hamilton, Ohio; and treasurer, Dr. William A. Galloway, Xenia, Ohio.

**The Edward N. Gibbs Memorial Prize.**—The New York Academy of Medicine announces that the sum of \$1,000 will be awarded to the author of the best essay on "The Etiology, Pathology, and Treatment of the Diseases of the Kidney." An essay must show originality in order to obtain the prize. The competition is open to the members of the regular medical profession of the United States. Essays must be received on or before January 1, 1907, by the recording secretary of the New York Academy of Medicine, at 17 West Forty-third street. The prize is awarded triennially. In 1902, two essays were received, but no prize was awarded, as, in the opinion of the trustees, neither of the essays was worthy of it.

**Plague in Hawaii.**—Passed Assistant Surgeon Hobdy, of the Public Health and Marine Hospital Service, reports two fatal cases of plague in Honolulu during the latter part of October. A Chinaman, admitted to the hospital with symptoms of plague, died, and the autopsy confirmed the diagnosis. The second patient was a woman who died after an illness of four days. The case was reported as suspicious by the attending physician, a Japanese, but unfortunately his suspicions did not develop till after the patient's death. Autopsy showed conclusively that the death was due to plague. In this case, Dr. Hobdy states that there were many contacts and he instituted outgoing quarantine. This action, he says, was necessary because of the large number of Japanese who were to leave for the coast two days later. Dr. Hobdy also reports other deaths which seemed suspicious, and some of which were proved by autopsy to have been due to plague.

**Report of the Surgeon General of the Navy.**—In his annual report for the year ending June 30, 1905, Surgeon-General Rixey states that the medical corps of the Navy is at a disadvantage in the mind of a prospective candidate because of the fact that the assistant surgeon of the Navy while on shore duty receives 15 per cent. less than his army colleague. Dr. Rixey believes that the removal of this apparent discrimination will be of service in successfully recruiting the corps. In reviewing the work of the service he mentions the development of the naval stations at Charleston, S. C., and at Guantanamo, Cuba, and invites attention to the fact that no provision has been made for a naval hospital at either place. The need for a hospital at Guantanamo, he states, is immediate and urgent from the fact that naval vessels are frequently at that place and there are no hospital facilities available. The report includes detailed statistics of the health of the navy and of the marine corps during 1904.

#### FOREIGN.

**Prussian Convalescent Home for Army Officers' Wives and Daughters.**—A convalescent home for the members of the family of underofficers in the Prussian army has just been inaugurated at Idstein in Taunus.

**Correspondence of Frederick the Great With Physicians.**—The Prussian Academy of Sciences has granted \$200 to Dr. G. L. Mamlock to aid in the publication of the correspondence between Frederick the Great and various physicians.

**Smallpox and Yellow Fever in Brazil.**—Consul Ayme, at Para, reports that the epidemic of smallpox is assuming serious proportions and that there are about 20 new cases daily. He also states that there has been a great deal of yellow fever lately.

**General Inspector of the Insane at Berlin.**—Besides the three asylums for the insane or feeble-minded at Berlin, a large number of idiots and epileptics are boarded out in private establishments. A central office for the entire system has just been organized and given in charge to the director of the asylum at Lichtenberg, Dr. Moeli, who has been appointed general superintendent of the insane in the Berlin district.

**Witchcraft Approved in the German Courts.**—A woman was sentenced at Coburg to three months' imprisonment for obtaining money under false pretenses by alleged medical practices. During the appeal proceedings a large number of witnesses testified that there had been no deception, that the woman had unmistakably fulfilled her promises to conjure witches and cure sick cows by her words, and that the witnesses had not been defrauded in any way. The suit against the woman was therefore dismissed.

**Three Years' Confinement for Drunkards in Great Britain.**—It has been announced that greater stringency is to be observed in the working of the English inebriates act. It has been found that permanent good can not be effected by confining persons in an inebriates' home for one or two years,



and the judges have been requested to suggest to the justices that all these individuals should be sent to homes for three years, because in almost every case in which the individual was confined in a home for three years success had been attained.

**Physicians Protest Against High Price of Meat in Germany.**—One of the official medical organizations of Munich has published a public protest against the present high price of meat. It calls the attention of the authorities to the inevitable injury to health, both for the present and the rising generation, from the prevailing high prices of the most important articles of food, especially meat. The protest asks for reduction in customs duties and abolition of measures restricting importation of canned and dried meats. As physicians and hygienists the subscribers urge that steps should be taken at once to prevent further deterioration of the health of the people of Bavaria.

**The Royal Society Medals.**—The Royal Society (Great Britain) has awarded medals to Prof. Charles Scott Sherrington, F.R.S., for his researches on the central nervous system in relation to reflex action; to Prof. John Henry Poynting, F.R.S., for his researches in physical science, especially in connection with the constant of gravitation and the theories of electrodynamics and radiation; the Copley medal to Prof. Mendeléef, of St. Petersburg, for his contributions to chemical and physical science; the Davy medal to Prof. Albert Ladenburg, of Breslau, for his researches in organic chemistry, especially in connection with the synthesis of natural alkaloids, and the Hughes medal to Prof. Augusto Righi, of Bologna, in recognition of his experimental researches in electric science.

**Postgraduate Course in Professional Organization Matters and Contract Practice.**—The *Leipziger Verband* has arranged for a series of lectures on these subjects to be delivered at Berlin to medical students and recent graduates under university auspices. The lectures are to be delivered Friday evenings, commencing in November. The first is to be by Kühler, on "The Physician and the Public"; the second, by A. Peyser, on "Organization of the Medical Profession"; the third by R. Lennhoff, on "The Physician and Sick Insurance Societies"; the fourth, by H. Joachim, on "Demand and Supply of Medical Positions"; the fifth, by Davidsohn, on "Medical Benevolent Institutions"; the sixth, by Bensch, on "Medical Insurance," and the seventh by Hesselbarth on "Legal Protection of the Physician." It is proposed to follow this series with another on allied themes in the next semester, and to publish the addresses in pamphlet form to reach a wider audience.

**Surgeon's Responsibility in Case of "Chloroform Death."**—A French surgeon was sued for \$10,000 on account of the death of a patient from syncope during the commencement of anesthesia. The court decided that the surgeon's technic was flawless, but that he had omitted to warn the patient and his family of the dangers of chloroform anesthesia in general, especially for persons more or less addicted to alcohol, as was the patient in the case. The judge stated: "As the operation was not undertaken for vital reasons, but merely for the reduction of a dislocated shoulder, the surgeon should have explicitly informed the patient and his family, and have obtained their consent before undertaking the administration of chloroform for an operation that was not strictly necessary. In case of vital necessity, the surgeon has only his science and his conscience to consult, but in the case in question this does not apply." The surgeon was sentenced to pay \$1,600 and costs. The full text of the decision is given in the *Gaz. Med. Belge* for November 9.

**British Physicians Honored.**—King Edward, on the occasion of his birthday, knighted Dr. James Barr, physician to the Royal Infirmary, Liverpool, and lecturer on clinical medicine in University College, Liverpool; Mr. Arthur Chance, president of the Royal College of Surgeons in Ireland, surgeon to the Mater Misericordiae Hospital, Dublin, formerly; Dr. Theodore Thomson, one of the medical inspectors of the local government board, has been made a companion of the Order of St. Michael and St. George, in recognition of services rendered in connection with sanitary matters to the foreign office and colonial office; he has represented Great Britain at international sanitary conferences. The same honor was conferred on Dr. Marc Armand Ruffer, president of the Egyptian Sanitary Board, distinguished for his researches in bacteriology and pathology; and on Dr. Featherstone Cargill, first class resident in the Protectorate of Northern Nigeria. Sir Felix Semon, C.V.O., physician extraordinary to his majesty, has been advanced to be a Knight of the Royal Victorian Order.

**Enteric Fever in the British Army.**—Dr. H. E. Leigh Canney, an acknowledged authority on the subject, recently delivered an address on "The Toleration of Enteric Fever by the British Army." His address was a strong indictment of the lack of medical organization that prevailed in the army. He declared that the condition of the British army at Bloemfontein was precisely similar from the point of view of sanitary organization to that of the royalist and parliamentary armies in 1642, when both sides being close together could not fight on account of disease. Figures were given showing that the incidence of typhoid fever in the British army represented in India and South Africa was extremely large when it was realized that the incidence of this disease in the army in Great Britain had been reduced to one-seventeenth of what it was between 1837 and 1846; at Gibraltar, to one-eighteenth, and at Malta to one-fortieth. The condition in India, he said, was comparable only, though considerably worse, with that of the army of England, long before sanitation was known, and the condition in South Africa was more serious still. Dr. Canney said that he is in favor of a "school of sanitation for officers" being established forthwith as well as a handbook of sanitation for the field and barrack being provided for officers.

**To Prohibit Use of White Lead.**—One of the Paris daily papers recently organized a public scientific meeting to agitate the question of the suppression of white lead. It was held Saturday evening in the Trocadero hall, and Dicufofy presided, with Brouardel and other prominent physicians and hygienists on the platform. The principal address was made by Mosny, who stated that in his small service at the Saint Antoine hospital, with only 60 beds, he averages 23 cases of lead poisoning every year. He drew the picture of the slow poisoning from the use of white lead in paints, etc., and discussed the measures necessary to prevent it, and save a large class of citizens and their descendants from insidious physical injury. Whether official regulation, substitution of zinc for lead, or prohibition of the use of white lead would prove most effectual he did not venture to decide. Regulation has been tried, but met with such opposition on the part of the proprietors that the regulations were never successfully enforced. The substitution of zinc white for white lead was also officially decreed in France at one time, but the higher price of the zinc caused the surreptitious use of the lead to such an extent that the regulation became practically a dead letter. The complete prohibition of the use of white lead is opposed only by the manufacturers of the latter. A bill has been passed by the chamber of deputies and is now before the senate, forbidding the use of white lead completely, but giving the manufacturers four years in which to close up their establishments. Several of the speakers emphasized the importance of training the young in hygiene in regard to prevention of lead poisoning. Adults seldom realize its importance until too late.

**Organization of the Profession in Bohemia.**—The last *Prager med. Wochft.* devotes several pages to an urgent appeal for the formation in Bohemia of a society for mutual aid in resisting unjust exactions by the sickness insurance companies (*Krankenkassen*). It is to be modeled on the *Leipziger Verband* for promoting the economic interests of the physicians of Germany, the success of which has surpassed all expectations. It now numbers 17,000 members, who pay annual dues of about \$5. It has, to date, aided in 318 affairs in which there was conflict between the *Krankenkassen* and their medical officers, and all but eight have terminated in favor of the physicians. The pecuniary results for the medical officers of the sickness insurance societies amount to a total of \$500,000 a year, gained for the profession by the efforts of the *Leipziger Verband*. Besides this, fully three times as many affairs were settled in favor of the medical officers without the necessity of a conflict, the total pecuniary results amounting thus to fully \$1,600,000 a year gained for the medical officers of the sickness insurance societies by the direct or indirect backing of the organized profession in the *Leipziger Verband*. In Bohemia it is proposed to organize a similar society in each district, and in time to combine them into a national organization. The district society must have the backing of at least half of the physicians, and stirring appeals call on them to organize and reap the benefit of such organization. The prestige of the whole profession is raised by the better position now accorded the sickness insurance officers in Germany as the results of organization, and the same is hoped for Bohemia. The application for membership contains a clause imposing a penalty of about \$400 for action contrary to the aims of the society.



**Epidemic Psychoses.**—The *Russische Med. Rundschau* discusses the mutiny on the *Potemkin* of the Black Sea fleet, quoting an article by Jacoby, who takes the view that the mutiny was the result of an epidemic psychosis among the men. He regards the Paris commune of 1870 as an instance of the same kind of psychic commotion. The revolutionary movement at that time spread to other cities in France and into Italy and Spain. At Carthage the crew of one of the naval vessels mutinied and bombarded the town. Jacoby met several of the members of the crew two years later and noticed that a number among them showed evidences of morbid minds, although their reasoning faculties were intact. In the present conditions in Russia, the editorial continues, instances of collective, induced psychoses are easily possible. One needs only to know the psychic condition of the Russian populace at the present time readily to understand it.

**International Congress of Drops of Milk.**—This fanciful name is given in Europe to the charity infant milk supply stations, combined with medical inspection of the infants and advice to mothers. An international conference of persons interested in the subject has just been held at Paris. The members of the congress visited the successful infant consultations in Paris and at Rouen and Fécamp, and decided to form an international union with headquarters at Brussels, where the next congress will be held in September, 1907. The official definition of the term *gouttes de lait* (drops of milk) was announced as "A work which fights against infantile mortality by every possible means; it gives advice to the mothers; encourages breast feeding, and supplies proper milk when the breast milk is insufficient or defective." The congress voted in favor of legislation for control of milk for the use of infants separate from the general milk supply. Ulecia, of Madrid, has founded a very successful infant consultation in his city and he remarked that to give milk to the mothers without medical advice at the same time, was high treason against motherhood (*lèse-maternité*). The charity milk supply stations in Great Britain are not under medical control, and there is no attempt at the "infant consultations" which have been developed to such perfection in France, as mentioned recently in these columns on page 1366. They have recently been introduced into Berlin, Vienna, Buda-Pesth and Buenos Ayres on the French models, and the Congress passed resolutions urging their still more general adoption. Four have been founded in St. Petersburg, but only one has survived to date. J. Bertillon proposed that infantile mortality should be classified by age, the first group including infants one to four days old; the second, five to nine; then ten to fourteen, fifteen to twenty-nine, one to three months, three to six months, and six to twelve months.

#### LONDON LETTER.

##### Increase of Inmates in the Asylums of Scotland.

The government report on lunacy in Scotland shows that the proportion of pauper insane resident in asylums per 100,000 of the population has steadily increased during the last twenty-five years. This does not appear to depend on increase of admissions, but on a diminution of the discharge rate. The reasons given for this are as follows: An increased unwillingness to retain insane persons in private life or to receive them back from asylums; the admission in large numbers of old and physically disabled persons who are unfit to be discharged; lessened activity on the part of parochial authorities in removal from the asylum of patients who could be cared for outside.

**Death from a Wasp Sting.**—The following remarkable case was investigated by the Sussex coroner. The wife of a workingman was drinking a glass of stout when she suddenly felt a pain in the throat as a result of some body which she had imbibed with the liquid. She coughed it out and found that it was a wasp. Beyond the natural fright and some discomfort in the throat, she seemed but little the worse for her experience, and for the next few days was comparatively well, so that medical advice was not sought. Then she felt faint and ill, but continued to pursue her ordinary vocation until the sixth day after the sting, when she called in a physician. He found little evidence of serious illness, but her symptoms rapidly increased and assumed a grave character. Cellulitis of the throat and nasal passages developed and death from septicemia followed in two days. This case differs from the ordinary cases in which dangerous symptoms follow wasp stings in that an interval elapsed between the sting and the onset of symptoms, and that these were due to cellulitis, and not to coxemia.

## Pharmacology

### The Square Deal in Pharmacy.

There are persons who are living more or less voluntarily in a fog, so far as concerns a real comprehension of the purpose of establishing the Council on Pharmacy and Chemistry. The issue is so plain that it should hardly need restating, but that further explanation is necessary is evident when we find the official journal of one state association joining hands with those who naturally are in opposition to the work of the reform.

Tersely stated, the object is to secure honesty in pharmacy. Apart from the creation of the false issues, the setting up of straw men, there are no two sides to the question. The profession is demanding nothing chimerical or difficult, but it should and must be recognized at once that the dishonest and fraudulent methods of those who are supplying physicians with medicinal articles must be stopped. The profession, the Association and the Council are desirous of bringing about this absolutely essential reform with as little friction and injury as possible. But in the past mild protests of a general character have failed to check the evil, so that the adoption of the present effective method became inevitable.

Nothing short of exposing fraud by giving specific examples will compel reform.

The profession needs attractive and reliable pharmaceuticals and welcomes the legitimate efforts of honest manufacturers. Those manufacturers who adopt the platform of the Council on Pharmacy and Chemistry—which is conservative and requires only honesty—are sure of the support of the profession. Common every-day honesty is all that is required, and those who are thereby now squealing so loudly are arousing questions as to their motives and methods.

There being not the least desire or need of punishing anyone for past offenses, it would seem to be an easy matter for the medical profession and the manufacturers to meet on the one common ground of square dealing and to arrange matters for the future so that harmony and honest methods may prevail. So long as there are fake preparations and misleading "literature" THE JOURNAL will continue to expose them, as a matter of duty to the medical profession and to the public. In the meantime, all who are ready to stand with us on the "square deal" platform will be welcomed.

### Birds of a Feather. A Menace to the Public Health.

The list of the members of the Proprietary Association of America, which we published two weeks ago, is but another illustration of the general truth of the old adage that "Birds of a feather flock together." With the exception of a comparatively few firms, the concerns enumerated are engaged in a business that is neither honorable nor commendable. For the physician who is at all interested in the progress of his profession, or in the maintenance of the public welfare, this list should prove highly instructive, especially since the proprietary association is practically forcing the newspapers of the country to publish matter they supply to counteract the movement against the patent medicine fraud.

The preparations that are enumerated under the several firm names are important, as they constitute a goodly portion of the articles that are sold directly to the public. But it will be noticed that many of them were at one time considered "ethical," because they were advertised directly to, and were prescribed by, physicians. Many of them are composed of more or less active medicinal substances and thus are a direct menace to public health, when, as is now the case, they are used indiscriminately and without regard to their danger in



certain conditions. To-day their common use by the public is an indictment of the credulity or foolishness, or both, of a large number of medical practitioners. While even the most reckless users of nostrums would scorn to prescribe "Bradfield's Female Regulator," "Liquozone," "Peruna," or "Wine of Cardui," thousands of otherwise intelligent physicians are daily prescribing "ethical proprietaries" that are not one whit better. Many other "ethical proprietary" preparations are gradually, but surely, going, or have gone, to the patent medicine class by the aid of physicians. Such, for instance, as "Vin Mariani," "Tongaline," "Antikamnia," "Kutnow's Powder," "Gray's Glycerin Tonic Comp.," "Peacock's Bromides," "Chionia," "Cactina Pillets," etc.

All of these and many more of the present-day "ethical" preparations that are "advertised only to the medical profession" may be found enumerated in the price lists of the larger cut-rate drug stores, and are daily sold to men, women and children, over the counter, at from 20 to 50 per cent. less than they are furnished on physicians' prescriptions.

The question naturally arises, Who is to take the blame for the ultimate consequences of the resulting haphazard self-medication? Who is to be held responsible for the overstimulation and subsequent collapse, the deranged metabolism and the frequently acquired dangerous, if not fatal, drug habits? Before we blame the public for the indiscriminate use of "patent medicines" it will be well for many of us to ask ourselves how far we are responsible for some of the "patent medicine" taking.

#### Medical Papers and Proprietary Medicines.

Our contemporary, THE JOURNAL of the American Medical Association, is not having by any means an easy task in its attempt to enlighten the physicians of the states on various points regarding the trade in proprietary articles. Many of the proprietors of much-advertised preparations regard the undertaking as a direct attack on their trade, and they are ready to use any weapon in self-defense. In particular, many of the less important medical papers, whose existence depends in great part on the returns from their advertisement columns, have published violent attacks on THE JOURNAL and on the personality of its editor. In some cases these attacks are little else than paraphrases of the matter to be found in the advertising columns of the same papers. How strong a hold some of these manufacturing druggists have over the medical press in America is shown in an amusing way by a letter to THE JOURNAL itself from the proprietors of a much-vaunted hematinic, many of whose advertisements are doubtless at present in our readers' waste-paper baskets. In an editorial article in our contemporary some months ago, the statement occurred that "the day of blind reliance on iron, quinin, and tonics in general in the treatment of anemic conditions in tropical countries is past, never to return." This seemingly innocent remark drew forth an indignant letter of remonstrance from the proprietors of the hematinic, who regard it as a direct "slap in the face," since it is alleged to cast a slight on their preparation, and they threaten in consequence to withdraw their advertisement. When an attempt is made to restrain such a paper as THE JOURNAL of the American Medical Association from free comment, one may judge the freedom permitted to less independent and less scrupulous journals.—*Medical Press and Circular*, London.

#### Multiple Neuritis Following the Use of Peruna.

In the report of a recent meeting of the Academy of Medicine of Cincinnati, as published in the *Lancet-Clinic*, Nov. 4, 1905, the following interesting case is reported by Dr. George E. Malsbray:

"In September, 1904, I was called to see a woman just past the meridian of life, whom I found suffering from

multiple neuritis. The nerves of the lower extremities, and some of the nerves of the head were successively involved. There was no history nor evidence of exposure to cold, rheumatism, nor exhaustion to act as etiologic factors. Finally, after ruling out other causes of the disease, it became evident that the patient must have been taking alcohol in some form, notwithstanding the fact that she was a refined lady and an earnest advocate of temperance, who would not knowingly indulge in any form of alcoholic beverage. I asked her what she had been drinking. She was shocked; she disclaimed being a tippler either in public or private. I asked her what medicine she had been taking. She stated that she had not been under the care of a physician. Further examination into the history of the case revealed the fact that the patient had been using 'peruna' for a long time, taking the nostrum under all sorts of pretexts. After explaining the case to the patient, she readily consented to stop the 'peruna' cocktails. As stated, first one nerve, then another, was attacked. Finally, after about three months' treatment with the usual remedies for multiple neuritis, the patient apparently recovered. . . . The patient has since relapsed, as is common in this disease, showing that the recovery was not complete."

#### Apothecaries and Patent Medicines.

To show what may be done by an apothecary who sees in the patent medicine he sells something beside the profit he reaps therefrom, we quote from a letter recently received from a Canadian druggist. He refers to a move of the patent medicine manufacturers to prevent price cutting, and incidentally to suppress what they denominate substitution:

At first sight the proposition was a perfectly equitable one, but on close examination I found that anyone who signed it would be under the necessity of passing out any nostrum asked for without comment. Now, when anyone comes in and asks me for a bottle of these swindles, I always give them what they ask for, but usually with my opinion of the fraud thrown in. In certain cases it is useless to do this, as it has no effect. I am thankful to say, however, that I have been instrumental in killing the sale of some hundreds of bottle of these frauds. Another vile swindle I am "down on" is the advertised tuberculosis cure. I believe that this one county contributes \$10,000 a year to the maintenance of those two harpies, — and —. I keep a small stock of the — "remedies," and dispense them under protest. —'s literature is so infernally offensive to the medical profession, that both my competitor and I have blacklisted the goods, and will have none of them.

This sentiment from a druggist is unusual, and hence the more commendable. That the apothecary has the legal right to sell his customers that for which they ask can not be denied; his opportunity for enlightening the public in regard to nostrums is not so thoroughly appreciated.—*American Medicine*.

#### Chicago Medical Society Indorses the Movement.

The Council of the Chicago Medical Society, at its last meeting, adopted the following resolutions:

*Resolved*, That the Chicago Medical Society expresses its hearty approval of the action of the American Medical Association in establishing a Council on Pharmacy and Chemistry to investigate non-official drugs and medicinal preparations. It realizes that such an investigation is necessary to sift out the numerous and rapidly increasing number of worthless and harmful preparations that are being exploited among the physicians of this country. It has confidence in this Council and wishes to support the Trustees of the American Medical Association in carrying on the work already instituted by this body.

The Chicago Medical Society also approves the action of THE JOURNAL of the American Medical Association in its campaign of educating the medical profession concerning the evils of secret nostrums and urges it to continue in the good work.

FRANK X. WALLS, Secretary.

#### Work of the Council Indorsed.

We are officially informed that at a meeting of the Aux Plaines Branch of the Chicago Medical Society, held in the Phoenix Hospital, Maywood, November 24, a vote of thanks was unanimously tendered THE JOURNAL of the American Medical Association for the excellent work of its Council on Pharmacy and Chemistry with reference to the proprietary remedy evil.



## Miscellany

**Obstetrical Binders.**—Povey, in the *Dominion Medical Monthly*, gives the following uses of the obstetrical binders as determined by his own personal experience. He advocates its use in practically all cases. The binder itself consists merely of a piece of unbleached muslin long enough to surround the abdomen and broad enough to extend from the pubes to the sternum; two pieces of the same material, three inches wide and eighteen inches long, are securely sewed to the posterior border (to avoid the use of safety pins, on which the patient would have to lie), so that when the binder is applied they hold it down in position, and, being pinned anteriorly above the pubes, hold the vulvar pads in position. Several of these simple binders should be on hand, so that as one becomes soiled another may be applied. A good sized pad of absorbent cotton or other suitable material should be placed on the abdomen just back of the uterus after that organ has been lifted forward. This pad is held firmly in this position while the previously arranged binder is pinned snugly by the nurse, beginning at the sternal end and pinning downward. The hand is gradually removed as the binder is pinned, so that the pad is held in place. The binder is pinned tighter above than below. The vulvar pad is placed in position and the two posterior straps are drawn up and pinned anteriorly, thus holding the binder down and the vulvar pad in position. Sometimes two additional straps can easily be adjusted. The binder may be tightened as the uterus contracts, and by the tenth day, when the uterus is within the pelvis, the pad may be entirely removed and the binder applied firmly throughout its entire length. The advantages of the binder thus applied are: 1. The patient is thus made comfortable. After the uterus has been delivered of its burden the patient necessarily feels a tremendous relief from weight, pressure and distension. 2. It permits the patient to be moved and turned in bed without the fear that something terrible is going to happen. For a patient to be turned from one side to the other, her position being changed when she becomes wearied, is of very great advantage in guarding against retroversion, descent and prolapse of the uterus. 4. It has a decidedly beneficial effect on the mental state, for the patient believes that her maidenly contour will be restored. Thus her mind is placed at ease, and this is no small factor in the establishment of an uneventful convalescence. He states that he has seen just as many cases of "after pains" when the binder was not applied as when it was, and in some cases in which he has removed the binder the pains continued. He is of the opinion that when not properly applied it causes retroversion, descent or prolapsus of the uterus, but when applied as he directs, thus allowing the patient to be turned and not requiring her to remain on her back, it possesses advantages far above the objection raised, and even is a great factor in preventing the mentioned sequela. The patient is of the opinion that it actually helps to restore the maidenly contour. All in all, it seems to Povey that the obstetrical binder is a rational, feasible and simple device, and when in the hands of a judicious obstetrician a decided help, comfort and blessing to womankind.

**Preparations for Confinement.**—De Forest, in the *Medical News*, gives the following list of articles which should be prepared and that should be within the reach of all save the very poor, and which does not include non-essentials:

*For Use of the Mother.*—Six towels, freshly laundered; three sheets, freshly laundered; one rubber sheet; one labor pad, made of newspapers and clean muslin, or quilted mattress protector; thirty-six lochial guards, preferably of gauze and paper wool, or of cotton waste, or of cotton and gauze sterilized; three binders, abdominal, 18 inches wide and circumference of hips; two binders, breast, made from pattern; twenty-four safety pins, Clinton, large No. 3; forty-eight medium No. 2; thirty-six small No. 1; two washbowls, earthen or agate; one water pitcher, earthen or agate; one slop jar; ten yards absorbent gauze for wash cloths, etc.; one fountain syringe (one gallon); one glass douche tip, for syringe; one glass drinking tube; one douche pan, white enamel or agate ware; two hand brushes; one hundred antiseptic tablets,  $7\frac{1}{2}$  grains,

bichlorid, blue; eight fluid ounces of lysol; one tube of vaselin; four fluid ounces Squibbs chloroform.

This list is printed on a card six inches square. On the front of the card a space is left for the name, address and telephone number of physician, patient and nurse. On the back page, after it is folded vertically, is the direction:

"Urine: Send half a pint of morning urine to doctor's office every two weeks after the sixth month."

At the time of labor the room should be cleared of all needless articles and ornaments. The carpet should be protected with a layer of newspapers, with a sheet tacked over them. The bureau mantel and table tops should be cleared and protected with paper and covered with clean towels for the instruments, etc. There should be plenty of hot and cold water and ice in readiness. These supplies should be at hand, in good order and easily accessible.

*For Use of the Baby.*—Four flannel bands, 6 inches wide, 30 inches long; twenty-four diapers; one woolen blanket, soft, old and about a yard square; three flannel petticoats; four slips; two knitted flannel shirts; one bath tub, white, at least 2 feet long on bottom; one bath thermometer; one bath apron, flannel and rubber; one hot-water bag; one pound absorbent cotton; four fluid ounces olive oil (sweet oil); one cake of Castile soap; one baby basket to hold dressing materials, etc.; baby powder (lycopodium, 3; zinc stearate, 2); four ounces boric acid; one ounce powder for cord (salicylic acid, 1; zinc oxid, 1); one pound boric acid; one salt shaker for boric acid; one lightning jar, half-pint, for boric acid solution; scissors, pin cushion, needles and thread.

**The Medical Student's First Duty.**—Let not the thought be lost sight of that the duty of the student is, first and foremost, to perfect himself in his knowledge of medicine. No success, no distinction, no fame in art or letters, or in other fields, can atone for neglect of this. This is the foundation to which his other attainments may be added, but may not supplant.—Arthur W. Hurd, before the Buffalo Academy of Medicine.

## Marriages

JOHN L. SWEENEY, M.D., to Miss Elsie F. Weeks, both of Chicago, November 15.

HOWARD E. WOODEN, M.D., to Miss Edith Marie Collier, both of Baltimore, November 8.

WADE HAMPTON NASH, M.D., to Miss Julia A. Pesold, both of St. Louis, November 14.

ROGER GRISWOLD PERKINS, M.D., to Miss Edna Brush, both of Cleveland, November 14.

ORRIN SAGE WIGHTMAN, M.D., to Miss Purl Parker, both of New York City, November 9.

JOSEPH N. ROY, M.D., Webster, Mass., to Miss Eva Lambert of Pascoag, R. I., October 31.

ROBERT W. WILLIAMS, M.D., to Miss Emma Kees, both of Cleveland, Ohio, November 14.

GEORGE E. SAUNDERS, M.D., to Miss Helen Rogers, both of Des Moines, Iowa, November 15.

J. SAMUEL PRICE, M.D., to Miss Maybel Hasbrouck, both of Beaumont, Texas, November 12.

JOHN WESLEY PHILLIPS, M.D., to Miss Laura Van Dyne, both of Troy, Pa., November 15.

WILLIAM S. JACKSON, M.D., to Miss Blanche Hambitzer, both of Houghton, Mich., November 15.

WILLIAM A. SELMAN, M.D., Atlanta, Ga., to Miss Elizabeth Crouch of Gay, Ga., November 15.

A. F. JOHNSON, M.D., Petersburg, Neb., to Miss Florence Hall of Exeter, Neb., November 22.

W. PRICE ZIMMERMAN, M.D., Batesburg, S. C., to Miss Mary Swygert of Peale, S. C., November 9.

GUY STONE, M.D., Keswick, Iowa, to Miss Agnes Kay Chubb of Michigan City, Ind., November 15.

ADELBERT D. HEAD, M.D., to Miss Sarah Elizabeth Roberts, both of Syracuse, N. Y., November 21.

JAMES A. YOUNG, M.D., Pearl, Idaho, to Miss Anne Llewellyn Walter of Boise, Idaho, November 15.

LEANDER B. DEAN, M.D., Blaine, Ky., to Miss Mollie Hutchinson of Fallsburg, Ky., November 16.



WARREN J. KARTERMAN, M.D., Hepler, Pa., to Miss Minnie B. Kehler of Kehler, Pa., November 8.

BROWNING G. PITTS, M.D., Lydia, S. C., to Miss Belle Watson of Ridge Spring, S. C., October 19.

JOSEPH C. RAUTH, M.D., Upper Sandusky, Ohio, to Miss Lillian Ley of Tiffin, Ohio, November 22.

CHARLES H. NORTH, M.D., Dannemora, N. Y., to Miss Luella B. Robinson of Clyde, N. Y., November 15.

WILBERT E. FORDYCE, M.D., to Miss Nellie Elizabeth Humphrey, both of Oelwein, Iowa, November 16.

EDWARD MARSHALL SANDIDGE, M.D., Clifford, Va., to Miss Lottie Walker of Salem, Va., November 15.

JOHN WALKER, M.D., Lynchburg, Va., to Miss Laura May Stebbins of South Boston, Va., November 29.

SAMUEL WARREN HOBBS, M.D., Aurelia, Iowa, to Miss Harriet D. Peters of Clinton, Iowa, November 11.

ELWIN W. CAPEN, M.D., Monson, Mass., to Miss Fannie Louise Barnes of Westfield, Mass., November 8.

HUGH O. MORGAN, M.D., to Miss Olga U. Von Hagen, both of Elkton, S. D., at Brookyngs, S. D., November 3.

LEWIS N. FOOTE, M.D., Brooklyn, N. Y., to Miss Mabel Shull Ackler of Ilion, N. Y., at Utica, N. Y., November 15.

ROBERT LAWRENCE CORBELL, M.D., Norfolk, Va., to Miss Nancy Alberta Webb, at Vienna, Md., November 21.

CLARENCE FONTAINE MAURY LEIDY, M.D., Philadelphia, to Miss Margaret Howard Ridgely, at Baltimore, November 25.

HARRY E. SUTTON, M.D., Cold Springs, Minn., to Miss Rosemund M. Garner of Spokane, Wash., in Watertown, S. D., November 16.

ROBERT E. NOBLE, M.D., first lieutenant and assistant surgeon, United States Army, to Miss Ella Lupton of Auburn, Ala., November 23.

WALTER C. CHIDESTER, M.D., lieutenant and assistant surgeon, United States Army, to Miss Marie Bull of San Francisco, November 22.

LEVY M. HATHAWAY, M.D., lieutenant and assistant surgeon, United States Army, to Miss Mary Frances Weir of Owensboro, Ky., November 27.

## Deaths

De Villo White Harrington, M.D. University of Buffalo (N. Y.) Medical Department, 1871; a member of the American Medical Association, New York State Medical Association, Erie County Medical Society, Buffalo Academy of Medicine, and Cavalry Society of the United States Army; a veteran of the Civil War; professor of genitourinary and venereal diseases in the University of Buffalo Medical Department; consulting physician to the Buffalo General Hospital and Buffalo City Hospital; from 1876 to 1885 attending surgeon at the Sisters' Hospital; one of the best-known physicians of western New York, died at his home in Buffalo, November 20, from heart disease, after a long illness, aged 61.

Andrew Martin Pierce, M.D. College of Physicians and Surgeons in the City of New York, 1873; a member of the American Medical Association; member and once vice-president of the Massachusetts Medical Society; member and many times an officer of the South Bristol Medical Society; once president of the New Bedford Medical Society; for years physician to the poor department of New Bedford, and for twenty years a member of the staff of St. Luke's Hospital, died at his home in New Bedford, November 6, after an illness of about one year, aged 53.

Augustus Choate Hamlin, M.D. Harvard University Medical School, Boston, 1855; assistant surgeon of the Second Maine Volunteer Infantry; brigade surgeon and finally lieutenant-colonel in the Army during the Civil War; made chevalier of St. Ann by the Czar of Russia in 1878; commissioner from Maine at the Yorktown centennial in 1881; surgeon-general of Maine from 1882 to 1886; twice mayor of Bangor; widely known as an author, artist and as an authority on tourmalines, died at his home in Bangor, November 20, aged 76.

Benjamin Myers, M.D. Jefferson Medical College, Philadelphia, 1869; formerly state representative and probate judge of Ashland County, Ohio; a veteran of the Civil War; for three years a member of the board of trustees of the Ohio Central Insane Asylum, Celina; in 1884 mayor of Ashland, died at his home in Ashland, November 21, from pneumonia, after an illness of four days, aged 63.

William A. Burns, M.D. Medical Department of Western Reserve University, Cleveland, Ohio, 1898; a prominent colored physician of Dayton, Ohio; a member of the Dayton Academy of Medicine, died at his home in Dayton, November 19, from typhoid fever, after an illness of three weeks. At a special meeting of the Academy of Medicine, it was voted to attend the funeral in a body, and resolutions of sorrow and respect were adopted.

Charles M. Zeh, M.D. Castleton (Vt.) Medical College, 1848, one of the oldest physicians of Newark, N. J.; a member of the board of health and health officer for many years; a member of the Medical Society of the State of New Jersey and the Essex County Medical Society; consulting physician to St. Michael's Hospital, died suddenly at his home, November 13, from cerebral hemorrhage, aged 78.

Robert Edwin Coy, M.D. Chicago Medical College, 1891; a member of the American Medical Association, Illinois State Medical Society, and Winnebago County Medical Society; a member of the attending staff of the Rockford City Hospital, died at his home in Rockford, Ill., November 21, from pneumonia, after an illness of about one week, aged 57.

Henry A. Tingley, M.D. University of Buffalo (N. Y.) Medical Department, 1848; one of the oldest practitioners of Susquehanna County, Pa.; president of the school board of Susquehanna; a surgeon in the Army during the Civil War, and president of the first soldiers' election board, died at his home in Susquehanna, October 28, aged 85.

Andrew Thustin Pearsall, M.D. College of Physicians and Surgeons in the City of New York, 1861; assistant surgeon and late brigade surgeon in the Confederate service during the Civil War; local surgeon for the D., L. & W. Railway, died at his home in Owego, N. Y., from diabetes, after a long illness, November 17, aged 66.

Daniel H. Tarbell, M.D. (Philadelphia Med. and Surg. Reg.), 1880; a veteran of the Civil War; twice coroner of the northern district of Rensselaer County, N. Y.; president of Schaghticoke, N. Y., for five terms, and health officer for twenty-eight years, died at his home in that village, November 10, after a long illness, aged 63.

John I. French, M.D. Tufts College Medical School, Boston, Mass., 1896; a member of the American Medical Association and Massachusetts Medical Society; instructor in materia medica and therapeutics in the Tufts College Medical School; police surgeon and member of the Board of Health of Winchester, Mass., died at his home in that city, November 18, from nephritis, aged 44.

William A. McCord, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1883; a member of the American Medical Association; one of the most prominent practitioners of Marshall County, Tenn., died at his home in Lewisburg, November 15, after a prolonged illness from disease of the stomach, aged 47.

Zaccheus Test, M.D. Department of Medicine of the University of Pennsylvania, 1855, but since 1859 not a practitioner owing to ill-health; one of the best-known educators of Indiana, died at his home in Richmond, November 3, from cerebral hemorrhage due to a fall downstairs two days before, aged 77.

William M. Mahoney, M.D. College of Physicians and Surgeons in the City of New York, 1891; an employe of the New York Department of Health; surgeon to the Metropolitan Throat and Nose Hospital, died at his home in New York City, November 16, from pulmonary hemorrhage, aged 47.

Ira Smith, M.D. Kansas City (Mo.) Medical College, 1879; a member of the American Medical Association; widely known in Cass and Bates counties, Missouri, where he had practiced for twenty-six years, was burned to death in a fire which destroyed his drug store at Austin, Mo., November 1.

James Carter, M.D. Chicago Medical College, 1880; a member of the American Medical Association; formerly of Rawlins, Wyo., and president of the Wyoming Medical Association, died at Robertsedale, Ala., where he had gone for his health nine months ago, November 17, aged 54.

James S. Trotter, M.D. University of Buffalo (N. Y.) Medical Department, 1891, of Buffalo; a member of the Erie County Medical Society and of the Buffalo Academy of Medicine, died on his farm at Waterford, Ont., November 11, after an illness of several months.

William F. Tait, M.D. Cincinnati, Ohio, 1866, of Galesburg, Ill.; a veteran of the Civil War; for several years assistant surgeon of the Soldiers' Home, Quincy, died at a hospital in St. Louis, November 8, from malignant disease of the face, aged 69.



Clarence Bartow, M.D. College of Physicians and Surgeons in the City of New York, 1905, ambulance surgeon of Roosevelt Hospital, New York City, was instantly killed by a collision of his ambulance with an automobile truck, November 25, aged 27.

William M. Woodworth, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1853; coroner of Crawford, Mich., and for many years county physician, died suddenly at his home in Grayling, November 1, aged 76.

William A. Bickers, M.D. University of Virginia Medical Department, Charlottesville, 1856, of Crooked Run, Va., died suddenly in his room at the Astor House, New York City, from cerebral hemorrhage, November 20, aged 69.

Julius A. Ruge, M.D. Humboldt Medical College, St. Louis, 1861; assistant surgeon of the Thirty-first Missouri Volunteer Infantry in the Civil War, died at his home in St. Louis, November 14, from heart disease, aged 69.

Whitcomb Phelps, M.D. Medical College of Ohio, Cincinnati, for many years a practitioner of Fort Wayne, Ind., died at the home of his sister in Troy, Pa., from disease of the stomach of long standing, November 12, aged 75.

Michael E. Scannell, M.D. Harvard University Medical School, Boston, 1891, of Worcester, Mass., died in the City Hospital, Worcester, November 16, from heart disease, after an illness of one week, aged 41.

Frank Fennell, M.D. Keokuk Medical College, College of Physicians and Surgeons, Keokuk, 1905, committed suicide by taking morphin at his office in Readlyn, Iowa, while despondent, November 2, aged 25.

Henry Noss, M.D. Long Island College Hospital, Brooklyn, N. Y., 1891, of Brooklyn, died at Verbeck, N. Y., November 18, from cerebral hemorrhage, after an illness of five years with spinal disease, aged 50.

Percy C. Smith, M.D. Medical College of Indiana, Indianapolis, 1898, formerly a practitioner of Swanton, Neb., died at his home in Los Angeles, Cal., November 3, after an illness of four weeks, aged 36.

William Finlaw, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1863, a surgeon in the Army during the Civil War, died at his home in Santa Rosa, Cal., November 17, after a short illness.

George Royal Shafer, M.D. Chicago, 1881, formerly a member of the Illinois State Board of Health, died at his home in Peoria, November 4, from rheumatic endocarditis, after a long illness, aged 47.

Norman L. Jones, M.D. Rush Medical College, Chicago, 1882, died at his home in Norton, Kan., November 17, from intestinal obstruction, for which an operation was made a few hours before.

Walter William Robison, M.D. College of Physicians and Surgeons, Chicago, 1897, died at his home in Edelstern, Ill., November 3, from the effects of an overdose of morphin, aged 35.

Willis J. White, M.D. Omaha (Neb.) Medical College, 1891, of Sioux City, Iowa, died at St. Joseph's Hospital in that city, November 13, from pneumonia, after an illness of five days, aged 40.

Thomas L. Painter, M.D. Medical College of Virginia, Richmond, 1868, of Knob, Va., died at the home of his son in Tazewell, Va., November 9, from nephritis, after a long illness, aged 64.

Patrick H. Gallagher, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1864, the oldest physician in the copper country, died at his home in Hancock, Mich., November 21, aged 74.

Mordecai C. Mendenhall, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878, died at his home in Vermilion Grove, Ill., November 15, after an illness of two weeks, aged 70.

Irwin A. Cofer, M.D. Southern Medical College, Atlanta, Ga., 1880, died suddenly from pulmonary hemorrhage, at the home of his nephew in Atlanta, Ga., November 17, aged 43.

Frank H. Russell, M.D. Rush Medical College, Chicago, 1899, died at his home in Kewanee, Ill., November 2, from tuberculosis, after an illness of more than a year, aged 35.

Zachary T. Magill, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1876, of Winters, Cal., died suddenly in Berkeley, Cal., November 9, from heart disease.

William B. Dunkle, M.D. Rush Medical College, Chicago, 1863, died at his home in Gelinan, Iowa, November 14, aged 70.

George H. Gilson, M.D. St. Louis Medical College, 1876, died at his home in Raymond, Ill., November 18, aged 56.

Frank M. Harry, M.D. Pennsylvania, 1878; formerly a burgess of Mount Joy, Pa., died at his home in that place, November 20, after a short illness, aged 57.

Arthur O. Bowman, M.D. Bellevue Hospital Medical College, New York City, 1891, died at his home in Roweaville, S. C., November 15, from diphtheria, aged 36.

James Vaughn Tabor, M.D. Harvard University Medical School, 1867, a veteran of the Civil War, died at his home in Hodgdon, Maine, October 24, aged 85.

Thomas Sullivan, M.D. Trinity Medical College, Toronto, Ont., 1881, died suddenly at his office in Springfield, Minn., from heart disease, November 10.

Frank A. Winne, M.D. Pennsylvania, 1878, died suddenly at his home in Brockport, N. Y., November 12, from cerebral hemorrhage, aged 55.

Jason P. Safford, M.D. Detroit (Mich.) Medical College, 1884, of Detroit, Mich., died in Plymouth, Mich., November 12, after a long illness.

Sarah J. Coe, M.D. Michigan, 1878, died at her home in Wilkesbarre, Pa., November 4, from paralysis, after an illness of three years.

John R. Manley, M.D. Cincinnati, 1895, died suddenly at his home in Buckhannon, W. Va., November 16, from heart disease, aged 45.

James F. Meeks, M.D. (Examination, Ohio), a surgeon in the Civil War, died at his home in Hoytville, Ohio, November 11, aged 71.

Joseph Watson, M.D. Ohio, 1853, of Cardington, Ohio, died suddenly in Detroit, Mich., from heart disease, November 2, aged 81.

John E. Gemmel, M.D. Manitoba Medical College, Winnipeg, 1888, died at his home in Rush City, Minn., November 11, aged 45.

Harriet Jackson Ravold, M.D. Illinois, 1894, died at her home in St. Joseph, Mo., November 17, after an illness of three years.

Robert B. Armstrong, M.D. Omaha (Neb.) Medical College, 1893, died recently at his home in Polk City, Iowa.

Francis A. Benham, M.D. Illinois, 1862, died at his home in Elkhart, Ind., November 19, aged 84.

## Book Notices

THE PHYSICIANS' VISITING LIST FOR 1906. Fifty-fifth year of its publication. Leather cover, with flap, pencil and pocket. Price, \$1.00. Philadelphia: P. Blakiston's Son & Co., 1905.

The fifty-fifth edition of this visiting list is furnished in four different weekly sizes, allowing for 25, 50, 75 and 100 patients respectively per week; in a perpetual edition with spaces for 1,300 and 2,600 names respectively, and in a monthly edition. The system used is different from that of Dr. Taylor's book, which we reviewed last week, in which each patient's account is by itself. This book is more of a day-book; each patient has a line, each day a column, and the entries are made in accordance with a table of signs, which includes all possible contingencies. Following the visiting list proper there are special pages for memoranda, addresses of patients, addresses of nurses, bills presented, vaccination engagements, obstetric engagements, births, deaths, and cash account.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By J. M. Anders, M.D., Ph.D., LL.D. Illustrated. Seventh Edition. Cloth. Pp. 1297. Price, \$5.50 net. Philadelphia: W. B. Saunders & Co., 1905.

In this seventh edition of Anders' text-book the original plan has been retained and the details of treatment of diseases have been given their proper prominence. Among the new subjects now treated more fully are: the Rocky Mountain spotted fever, splachnoptosis, myasthenia gravis, pseudo-tuberculosis, benign cirrhosis of the stomach, intestinal lithiasis and calculi, emulsion-albuminuria, the sequelæ of valvular lesions, the Adams-Stokes syndrome, examination of patients for diagnosis of diseases of the stomach, and Cammidge's tests for glycerose in the urine. The sections on paratyphoid fever, beriberi and trypanosomiasis have been rewritten and the entire volume has been brought up to date. Important additions have been made to the sections dealing with those tropical and subtropical diseases which are being observed with increasing frequency in the temperate zone.



# Queries and Minor Notes

## TUBERCULOSIS ORGANIZATIONS.

STANFORD UNIVERSITY, CAL., Nov. 8, 1905

To the Editor:—Can you furnish a list of tuberculosis leagues and societies in the U. S., also any suggestion concerning a way of getting at the progress of these leagues. I am anxious to secure a bibliography on the subject.

JAMES ROSENFELD.

ANSWER.—The following are the principal organizations working against tuberculosis in the United States:

1. The National Association for the Study and Prevention of Tuberculosis (organized June 6, 1904). President, Dr. Herman M. Biggs, New York; secretary, Dr. Henry Barton Jacobs, Baltimore; executive secretary, Professor Livingston Farrand. Office, 105 East 22d Street, New York City. The objects of the association are, the study of all forms of tuberculosis; the dissemination of knowledge concerning the disease; and the encouragement of its prevention and scientific treatment. The association aims to bring into co-operation all the various agencies working against the disease in America. It has aided in the organization of state and local work in many parts of the country, and by various means is spreading a knowledge of the subject and of its importance, among the people at large. One of the most important of these efforts is the Tuberculosis Exposition, which is to be held in New York, beginning November 28. (See THE JOURNAL, Nov. 25, p. 1664.)

2. The Tuberculosis Committee of the Charity Organization Society of New York (organized in June, 1902). Secretary, Mr. Paul Kennaday, 105 East 22d Street, New York City. In addition to much educational, scientific and legislative work, the committee has published a very complete and valuable "Handbook on the Prevention of Tuberculosis," in which every branch of the subject is fully and authoritatively treated.

3. The Committee on the Prevention of Tuberculosis of the Visiting Nurse Association of Chicago (established in June, 1903). Medical Director, Dr. Arnold C. Klebs. Central office, 1414 Unity Building, Chicago. This committee has provided medical and nursing care and instruction for over 1,000 poor consumptives. It has a staff of district physicians and nurses, with offices in the different quarters of the city, by whom patients are attended to, as well as instructed about their disease, its prevention and cure. Special attention is given to the compilation of statistics and to educational work, especially by means of lectures. It also maintains a library and bibliography on tuberculosis. The central office of the committee is also used by the Illinois State Association for the Prevention of Tuberculosis.

4. The Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis (founded February, 1903). Dr. Lawrence F. Flick, medical director, 238 Pine Street, Philadelphia, Pa. This is one of the most completely equipped and most efficient establishments connected with the movement. The institute maintains a hospital for advanced cases, a free clinic, and a laboratory. It also arranges lectures and does other educational work. The results of its first year's work have been published in a report, containing statistics from about 2,000 cases treated.

5. The Boston Association for the Relief and Control of Tuberculosis (organized in 1903). Alexander M. Wilson, general secretary; 8 Beacon Street, Boston. This committee carries on educational and statistical work, promotes the establishment of sanatoria and hospitals, and has done much to arouse interest in the subject among trades unions.

There are similar societies or committees carrying on this work in the following cities: Hartford and New Haven, Conn.; Washington, D. C.; Lexington, Ky.; Peoria, Streator, Jacksonville and Moline, Ill.; Cambridge, Mass.; Minneapolis; St. Louis; Binghampton, Buffalo and Rochester, N. Y.; Cleveland, Toledo and Youngstown, Ohio; Scranton, Pa.; Newport, R. I.

Among the most important state organizations are the following:

The Pennsylvania Society for the Prevention of Tuberculosis (organized in 1892). The first state society of its kind in America. It has done much educational and legislative work, and has agitated for better sanitary conditions.

The Tuberculosis Commission of Maryland has made an extensive study of tuberculosis in Maryland, embodying the results in a report to the governor of the state, published in 1904. It also held a tuberculosis exposition in Baltimore, in January, 1904, which greatly increased interest in and knowledge of the subject.

The Illinois State Association for the Prevention of Tuberculosis (organized in January, 1905), has prepared and distributed literature, and has organized the work against tuberculosis in a number of towns. The association has also conducted a vigorous campaign for the establishment of a state sanatorium.

There are also state associations, committees or commissions in the following states: California, Georgia, Indiana, Iowa, Kentucky, Minnesota, New Hampshire, New Jersey, Ohio, Vermont and Wisconsin.

Among the more valuable works on the subject are these: "A Directory of Institutions and Societies Dealing with Tuberculosis." Charity Organization Society, New York, 1904. "A Handbook on the Prevention of Tuberculosis." Tuberculosis Committee of Charity Organization Society, N. Y., 1904. "First Annual Report of the Henry Phipps Institute," Philadelphia, 1905.

A complete list of all organizations, hospitals, dispensaries, etc., for tuberculosis was given in THE JOURNAL, Feb. 11, 1905, page 455.

# State Boards of Registration

## COMING EXAMINATIONS.

Wyoming Board of Medical Examiners, Cheyenne, December 6. Secretary, S. B. Miller, Laramie.

Examining Board representing the President and Fellows of the Medical Society of Delaware at Dover, and the Homeopathic Board, Wilmington, December 12. Secretary, P. W. Tomlinson, Wilmington.

Ohio State Board of Medical Registration and Examination, Columbus, December 12-14. Secretary, F. Winders, Columbus.

Medical Examining Board of Virginia, Richmond, December 12-15. Secretary, R. S. Martin, Stuart.

Board of Medical Examiners of Maryland, Baltimore, December 13-16. Secretary, J. McScott, Hagerstown.

State Board of Health of Missouri, Kansas City, December 19-21. Secretary, J. A. B. Adcock, Warrensburg.

Board of Medical Examiners State of California, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.

Colorado March, July and October Reports.—Dr. S. D. Van Meter, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examinations held at Denver, March, July and October, 1905.

At the March examination the number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 70. At the July and October examinations the number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 70.

At the March examination the total number of candidates examined was 3, of whom 2 passed and 1 failed. The following colleges were represented:

College.	PASSED.	Year.	Per Cent.
Physio-Medico College, Chicago.....	(1900)	Grad.	70
College of Medicine and Surgery, Chicago.....	(1904)		78

College.	FAILED.	Per Cent.
Little Rock and Dallas, Texas, Med. Coll.....		31.9

At the July examination the total number of candidates was 4, including one osteopath. Two passed, 1 failed, and 1 failed to appear for examination.

College.	PASSED.	Year.	Per Cent.
Barnes Med. Coll., St. Louis .....	(1905)	Grad.	70

College.	FAILED.	Per Cent.
Kansas Med. Coll. (1895)*		
California Med. Coll. (1904)**		

\* Candidate took the oral and clinical examination, but refused to take the written one.

\*\* Candidate failed to appear for examination. License refused.

At the October examination one candidate, a graduate of Starling Medical College (1855), took the oral and clinical examination, but refused to take the written one, and a license, therefore, was refused. A graduate of the College of Medicine and Surgery, Indianapolis (1894), applied for license but refused to appear for examination; in this case also the license was refused. A license was refused to one candidate on account of his moral character.

From April 20 to October 1 there were thirty applicants, not included in refused list, who have not been granted licenses, owing to the fact that after filing their preliminary papers they either failed to complete their applications or withdrew them. Some of these candidates failed to appear for legitimate reasons, such as changing their minds, etc., but the majority did so because they concluded after further investigation that they would be refused licenses. This explains why the percentage of refused applicants and written examinations is so low.

Iowa Requirements.—At the semi-annual meeting, November 1, the Iowa State Board of Medical Examiners ruled that, after July 1, 1906, they will consider no medical college in good standing which does not require as a condition for graduation not less than four courses of lectures of not less than seven months each, no two of which shall begin or end in the same calendar year; or which grants any advanced standing because of the possession of a literary or scientific degree. Graduates of colleges which do not fulfill the requirements will not be examined.

Idaho October Report.—Dr. J. L. Conant, Jr., secretary of the Idaho State Board of Medical Examiners, reports the written examination held at Boise, Oct. 3-4, 1905. The number of subjects examined in was 13; total number of questions asked, 110; percentage required to pass, 75. The number of candidates examined was 31, of whom 27 passed and 4 failed. The following colleges were represented:



College.	PASSED.	Year. Grad.	Per Cent.
Rush Med. Coll., (1880) 83.8; (1890) 82.8; (1902) 75; (1905) 93.3			
Washington University, St. Louis.....	(1905)		84.8
Jefferson Med. Coll. ....	(1904) 83.1; (1905) 78.4,		81.8
University of Minnesota.....	(1887)		77.9
Hahnemann Med. Coll., Chicago.....	(1901)		79.5
University Med. Coll., Kansas City.....	(1903)		80.9
Kansas City Med. Coll. ....	(1904)		86.3
University of Michigan .....	(1904)		84.5
Central Med. Coll. ....	(1905)		81.5
University of Iowa, Homeo. Dept.....	(1897)		77.5
Northwestern University .....	(1904) 80; (1905)		80.3
University of Colorado .....	(1905)		83.2
Kansas Med. Coll. ....	(1905)		85.9
University of the South, Sewanee.....	(1904)		78.4
Herring Med. Coll., Chicago .....	(1904)		87
University of Nebraska .....	(1903)		75
Kentucky School of Medicine.....	(1892)		79.3
University of Toronto .....	(1905)		88
Denver & Gross Coll. of Med. ....	(1904) 81.2, 87.3		88.2
FAILED.			
Ft. Wayne Med. Coll. ....	(1892)		73.6
University of Michigan .....	(1901)		72.3
University of Louisville .....	(1883)		38
Bennett Med. Coll., Chicago .....	(1900)		68.2

**Oregon April Report.**—Dr. B. E. Miller, secretary of the Board of Medical Examiners of the state of Oregon, reports the written examination held at Portland, April 20, 1905. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 54, of whom 28 passed and 26 failed. The following colleges were represented:

College.	PASSED.	Year. Grad.	Per Cent.
University of Oregon....	(1905) 75.3, 79, 79.40, 79.8, 79.8,		80.8,
81, 81, 81, 81.5, 82.9, 84, 86.6, 86.7.			
Willamette University .....	(1905) 78.6, 79.4, 79.4,		81.3, 83.4
College of P. and S., San Francisco.....	(1904)		84.6
Rush Med. Coll. ....	(1895) 81.8; (1897)		80.8
Woman's Med. Coll., Pennsylvania.....	(1904)		88.4
University of Nashville .....	(1896)		76.6
University of Baltimore .....	(1899)		82.2
University of Michigan.....	(1885)		87.2
College of Med. and Sur., Minn.....	(1901)		81.8

FAILED.			
Medico-Chirurgical College, Missouri.....	(1905)		69
Marion-Sims-Beaumont Coll., Missouri.....	(1904)		71
Marion-Sims Med. Coll. ....	(1891)		69
Illinois Med. Coll. ....	(1892)		71.3
Rush Med. Coll. ....	(1892)		71.8
American Coll. of Med. and Surg., Illinois.....	(1904)		51.6
California Med. Coll. ....	(1902)		71
Dallas Med. Coll., Texas.....	(1904)		31.5
Hahnemann Med. Coll. Hosp., California.....	(1897)		30.9
University of Oregon (1905) 71, 74, 74, 74, 74, 74.8, 74.8, 74.4,			
74.5, 71.2, 71, 71, 71.			
Willamette University .....	(1905) 74.7, 72.4, 73		
Nongraduates .....	71, 56.2		

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending November 25:

Hoff, John Van R., asst.-surgeon general, ordered to report in person to the chief of staff for temporary duty in his office.

DeWitt, Wallace, asst.-surgeon, leave of absence extended ten days.

Frick, Euclid B., surgeon, detailed to accompany troops G and H, Third Cavalry, from Fort Snelling, Minn., to San Francisco.

Collins, C. C., asst.-surgeon, granted thirty days' leave of absence, with permission to apply for thirty days' extension.

Lippitt, Wm. F., surgeon, granted four months' leave of absence.

Rockhill, E. P., asst.-surgeon, ordered to report to Lieut.-Col. Geo. H. Torney, deputy surgeon general, president, examining board, General Hospital, Presidio of San Francisco, for examination to determine his fitness for advancement, on December 29.

Metcalfe, R. F., asst.-surgeon, ordered, on arrival at San Francisco, to proceed to Fort Leavenworth, Kan., for temporary duty. On return of Asst.-Surgeon Buck to that post, Asst.-Surgeon Metcalfe will proceed to Columbus Barracks, Ohio, for station.

Lippitt, Wm. F., surgeon, granted leave of absence from December 19, 1905, to January 5, 1906.

Owen, Wm. O., surgeon, having been found by an army retiring board incapacitated for active service on account of disability incidental thereto, his retirement from active service by the President, November 23, is announced.

Koerber, C. E., asst.-surgeon, in addition to his present duties will report at Washington Barracks, D. C., for temporary duty.

Havard, Valery, asst.-surgeon general, left Governor's Island, N. Y., with department commander on inspection tour.

Raymond, Henry I., surgeon, left Columbus Barracks, Ohio, with recruits to Vancouver Barracks, Washington.

Farrow, Edgar J., contract surgeon, ordered to sail for Manila, P. I., November 25, for duty in the Philippines Division.

Hereford, John R., contract surgeon, granted an extension of one month to his leave of absence.

Wing, Franklin F., dental surgeon left Fort Des Moines, Iowa, and arrived at Jefferson Barracks, Mo., for duty.

Carpenter, Alden, dental surgeon, left Boise Barracks, Idaho, for Vancouver Barracks, Washington, his proper station.

Daywalt, George W., contract surgeon, left Fort St. Philip, La., on leave of absence for one month, twelve days.

Mason, George L., dental surgeon, ordered from Fort McPherson, Ga., to Fort Fremont, S. C., for two weeks' duty; to go thence to Fort Moultrie, S. C., for one month.

Wolven, F. Homer, dental surgeon, granted leave of absence for fifteen days.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending November 25:

Guthrie, J. A., surgeon, orders of November 8, modified; granted sick leave for three months.

Ledbetter, R. E., P. A. surgeon, detached from the Navy Yard, Norfolk, Va., and ordered to the *Glacier*.

Traynor, J. P., asst.-surgeon, ordered to the Naval Hospital, Boston.

Miller, J., asst.-surgeon, detached from the *Lawton* and ordered to duty at Midway Islands.

Hart, G. G., acting asst. surgeon, detached from the *Glacier* and ordered to the naval recruiting station, Buffalo, N. Y.

Tyree, F. W., acting asst.-surgeon, detached from duty at Midway Islands and ordered to duty at the naval training station, San Francisco.

Evans, S. G., surgeon, ordered to the naval recruiting rendezvous, Denver, December 1.

Miller, J. T., acting asst.-surgeon, detached from the naval hospital, Sitka, Alaska, and ordered home to wait orders.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 22:

Vaughan, George T., assistant surgeon-general, granted leave of absence for four days from November 15.

Bailhache, P. H., surgeon, granted leave of absence for ten days from November 20.

Sawtelle, H. W., surgeon, granted extension leave of absence for twenty days, from November 23.

McIntosh, W. P., surgeon, twenty-one days leave of absence granted from November 15, amended to read twenty-one days from November 18.

Rosenau, M. J., P. A. surgeon, granted leave of absence for fourteen days from November 22.

Parker, H. B., P. A. surgeon, granted leave of absence for twenty days from December 15.

Anderson, J. F., P. A. surgeon, leave of absence granted for one month from November 1, amended to read eighteen days from November 1.

Corput, G. M., P. A. surgeon, directed to proceed to Pascagoula, Miss., for special temporary duty.

Berry, T. D., P. A. surgeon, leave of absence temporarily revoked and directed to proceed to Biloxi, Miss., for special temporary duty.

Warren, B. S., P. A. surgeon, granted extension leave of absence for one month from December 3.

Bahrenburg, L. P. H., Burkhalter, J. T., and Boggess, J. S., asst.-surgeons, to report to chairman of board of examiners at Washington, D. C., December 4, for examination to determine their fitness for promotion to the grade of passed assistant surgeon; on completion of this duty to rejoin station.

Jackson, J. M., acting asst.-surgeon, granted six days' leave of absence, from November 5.

Mohr, H. B., acting asst.-surgeon, granted leave of absence for thirty days, from December 1.

Small, E. M., acting asst.-surgeon, granted leave of absence for fourteen days beginning December 7.

Frick, John, acting asst.-surgeon, granted leave of absence for thirty days, from December 1.

Kennard, Karl S., acting asst. surgeon, granted leave of absence for fourteen days, from November 27.

Stearns, H. H., acting asst.-surgeon, granted leave of absence for twenty-one days from Dec. 11, 1905.

Tarbell, B. S., acting asst.-surgeon, granted leave of absence for ten days from November 21.

Richardson, S. W., pharmacist, granted leave of absence for twenty-three days from November 23.

### BOARD CONVENED.

Board to meet at Washington, D. C., December 4, for the examination of assistant surgeons. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General J. M. Eager; P. A. Surgeon John F. Anderson, recorder.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon general, Public Health and Marine-Hospital Service during the week ended November 20.

#### SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 29-Nov. 11, 7 cases.

Florida: Jacksonville, Nov. 4-11, 1 case.

Louisiana: New Orleans, Nov. 4-11, 2 cases.

Michigan: Kalamazoo, Nov. 4-11, 4 cases.

Ohio: Lucas County, Nov. 11-18, 5 cases.

Pennsylvania, York, Nov. 11-18, 1 case.

#### SMALLPOX—FOREIGN.

Argentina: Buenos Ayres, Aug. 1-31, 28 deaths.

Brazil: Bahia, Oct. 1-21, 117 cases, 3 deaths; Pernambuco, Sept. 17-30, 208 deaths; Rio de Janeiro, Oct. 8-15, 6 cases, 6 deaths.

Canada, Toronto, Nov. 4-11, 5 cases.

England, Leeds, Oct. 29-Nov. 4, 1 case; Nottingham, Oct. 14-21, 1 case.

France: Paris, Oct. 21-28, 8 cases.

Gibraltar: Oct. 29-Nov. 4, 4 cases.

India: Bombay, Oct. 10-17, 2 deaths.

Italy: Catania, Oct. 23-Nov. 2, 2 cases; Genzano, 2 cases; Magliano Del Marti, 1 case; Messina, Oct. 21-28, 1 death; Troina, Oct. 28-Nov. 2, 2 cases; Vallerlonga, 2 cases.

Russia: Moscow, Sept. 23-Oct. 14, 16 cases, 10 deaths; Odessa, Oct. 14-21, 9 cases; St. Petersburg, Oct. 1-21, 5 cases.

Spain: Barcelona, Oct. 21-31, 3 deaths.

Turkey: Constantinople, Oct. 22-29, 2 deaths.

#### YELLOW FEVER—UNITED STATES.

Florida: Pensacola, Nov. 9-16, 1 case, 1 death.

Louisiana: New Orleans, Nov. 4-11, 2 cases, 1 death.



## YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Oct. 8-15, 2 deaths.  
Honduras: Choloma, Nov. 15, present; Puerto Cortez, 2 cases;  
San Pedro, 3 cases.  
Mexico: Vera Cruz, Oct. 29-Nov. 4, 2 cases, 1 death.

## CHOLERA—FOREIGN.

Germany: Kurzebrack, Sept. 3-9, 4 cases, 2 deaths; Adolfsdorf, Sept. 1-Oct. 14, 12 cases, 2 deaths; Czarnikau, to Sept. 2, 2 cases, 2 deaths; Dratzig, Sept. 3-9, 3 cases, 3 deaths; Grandenz, to Sept. 9, 8 cases, 2 deaths; Gnesen, Sept. 3-9, 3 cases; Rastenburg, 1 case; Sommerau, 1 case, 1 death; Steinfurth, Sept. 1-7, 1 case; Warnkeim, Sept. 10-16, 1 case, 1 death; Stolpe, Oct. 1-21, 19 cases, 1 death; Strasburg, Oct. 15-21, 1 case.  
India: Calcutta, Sept. 23-Oct. 14, 127 cases.  
Russia: Vistula Territory, Oct. 11-18, 26 cases, 14 deaths.

## PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 1-31, 7 deaths.

## PLAGUE—FOREIGN.

Australia: Sydney, Aug. 1-31, 1 death.  
Brazil: Rio de Janeiro, Oct. 8-15, 5 deaths.  
India: General, Oct. 7-14, 4,294 cases, 3,395 deaths; Bengal, 88 cases, 65 deaths; Bombay, Oct. 10-17, 14 deaths; Calcutta, Sept. 23-Oct. 14, 26 deaths; Karachi, Oct. 10-17, 10 cases, 8 deaths.  
Japan: Kobe, Oct. 14-21, 2 cases, 2 deaths.  
Peru: Lima, Oct. 11-20, 7 cases, 4 deaths; Sept. 21-30, 4 cases, 2 deaths; Payta, Oct. 11-20, 1 case, 1 death, Sept. 21-30, 3 cases, 2 deaths; Mauseiche, 3 cases.

## Medical Organization

### California.

ALAMEDA COUNTY MEDICAL ASSOCIATION.—Dr. J. N. McCormack, organizer for the American Medical Association, delivered an address before the Alameda County Medical Association, October 18, in which he urged the benefits of organization.

LONG BEACH MEDICAL SOCIETY.—The medical fraternity of Long Beach assembled, October 27, to meet Dr. J. N. McCormack, organizer of the American Medical Association, and Dr. Philip Mills Jones, San Francisco, secretary of the State Board of Health, with the object of effecting a local organization. After addresses by the visitors, an organization was formed, with Dr. Homer O. Bate, president, and Dr. Joseph M. Holden, secretary.

NORTHERN CALIFORNIA MEDICAL ASSOCIATION.—This association completed its organization at Redding, October 23, by electing the following officers: Dr. Clarence E. Reed, Redding, president; Dr. Thomas J. Edgecomb, Shasta, vice-president; Dr. Robert F. Wallace, Redding, secretary and treasurer; Drs. Sherman T. White, Redding, Robert T. Legge, Siskiyou, and Lucian A. Bouter, Redding, executive committee, and Drs. Ferdinand Stabel, Redding, and George E. Flora, Igo, finance committee.

### Georgia.

ELBERT COUNTY MEDICAL SOCIETY.—The physicians of Elbert County met at Elberton, November 15, to discuss the organization of a county medical society.

GEORGIA MEDICAL—CHATHAM COUNTY MEDICAL SOCIETY.—At a joint meeting of the Georgia Medical Society and the Chatham County Medical Society, held in Savannah, October 27, preliminary measures were taken to amalgamate the two societies, in conformity with a resolution passed at the last annual meeting of the state medical association, providing for one society in each county. The meeting was called by Dr. John S. Howkins, Savannah, counselor of the First District, who presided, and Dr. Martin J. Cooley, Savannah, acted as temporary secretary. A constitution and by-laws were adopted as prescribed by the American Medical Association.

MERIWETHER COUNTY MEDICAL SOCIETY.—The physicians of this county met in Greenville, October 18, and organized a county medical organization, with the following officers: Dr. Edward B. Terrell, Greenville, president; Dr. Jesse S. Snead, St. Marks, vice-president; Dr. Pryor W. Fitts, Greenville, secretary and treasurer, and Drs. John W. Pinkston, Greenville, F. H. Letson, Lone Oak, and Charles E. Stipe, Odessadale, censors.

SOUTH GEORGIA MEDICAL ASSOCIATION.—This association was organized at Cordele, November 1, under the auspices of the Georgia Medical Association, with the aid of Dr. R. E. Lee Barnum, Richland, counselor for the third congressional district, with 15 charter members. The following officers were elected: President, Dr. J. T. Gammage, Pine View; vice-president, Dr. Archie Griffin, Luke; secretary and treasurer, Dr. Thomas J. McArthur, Cordele, and Drs. Virgie O. Harvard, Arabi, James A. Ward, Cordele, and L. A. Williams, Abbeville, censors.

WARE COUNTY MEDICAL ASSOCIATION.—This association was re-organized at Waycross, October 20, on the standard plan. Dr. Jefferson D. Herrman, Eastman, counselor for the eleventh

district, was present. Dr. Robert P. Izlar, Waycross, was elected president; Dr. James C. Rippard, Waycross, vice-president; Dr. H. M. Johnson, Waresboro, secretary, and Dr. F. C. Folks, delegate to the state association.

### Pennsylvania.

LAWRENCE COUNTY MEDICAL SOCIETY.—At its meeting, October 5, the standard constitution and by-laws was put in effect by this society.

LUZERNE COUNTY MEDICAL SOCIETY.—At a meeting of this society, October 5, Dr. Fell reported on the recent meeting of the state medical society in Scranton and gave a draft of the proposed new by-laws, which provide that any reputable physician, regardless of his school of medicine, is eligible for membership in the state and county societies, provided he carry on his work as a general practitioner and agree to practice non-sectarian medicine.

### Dr. McCormack's Tour.

The Texas meetings have proved to be very successful, some of them the largest ever held in Texas. At many of the meetings there were present, in addition to the physicians, a good representation of teachers, lawyers, legislators, preachers and druggists.

Some of his meetings were as follows: Galveston, November 6; Houston, November 7; Waco, November 8; Fort Worth, November 10; Dallas, November 13; Tyler, November 15; Paris, November 17; Bonham, November 20, and Gainesville, November 23.

As the strongest arguments for organization Dr. McCormack detailed the benefits to the profession and to the laity that would be sure to follow. He compared the general pleasant relations among lawyers with traditional discord among doctors. The lawyers are on good terms because they are frequently closely associated in court and become well acquainted in the ordinary course of their professional work. Physicians work in isolation and must create for themselves the needed opportunity for mingling—the county medical society. Mutual acquaintance paves the way for the co-operation that is essential to the profession if it is to accomplish the great things for which its knowledge fits it. Postgraduate study was urged on every physician as indispensable to real success. Physicians and laity should support the anti-nostrum crusade so well begun by prominent lay journals. [In this connection Dr. McCormack writes that a surprisingly large number of country papers are republishing the *Collier's* exposures and delaring their independence of the now notorious "red clause."]

From Dallas, Texas, there comes news that Dr. McCormack's appeals have already borne fruit. It is announced that joint meetings will be held of the physicians with, first, the lawyers (to discuss legislation and medical testimony), and second, with the clergy, for the purpose of arranging for co-operation in efforts to improve social conditions.

## Society Proceedings

### COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.

American Dermatological Association, New York, Dec. 28-30.

Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### BOSTON MEDICAL LIBRARY MEETING.

Regular Meeting, held Nov. 15, 1905.

DR. RICHARD C. CABOT in the Chair.

The purpose of the meeting was to demonstrate the practical usefulness of "moving pictures" in teaching students or illustrating medical subjects.

DR. WALTER B. CHASE of Brookline told of the rapid developments of this work during the past few years and of his own application of it. He demonstrated the special camera needed, the films, etc., and explained how they are prepared. He has taken in this way about 37,000 pictures, of which 22,000 are of epileptic seizures, including all classes of cases, even the "status epilepticus." They were taken at the Craig Epileptic Colony at Sonyea, N. Y. Other pictures shown by the biograph were athetosis, rhythmic idiots, nystagmus and a variety of gaits. He believes that soon it will be possible to show the heart beating, and the pupil of the eye dilating and contracting.

DR. W. B. CANNON demonstrated, also by the biograph, the movements of the stomach and intestines. These pictures



were obtained by the x-ray fluoroscope, the food having been impregnated with bismuth subnitrate. Outline pictures were traced successively and photographed on the biograph film. The results as thrown on the screen clearly showed the waves of motion near the pylorus of the stomach and the quiet at the cardiac end. The latter suggests an opportunity for the salivary digestion. In the small intestine he showed that peristalsis is less frequent than "rhythmic segmentation." In the upper part of the large intestine, close to the ilcoecal valve, a distinct anti-peristalsis was demonstrated—the last effort of the digestive tract to separate nutriment from the food.

DR. R. C. CABOT demonstrated five pictures of pyopneumothorax. The camera was located directly over the cadaver, and photographs were taken as the autopsy progressed while the organs were *in situ*, the photographs being colored to accord with the actual specimens. One unique fact thus made prominent was that in left-sided effusion the entire mediastinum is pushed to the right, the relative position of the heart being maintained.

#### SOUTHWESTERN TRI-STATE MEDICAL ASSOCIATION OF TEXAS, OKLAHOMA AND INDIAN TERRITORY.

*Sixth Annual Session, held in Oklahoma City, Nov. 8-9, 1905.*

The President, DR. W. R. BLALOCK, Dallas, Tex., in the Chair.  
Welcome.

The address of welcome on behalf of Oklahoma City was delivered by the Hon. B. M. Dilly, in place of Mayor Messenbaugh, who was unable to be present. Dr. Vene P. Armstrong, Dallas, Texas, responded. Dr. William T. Salmon, Oklahoma City, welcomed the visitors in behalf of the medical profession, and to this address Dr. James C. Loggins, Ennis, responded. President T. D. Turner, of the Chamber of Commerce, then welcomed the association in the name of that body and extended an invitation for a car ride.

#### Treatment of Insane.

DR. JOHN S. TURNER, Terrell, Texas, in a paper entitled "Therapeutics Employed in the Treatment of the Insane," referred to the false economy of commonwealths in the profession for the insane and especially in the way of cottage treatment. He urged the great need of the proper transfer of nervous patients to reliable and reputable sanatoria for skilled treatment and proper feeding. He strongly commended care in feeding insane patients and urged the advantage of natural sleep over that induced by narcotics. He declared it often to be absolutely necessary that friends and relatives be kept away from patients.

#### Mental Responsibility.

HON. B. F. BURWELL, Oklahoma City, in his address on this subject, urged that physicians and surgeons make a special study of insanity in order that when they are called into court to offer expert testimony they may be qualified so to act. The problem of whether or not an individual committing a crime is mentally responsible is one of the greatest importance in the trial of criminal cases, as insanity is so often made the defense. The speaker urged physicians so to prepare themselves that they might be able to determine whether or not in any given case the defendant was insane and, if necessary, the extent of the mental alienation.

#### Division of the Fee.

A warm discussion arose during the discussion on the division of fees. It was found to be the consensus of opinion of those present that there should be no secret in such cases, and that the honorable course is to present separately the bill of the specialist and that of the physician who brings the patient to him. Such a course would remove from the patient any suspicion of unfair dealing.

#### Banquet.

The banquet held at the Threadgill was attended by 110 members, and Dr. A. De Bord Young, Oklahoma City, acted as toastmaster.

#### Election of Officers.

The following officers were elected: President, Dr. George W. West, Eufaula, I. T.; vice-presidents, Drs. Edward H. Troy, South McAlester, I. T.; Richard T. Edwards, Oklahoma City,

Okla., and George H. Moody, San Antonio, Texas; secretary and treasurer, Dr. Rufus J. Crabill, Allen, I. T.; chairman of section on surgery, Dr. Charles M. Rosser, Dallas, Texas; materia medica and therapeutics, Dr. Mahlon A. Kelso, Enid, Okla.; eye, ear, nose and throat, Dr. L. Haynes Buxton, Oklahoma City, Okla.; state, medical and public hygiene, Dr. Arthur L. Anderson, Wilburton, I. T.; practice of medicine, Dr. Warren F. West, Waxahatchie, Texas; diseases of children, Dr. U. A. D. Callamo, Coalgate, I. T., and obstetrics and gynecology, Dr. William B. Pigg, South McAlester.

South McAlester was selected as the next place of meeting, on Oct. 16 and 17, 1906.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Treatment of Colic.

In making a diagnosis of colic, several things which may cause pain should be considered. According to Hutchison, whenever an infant screams almost constantly the possibility of colic should be thought of. Other causes for such outbursts may cause a mistake in the diagnosis. One of these is carache, another is teething, and there are still others, such as renal colic, phimosis, and tenderness of bones, as in scurvy. One of the signs, also, of defective cerebral development in young infants is screaming without any apparent cause. Colic, however, is commoner than all the other causes put together. The important signs of colic are hardness of the abdomen, the tendency to draw up the legs, and perhaps convulsions. When there is passage of flatus there is a cessation of screaming for a time, and this latter is the most positive symptom of colic.

In the treatment of an attack of colic, the first thing to be done, according to Hutchison, is to apply warmth to the abdomen. This can be done by means of friction with warm oil, by warm fomentations or by poultices of linseed or mustard; in extreme cases the mustard bath may be used. In addition to the external application of warmth, it can be applied internally by means of enemas of warm water. Two or three ounces of water should be injected as hot as the child can bear it; an effort should be made to reach as much of the large intestine as possible.

Carminatives should be given by the mouth in order to aid in the expulsion of flatus. Peppermint water and dill water are both suitable for this purpose. Ten drops (.65) of spiritus etheris nitrosi (sweet spirits of nitre) is also recommended and preferred by some authorities. Such measures as the foregoing, according to Hutchison, are usually effective in cutting short an attack of colic.

The next question to consider is how to prevent the recurrence of the attack. The author divides the cases into two groups: Infants that are breastfed and those which are bottlefed. Inquiry will usually show that the breastfed infant is nursed too frequently and often at irregular intervals. In such cases the simple regulation of nursing suffices. The time between the feedings should usually be lengthened. The mother is inclined to overfeed the child, because of the temporary relief afforded by the warm milk in the child's stomach, which, however, is frequently followed by a severe attack of colic, and in this way a vicious circle is formed. The clock should be brought into use in such cases to correct the irregular intervals between feedings. The presence of too much casein is responsible for the attacks in a great many cases. When such is the case, the administration of a few teaspoonfuls of lime water before each feeding is of advantage; it should be sweetened slightly to make it more palatable for the child. If the infant is constipated, as is so often the case in breast-fed children, this condition should by all means be corrected. On the other hand, bottle-fed infants are troubled with diarrhea, which must be corrected.



In the treatment of the constipation, a drastic cathartic, such as a large dose of castor oil at irregular intervals, should never be given. Massage should be applied to the abdominal muscles over the course of the colon, twice a day, morning and evening, for five or ten minutes at a time.

In the use of medicines to correct constipation, only those should be selected which have a tonic action on the coats of the intestine. To meet these indications, the following combination is recommended by the author:

R. Tinct. aloes.....gtt. iii-v	20-30
Syrupi sennæ.....gtt. xx	1 30
Tinct. belladonnæ.....gtt. ii	12
Tinct. nucis vomicæ.....gtt. ss	03
Infusi gentianæ co. q. s. ad.....3i	4

M. Sig.: To be taken at one dose as a laxative.

The size of the dose should depend on the age of the child. The author recommends the addition of dill water, cinnamon water or peppermint water to the foregoing, if necessary to modify the taste and as a carminative.. In mild cases it may be necessary to give only one dose of the foregoing at night; in other cases it may be necessary to give it at regular intervals two or three times a day until the action of the bowels takes place at regular intervals, after which the medicine should be gradually discontinued.

If for any reason the foregoing combination does not meet the requirements of the case, or if vomiting is produced on account of the bitter taste, the confection of sulphur is recommended, giving half a teaspoonful (200) at night, or both morning and night, as infants will take it very readily. If, after correcting constipation, the colic persists and the child is losing weight, the question of changing the food should be considered.

In the prevention of colic in bottle-fed infants, cleanliness in preparing the milk is frequently wanting, in addition to the conditions already mentioned.

In all cases of colic, carminatives administered between the feedings are recommended by Hutchison. The carminative should contain certain definite ingredients and should be alkaline in reaction. For this purpose he recommends the following combination:

R. Sodii bicarb. ....gr. iiss	15
Spts. ammon. arom., āā.....gtt. iiss	15
Glycerini .....m. ii	12
Aq. menthæ piperitæ q. s. ad.....3i	4

M. Sig.: To be given to the infant at one dose, and repeated as necessary between the feedings.

The glycerin is preferred to syrup to render the taste pleasant on account of the liability of the latter to ferment. In addition to keeping the child warm, if it gains weight, one is perhaps not justified in producing too great an alteration in the food. Under such circumstances, opium in some form is recommended. The best preparation, according to this author, is codein given in doses of grain 1/40 to 1/30 (.0015-.0020), combined with glycerin and peppermint water. [While Hutchison recommends this dosage, it should be remembered that children are susceptible to opiates, and that it might be advisable to start with a smaller dose.] A combination similar to the following is recommended by some authors to relieve the colic of infants:

R. Spts. etheris comp.	
Aq. camphoræ, āā.....3ii	8
Aq. menthæ viridis.....3iv	15
Aq. dest. ....3iii	12

M. Sig.: One teaspoonful every two or three hours, to a child 2 or 3 years of age. Or:

R. Tincture opii camph.....gtt. xl	2 65
Essentiæ feniculi.....m. iv	15
Syrupi zinziberis q. s. ad.....3ii	60

M. Sig.: Fifteen to thirty drops in water every two hours to children under one year of age.

Psoriasis.

As an internal remedy in the treatment of psoriasis, the following combination is recommended by *Merck's Archives*:

R. Sulphuris precipitata.....gr. iii	20
Salol .....gr. ii	12
Olei gaultheriæ.....m. ss	03
Acidi arsenosi.....gr. 1/30	002

M. Ft. capsula No. i. Sig.: One such capsule three times a day for an adult.

Sulphur in the Treatment of Chronic Nasal Catarrhs.

Kolipinski, in *Med. News*, states that sulphur is valuable in the treatment of simple chronic rhinitis, in the hypertrophic stage. Intumescent rhinitis is relieved by this preparation, but its effects in atrophic rhinitis are not so effective as during the earlier stages. In phlegmonous rhinitis the disease is often aborted by it. Scrofulous rhinitis, he says, can also be improved by its application. The immediate effects of sulphur are to check the purulent irritating discharge, to heal the excoriations, to improve the patient's pale and languid appearance and to stop the sniffing, sneezing, crust formation and odor. In epistaxis from any cause this is regarded by the author as one of the best preparations, but should be reinforced for twenty-four hours with a gauze tampon. It is a splendid postoperative dressing in surgery of the nasal cavities. The best preparation is the official sulphur precipitatum, United States Pharmacopeia. In the treatment of rhinitis, applications of sulphur should be made to the nares two or three times a week for one month, and then less frequently. It should be insufflated into the nares by means of an ordinary powder blower.

Treatment of Roentgen Ray Burns.

Engman, in an article in the *Ther. Gazette*, recommends, in the treatment of burns from the Roentgen ray, that the exposures be discontinued and lanolin applied for twenty-four hours, after which the following combination is recommended:

R. Acidi borici .....3iiss	45
Zinci oxidi	
Bismuthi subnit.	
Pulv. amyli, āā.....3i	30
Olei olivæ	
Aquæ calcis	
Lanolini, āā .....3iii	90
Aquæ rosæ .....3iiss	45

M. Ft. unguentum. Sig.: Apply locally to the affected areas.

Satterlee, in the same periodical, recommends the following combination in the treatment of this condition:

R. Acidi carbolici .....3iv	15
Aquæ rosæ .....3iv	120

M. Ft. solutio. Sig.: Apply locally.

Tuberculous Glands.

The following combination is recommended by Thornton, in *Denver Medical Times*, in the treatment of tuberculous glands:

R. Syr. ferri iodidi.....m. v	30
Olei morrhue.....m. xx	1 30
Ext. pancreati.....gr. i	06

M. Ft. cap. No. i. Sig.: One or two such capsules two hours after each meal.

E. P. Davis recommends, in addition to tonics, the following combination as an ointment:

R. Iethyol .....gr. x	65
Ung. zinci oxidi	
Lanolini, āā .....3ii	8

M. Ft. unguentum. Sig.: Apply locally night and morning.

Suprarenal Extract in Asthma.

Dr. G. W. Kirby, Millersburg, Ind., calls attention to the marked opportunity before the physician to fulfill his high aim of relieving suffering and of prolonging life by relieving the intense suffering produced by a severe asthmatic attack. He declares that more rapid relief can not be obtained in any condition than that secured in the use of the blood-raising principle from the suprarenal gland. He injects subcutaneously from 8 to 15 drops of adrenalin, which has been diluted with an equal amount of sterile water. This affords the patient almost instant relief. Aside from a throbbing sensation in the head and a weakness of the limbs due to the stimulation of the heart, no bad results follow. To my knowledge, he continues, this drug has not been advertised to be used in this condition, nor have I known of its general use in practice. It gives some relief in every case, but its chief use can be considered specific in the treatment of the spasmodic form of asthma, where so much morphia is given.



## Medicolegal

### To Prevent the Buying and Selling of Infant Children.

No. 154 of the Laws of Pennsylvania of 1905 provides that if any person or persons shall, within that state, trade, barter, buy, sell, or deal in humanity, by trading, bartering, buying, selling, or dealing in infant children, he, she, or they shall be guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine not exceeding \$1,000, or undergo an imprisonment not exceeding five years, or both, at the discretion of the court.

### Use of Preservatives in Food Products.

No. 7 of the Public Acts of Michigan of 1905 provides that no person, firm or corporation shall manufacture, sell, offer for sale, expose for sale, or have in his possession with intent to sell, any food product containing benzoic acid or benzoate of sodium, or any other harmless preservative, unless each and every package containing the same shall, in the condition in which it is exposed for sale, be distinctly, conspicuously and legibly branded, labeled or marked, in plain English letters, with the words "prepared with" followed by the proper English name of the preservative used; provided, that nothing in this act shall be construed to prohibit or regulate, by branding or otherwise, the use as a preservative of common salt, syrup, sugar, saltpetre, spices, alcohol, vinegar or wood smoke; and provided, further, that the provisions of this act shall not apply to dairy products.

### New Grounds for Revoking Certificate.

No. 161 of the Public Acts of Michigan of 1905 amends the sixth division of section 3 of the medical practice act as amended in 1903 providing that the State Board of Registration in Medicine may revoke the certificate of registration, after due notice and hearing, of any registered practitioner for certain causes by adding thereto: "Or who for the purpose of procuring patients employs any solicitor, capper or drummer; or who shall subsidize any hotel or boarding house; or pay or present to any person money or other valuable gift for bringing patients to him."

No. 207 of the public acts of 1905 amends section 7 of said practice act by making the penalty for practicing medicine or surgery without a certificate of registration a fine of not more than \$200, or imprisonment in the county jail for a period of not more than six months, or such fine and imprisonment, for each offense.

### Restriction on Marriage.

Chapter 136 of the Public Acts of Michigan of 1905, in addition to retaining the prior provision that no insane person, idiot, or person who has been afflicted with syphilis or gonorrhea and has not been cured of same, shall be capable of contracting marriage, provides that no person who has been confined in any public institution or asylum as an epileptic, feeble-minded, imbecile or insane patient, shall be capable of contracting marriage without, before the issuance by the county clerk of the license to marry, filing in the office of the said county clerk a verified certificate from two regularly licensed physicians of the state that such person has been completely cured of such insanity, epilepsy, imbecility, or feeble-mindedness, and that there is no probability that such person will transmit any of such defects or disabilities to the issue of such marriage. Any person of sound mind who shall intermarry with such insane person or idiot or person who has been so confined as an epileptic, feeble-minded, imbecile or insane patient in any public institution or asylum, except on the filing of certificate as herein provided, with knowledge of the disability of such person, or who shall advise, aid, abet, cause, procure or assist in procuring any such marriage contrary to the provisions of this section, shall be deemed guilty of a felony and on conviction thereof shall be punished by a fine of not more than \$1,000 or by imprisonment not less than one year nor more than five years, or by both such fine and imprisonment in the discretion of the court.

### Provides for Sanatorium for Treatment of Tuberculosis.

No. 254 of the Public Acts of Michigan of 1905, an act to establish a state sanatorium in some suitable locality in Michigan, for the care and treatment of persons having tuberculosis, provides for a board of six trustees, four of whom shall be legally registered physicians, to be appointed by the governor. The trustees shall appoint a medical superintendent, not a member of the board, who shall be a legally qualified physician, of at least six years' experience in the practice of his profession, and who shall be chosen with a special view to his professional and executive ability. The medical superintendent, with the consent of the board of trustees, shall appoint such other officers, assistants and employes in and for the sanatorium as may be necessary, provided that all medical officers shall be well educated physicians. The medical superintendent shall be chief executive officer of the sanatorium. He or his representative shall daily ascertain the condition of each and all the patients, and prescribe or direct their treatment. There shall be received into the sanatorium such persons as shall be proved by proper bacteriologic or clinical examination to be suffering from tuberculosis. Such patients shall be of two classes, namely, first, persons resident of the state who on account of their poverty are unable to pay the necessary expenses for residence at the sanatorium; and, second, residents of the state who are able to pay such fees as shall be fixed by the board of trustees.

### Provisions for Psychopathic Research.

No. 140 of the Public Acts of Michigan of 1905 provides that the joint board of trustees of the asylums for the insane of the state, in conjunction with the board of regents of the State University, shall select and employ from time to time an experienced investigator in clinical psychiatry, who shall be placed in charge of the psychopathic ward on the hospital grounds of the State University, and whose duty it shall be to conduct the clinical and pathologic investigations therein, to direct the treatment of such patients as are inmates of the psychopathic ward, to guide and direct the work of clinical and pathologic research in the several asylums of the state, and to instruct the students of the medical department of the university in diseases of the mind. In the conduct of this work he shall be allowed such graduate assistants as may be necessary and as the said board may approve. The said pathologist shall establish and maintain in said psychopathic ward a clinical laboratory of research in which investigations shall be continuously carried on with a view of determining the nature and causes of insanity and of perfecting the means of prevention and cure of diseases of this nature. Said pathologist shall make an annual report to the governor of the state on or before the first day of July of each year, of the medical work carried on at the psychopathic ward and in the clinical laboratory of research, and copies of such report shall be sent to the several boards of trustees of the various state asylums and to the board of regents of the State University. It shall be the privilege of the trustees of each public asylum of the state to have at any and all times at least one member of the medical staff of said asylum in the psychopathic laboratory of clinical research for special study, instruction and research.

### To Secure Pure Foods.

Chapter 33 of the Laws of Wisconsin of 1905 makes it unlawful to manufacture, sell, ship, consign, offer for sale, expose for sale or have in possession with intent to sell for use or consumption within the state any article of food within the meaning of section 4600 of the statutes of 1898 and laws amendatory thereof (which would seem to make the term food include all articles used for food or drink), which contains formaldehyd, sulphurous acid or sulphites, boric acid or borates, salicylic acid or salicylates, saccharin, dulcin, glucin, beta naphthol, abrostol, asaprol, fluorids, fluoborates, fluosilicates or other fluorin compounds, or any other preservatives injurious to health; provided, however, that nothing contained in this section shall prohibit the use of common salt, saltpetre, wood smoke, sugar, vinegar and condimental preservatives, such as turmeric, mustard, pepper and other spices. Nor shall any article of food be manufactured, etc., containing any



added substance, article or ingredient possessing a preservative character or action other than the articles named in the proviso of this act, unless the presence, name and proportionate amount of said added substance, article or ingredient shall be plainly disclosed to the purchaser.

Chapter 104 of the Laws of Wisconsin of 1905 amends section 4601a of the statutes of 1898 so as to make it unlawful to pack, can or preserve within the state, for use or consumption therein, fruits, vegetables, meats, fish or shellfish, or to sell, etc., for such use such canned articles containing saccharin, formaldehyd, sulphurous acid or sulphites, salicylic acid, or salicylates or any substance, article or ingredient other than sugar, salt, vinegar or spices, possessing a preservative character or action, or any copper compound or other artificial coloring, or any bleaching compound, or any article injurious to health.

Chapter 138 of the Laws of Wisconsin of 1905 prohibits the sale or delivery of adulterated milk or cream. Chapter 151 forbids the selling for maple sugar or maple syrup anything but the pure, unadulterated article. Chapter 152 is an act relating to the sale of syrups, molasses and glucose mixtures. Chapter 228 relates to the manufacture or sale of lemon extract and vanilla extract. Chapter 229 prohibits the sale of adulterated honey. Chapter 247 provides a standard for condensed milk and for evaporated cream.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

#### Medical Record, New York.

November 18.

- 1 \*Treatment and Care of Advanced Cases of Pulmonary Tuberculosis. S. A. Knopf, New York.
- 2 \*Primary Cryptogenic Pneumococcus Cerebrospinal Meningitis. R. C. Cupler, Chicago.
- 3 \*Penetrating Gunshot Wound of the Abdomen. J. H. Iden, U. S. N.
- 4 \*Case of Typhoid Fever with Triple Intussusceptions. B. L. Bryant, Bangor, Maine.
- 5 \*Antitoxin of Unusual Dosage in a Case of Scarlet Fever Complicated by Diphtheria. St. C. Streett, Kansas City, Mo.
- 6 Case of Anthrax—Probably Due to Inoculation—Without a Visible Initial Lesion. J. D. Jones, Utica, N. Y.

#### 1. Treatment of Advanced Cases of Pulmonary Tuberculosis.

—Knopf regards as advanced those cases of pulmonary tuberculosis that can no longer be classified as incipient or early. The advanced cases are divided into ambulant and bed cases. The former are those patients who are most of the time without fever, and in whom the systemic disturbances are only a little more aggravated than in the early stage. These cases may be treated as incipient, with the one exception, that if there is not a satisfactory gain in weight the patients should be put at rest in bed or on the reclining chair, constantly exposed to the open air. The ambulant patients are the most frequent sources of infection, and the greatest care must be taken to train them to dispose of their sputum properly. Several plans for accomplishing this are described. The bed cases are subdivided into four classes, namely, sanatorium patients, hospital patients, home patients—well-to-do, living either in cities or country—and the consumptive poor, living in villages or in city tenements. It is a matter of great difficulty to find proper accommodations for such patients, as sanatoria are usually unwilling to receive cases that do not offer a favorable prognosis. Knopf outlines the essentials for the institutional treatment of such patients, and then describes a great number of plans for applying the fresh-air principle in home treatment. One of the most serviceable of these, especially in dealing with the poor in cities, is a device invented by Knopf and known as the window tent. The patient lies on a cot, with his head beside the open window, to which is attached a sort of internal awning. This is arranged so that it shuts off the patient's head from the interior of the room, and permits the latter to be kept warm, while the effect is the same as if the patient were entirely out of doors. Other devices that are recommended are Bull's aërium and Kellogg's *porte d'air*. These are intended

to serve the same purpose of permitting the patient to remain indoors, while at the same time he is enabled to receive fresh air as freely as if he were not in the house.

2. Primary Cryptogenic Pneumococcus Cerebrospinal Meningitis.—Cupler reports three cases of cerebrospinal meningitis in which pneumococci were found in the cerebrospinal fluid removed by lumbar puncture. One patient recovered after an illness of five weeks; the other two died at the end of thirty-six and forty-eight hours, respectively. Cupler has found caffeine citrate excellent in combating the paralysis of respiration, and recommends lingual traction if stupor is deep and cessation of breathing imminent. Of lumbar puncture he says that it relieves the intracranial pressure, lessens the severity of the symptoms, assists in diagnosis, and meets the requirements of a rational principle in treatment.

3. Penetrating Gunshot Wound of Abdomen.—Iden's patient, aged 28 years, was accidentally shot in the abdomen in the region of McBurney's point, with a 32-caliber revolver. About four hours later, the abdomen was opened in the median line and was found full of blood. Nineteen perforations of the small intestine were discovered, as well as several wounds of the mesentery. At one place there were five perforations in four inches of gut, necessitating resection. End-to-end anastomosis was done, using the Cushing suture, and the other perforations were closed with purse-string sutures. The intestines were cleaned with gauze, wet with hot salt solution, and the wound closed without drainage. The operation consumed two and one-half hours, and at its close the pulse was imperceptible at the radial, facial, and temporal arteries, and the heart beats were from 170 to 180 a minute. In spite of the grave condition of shock, the patient rallied very quickly, and the wound healed by primary intention, the man returning to his work, perfectly well, fifty-one days after the operation.

4. Typhoid with Triple Intussusceptions.—Bryant and Bragg report this case. The patient was a man, aged 23, who, thirty-eight days after the first symptoms of his typhoid infection, which up to then had run an uneventful course, was suddenly seized with pain in the right iliac region, rise of temperature, and symptoms of shock. A perforation was suspected and the abdomen opened. It was found filled with clear serum, and, on drawing out the small intestine, a short distance from the ileocecal juncture an intussusception was found about eight inches long, invaginated both ways. A short distance further on a second intussusception was found about five inches in length, also invaginated both ways; and, drawing out more gut, there was a third intussusception about three inches long, invaginated from the right. Beyond this the gut appeared normal in color, excepting the infiltrated patches and lymph nodes due to the typhoid infection. Reduction of the invaginations was easily accomplished, but the patient died in shock five hours later.

5. Unusual Dose of Antitoxin.—Streett describes a case of scarlet fever, complicated by diphtheria, in which only after 67,000 units of antitoxin had been administered was there any response to treatment. The fresh product of two reliable firms was used. Streett says that the experience teaches the propriety and necessity of continuing the use of antitoxin even when the patient does not seem to respond to it, and the further necessity of increasing the dose administered until such time as results are obtained.

#### American Medicine, Philadelphia.

November 18.

- 7 \*Clinical Experiences with Certain Drugs in Heart Disease. T. E. Satterthwaite, New York.
- 8 \*An Area of Endemic Goiter in the Philippine Islands. L. C. Duncan, Manila, P. I.
- 9 \*The Retroverted Uterus. A. P. Stoner, Des Moines, Iowa.
- 10 \*Struggle Against Tuberculosis in Pennsylvania. J. M. Wainwright, Scranton, Pa.
- 11 Mental and Moral Effects of the Removal of Adenoids. E. A. Huntington, Philadelphia.

#### 7. Clinical Experiences with Certain Drugs in Heart Disease.

—Satterthwaite regards suprarenal gland as the most powerful heart stimulant known. As to the dangers from the nitrites and nitrates, he finds that their effects are always evanescent. Ordinarily in angina, in hypertension and in arteriosclerosis they are useful, but if they produce violent pulsation in an arteriosclerotic patient they should be suspended.



He says that iodine in some form or other should be the main reliance. Strychnin is a reliable heart stimulant, but should be used with discretion and in moderate doses. Larger doses produce nervousness and insomnia. It should never be continued more than a week or two at a time. Cactus is a good heart regulator, and strophanthus is excellent if prompt action is needed. Digitalis acts best when the arteries are flaccid, and just enough is given to restore normal tension. If the drug produces too much tension, the work of the heart is unnecessarily increased. In acute endocarditis, the fat heart, fatty degeneration, advanced arteriosclerosis, aortic diseases and in cardiac neuroses, digitalis may do serious harm. In deficient or failing compensation, digitalis is useful up to the point of producing normal arterial tension, after which its action is harmful, except in so far as it may increase diuresis. Circulatory depressants, such as antimony, veratrum, pulsatilla and hellebore are out of date, he states, in the treatment of cardiac diseases; but aconite is useful in cardiac neuroses. Satterthwaite places great reliance on camphor. In small doses it is a diffusible stimulant, improving the circulation and relieving arterial pressure, but it is also an antispasmodic and sedative. In threatened heart failure, if the nitrites fail, ammonium carbonate or oxygen, hypodermics of camphor in sterilized oil, may properly be used. Three-hundredths gram ( $\frac{1}{2}$  gr.) to .13 gm. (2 gr.) may be dissolved in sterilized olive oil and injected hypodermically in divided doses.

**8. Area of Endemic Goiter in Philippines.**—Duncan reports goiter as being very prevalent in the municipality of Macabebe, which is but a few feet above sea level, on the northeast shore of Manila Bay. He ascribes the disease to the lack of potable water and to consanguinity and heredity which favor the continuance of the affection. Duncan estimates that in 1904 there were at least 20 cases per 1,000 of population and that the proportion is probably much greater.

**9. Retroverted Uterus.**—Stoner asserts that in many cases of recent dislocation in which the pelvic floor is intact the uterus may be replaced and retained without the use of instrumentation or operative procedure. A few such patients are permanently cured by prolonged rest, faradism, hot douches, and tamponment with gauze saturated with a preparation of ichthyol and glycerin. The tampon should be changed daily and snugly packed in front of the cervix, in order to prevent it from rotating forward. It thus aids in supporting the uterosacral ligaments. Nearly all supports act largely by their pressure on the uterosacral ligaments, which, in being rendered tense by the posterior upright bar of the pessary, the cervix is swung upward and backward. When, however, the pessary is withdrawn, the ligaments relax and the cervix drops downward and forward.

**10. Struggle Against Tuberculosis in Pennsylvania.**—Wainwright says that local boards of health take no cognizance of tuberculosis except in Philadelphia and in Erie. In Scranton and Pittsburg sputum is examined. In both state prisons efficient measures are being taken to prevent the spread of infection. Five societies have been formed to combat tuberculosis. They are in Philadelphia (state society), Pittsburg, Harrisburg and Scranton. An obstacle to progress in this work is the very general failure to make an early diagnosis and indifference to preventive measures when it has been made. Another serious menace is the general medical dispensary. In one dispensary in Philadelphia, last year nearly 900 people of the poorer classes were treated and in none of them was tuberculosis diagnosed. Wainwright recommends: 1. A state commission on tuberculosis should be appointed to frame legislation governing health boards and to determine the best system for sanatoriums. 2. Compulsory divisions for diseases of the lungs should be enforced in all dispensaries receiving state aid directly or indirectly through the hospitals or schools to which they belong. 3. The State Society for the Prevention of Tuberculosis should be put on a state basis with annual meetings at the same time and place as the state medical society; this society to collect material for an exhibit to be given together with public lectures in each city in which it meets. In this way, each large city in the state would be reached in a few years. The state society should do missionary work and should establish local societies in communities now without them.

# Medical News, New York.

November 18.

- 12 Reminiscences of Dr. Thomas Addis Emmet. By Himself.
- 13 \*Further Evidence of Immunity Against Cancer in Mice After Spontaneous Recovery. G. H. A. Clowes and F. W. Baeslack, Buffalo, N. Y.
- 14 \*Female Type of Hand in Extension; or Sigmoid Carpus. R. Kingman, Brooklyn, N. Y.
- 15 \*Diplococci and Pneumococci; Their Pleomorphism, Virulence and Mode of Causing Disease. E. Palier, New York.
- 16 Digitalis Treatment. F. Schwyzer, New York.
- 17 Partial Turbectomy. C. H. Knight and J. F. McKernon, New York.

**13. Immunity Against Cancer.**—Clowes and Baeslack present the results of studies made by them on cancer immunity. About 1,600 mice have been employed in these experiments relating to the transplantation and development of the Jensen tumors. Thirty mice which had recovered spontaneously of genuine tumors or had been cured of their tumors by serum injection were re inoculated, and of this number 10 were inoculated for the third time. In no case did a tumor develop as a result of inoculation on a mouse which had previously recovered from a true tumor. By mixing cancer materials previous to inoculation with the serum of such spontaneously recovered mice and comparing its effect with that of cancer materials from the same source mixed with serum from normal mice, it was found that the former exerted an inhibiting effect, and that the percentage of tumors is much smaller and the percentage of mice surviving the treatment is larger in the immune than in the normal series. The author feels justified in announcing that all evidence thus far obtained in this field of research is distinctly in favor of the hypothesis that an immune body is present in mice which have recovered spontaneously from malignant tumors.

**14. Female Type of Hand.**—Kingman attempts to establish a characteristic difference in the male and female hand when in a position of extension under normal conditions, believing that further study and observation may show the absence of the sigmoid type in the female and its presence in the male to be of some diagnostic value in conditions of disease. It appears that males who live and work and think on a plane of continued high tension often exhibit the feminine form of hand. The position assumed by the normal female hand is designated by Kingman as the sigmoid carpus. By this is meant a double or S-shaped curve of the wrist and hand involving the portion of the upper extremity from the tips of the fingers to, and including, the lower ends of the radius and ulna. This S curve is made up of two parts, one being formed by flexion at the wrist where the carpus articulates with the ulna and radius, and the other by overexertion at one or more of the three finger joints (the first and second phalangeal and the metacarpophalangeal or knuckles). Viewed from above, the proximal arc of the S is convex and located at the wrist joint, while the distal arc is concave and located at one, two or three of the phalangeal articulations. From below, the reverse, of course, presents a proximal concave joined to a distal convex arc. The sigmoid carpus may best be observed in profile from the ulnar aspect of the hand, the characteristic appearance being somewhat obscured on the radial border by the thumb.

**15. Diplococci and Pneumococci.**—Palier emphasizes the fact that the only reliable method of diagnosing pneumonia bacteriologically is to obtain cultures from the blood of patients suspected to have this disease. Furthermore, the cultures so obtained must be virulent to mice. Smear preparations or cultures from the sputum are valueless.

## New York Medical Journal.

November 18.

- 18 Direct Fixation of Fractures. J. B. Roberts, Philadelphia.
- 19 Skiagraphic and Therapeutic Factors in Tuberculosis of the Bones and Joints, with Some Reference to the Iodoform Treatment. (Concluded). C. Beck, New York.
- 20 Short History of Splenectomy. J. H. Carstens, Detroit, Mich.
- 21 Plea for Routine Examination of the Middle Ear. E. Danziger, New York.
- 22 \*Diagnosis of Gall-Bladder Disease. C. Graham, Rochester, Minn.
- 23 Chronic Headache, and Its Treatment by Massage (Concluded). F. Norstrom, New York.
- 24 Adjustment of X-Radiations for Various Physiologic Effects. R. H. Boggs, Pittsburg, Pa.

**22. Diagnosis of Gall Bladder Disease.**—Graham bases this paper on 135 cases seen by him and followed by operation. He



calls attention to the difficulties met with in diagnosing disease of the gall bladder, especially when it simulates gastric ulcer, pleurisy, disease of the kidney, pancreatitis, and appendicitis. Particularly difficult of diagnosis are those cases in which the gall bladder contains but one large stone or, at most, a few large ones, and is shrunken down on its contents. In Graham's series there were 13 patients with few stones in the gall bladder; seven had but one, two had two stones, two others had three, and one had six. Of this number, two cases were duodenal ulcer, six had duodenum and stomach given first place, with gallstones or cholecystitis a poor second, five were typical enough to be little questioned as to the real trouble. In the whole series, four cases were diagnosed duodenal ulcer, five ulcer and gallstones (twice both found), six ulcer of the stomach or perhaps gallstones, twelve were variously called stomach or duodenal ulcer, or appendicitis, too frequently failing to hint at cholecystitis or gallstones. One hundred and six cases were diagnosed without question as gall bladder trouble and the operation proved its truthfulness. In the two remaining cases stones were found when operating for pelvic tumors. One patient had a fibroid uterus, and a stone was found in the common duct with no history elicited. The second gave a history of ovarian tumor with twisted pedicle, but it was not found twisted at the operation and the gall bladder was filled with stones. Twenty-five patients were jaundiced when they presented themselves for examination and one gave a history of jaundice at the first attack. Graham says that this is too large a percentage of jaundice. The diagnosis and operation should be made while still an uncomplicated case of gallstones, when the mortality is extremely small (2.47 per cent.). If we wait for jaundice a complication has arisen which usually greatly increases morbidity and mortality (10.40 per cent.).

#### St. Louis Medical Review.

November 18.

- 25 The Cigarette, Its Relations to Mental and Nervous Diseases. W. B. Fletcher, Indianapolis, Ind.

#### Lancet-Clinic, Cincinnati, Ohio.

November 18.

- 26 \*Unrecognized Responsibilities of Press and State in Conserving Health. B. Lewis, St. Louis, Mo.  
27 Micrococcus Tetrigenus the Immediate Predecessor of the Tubercle Bacillus. H. G. Graham, Elmdale, Kansas.  
28 \*Death Following Scopolamin-Morphin Injection. J. C. Sexton, Rushville, Ind.

26. See abstract in THE JOURNAL, Oct. 28, 1905, page 1353.

28. Death Following Scopolamin-Morphin Anesthesia.—Sexton's patient, aged 47, had been in poor health for five years, principally on account of excessive bleeding from the uterus. A diagnosis of fibroid was made and operation was advised. The patient was anemic and had a weak heart, but otherwise presented no evidence of disease, except of the uterus and ovary. She was prepared for operation as usual, and at 7:30 a. m. a hypodermic of scopolamin hydrobromate, 1/100 grain, and morphin sulphate, 1/6 grain, was given. The patient was sound asleep in fifteen minutes. At 8 a. m. she was found unconscious, slightly cyanosed, pulse 120 and throbbing, respiration 20 but very shallow, abdominal muscles and intercostals rigid, so that it was impossible to compress the lower chest and epigastria. The muscles were contracted markedly. The jaw dropped, the mouth was open, and the eyeballs were turned up. All efforts at resuscitation failed and the patient died at 9:15 a. m. without the least response to stimulants, pain, heat, flagellations or changing posture.

#### Boston Medical and Surgical Journal.

September 16.

- 29 City Physician, His Duties and Responsibilities. J. H. McCollom, Boston.  
30 \*Practical Photometric Method for Case Record. G. W. Fitz, Boston.  
31 \*Technic Employed in 100 Laparotomies with the View of Restricting the Employment of Drainage. L. J. Hammond, Philadelphia.

30. Photometric Method for Case Records.—To insure convenience and accuracy of handling and economy of time, expense and storage, Fitz has devised a method for photographically recording deformities. The method is briefly as follows: 1. The focus of the lens is adjusted for such selected image sizes of the subject as will give the desired ratios of size be-

tween subject and image (such as 6 = 100, 10 = 100, 14 = 100, 20 = 100, etc.). These foci and the corresponding distances of the subject from the camera are marked on the adjusting part of the camera or lens so that the focus can be instantly secured by merely setting an index to a mark and adjusting the patient's distance by means of a graduated tape or knotted string, and the photographs taken in the exact ratio without any delay for focusing or other adjustment. 2. The camera is arranged so that it will take three or four photographs of the same individual in different aspects on the same plate, thereby avoiding confusion in labelling and loss of identity of the several photographs. 3. An identifying number is photographed with each subject and absolutely identifies every photograph. 4. A transparent scale is made, based on the ratios of subject size to the image size selected for records, by which the photographic images may be measured as to any dimension, asymmetry or deformity, directly in inches or centimeters, as if one were measuring the patient himself, by the application of the scale to the face of the photograph. The apparatus employed and the methods of its use are described fully.

31. Drainage and Laparotomy.—Hammond's experience has convinced him of the worthlessness of the gauze drain in any shape or form, but he considers the gauze tampons, as recommended by Mickulicz, a rational means of avoiding infection of the neighboring viscera. Its value, however, is but temporary, and its presence as a foreign body not only lessens the power of resistance of the peritoneum, but goes far toward keeping up shock, encourages the excessive formation of adhesions, and is the commonest of all causes of about all of the postoperative hernias. The argument that is used by some, that gauze drainage is useful because Nature builds a wall around the infected area, can be logically employed as an argument against its use at all, as the fact that Nature does not shut out from communication with the general peritoneal cavity shows clearly its utter worthlessness.

#### University of Pennsylvania Medical Bulletin, Philadelphia.

October.

- 32 Histologic Changes Encountered in the Thymus and Elsewhere in a Case of Congenital Hypotonia. A. J. Smith, Philadelphia.  
33 Natural Defenses of the Organism Against Infection. D. H. Bergey, Philadelphia.  
34 Intrahepatic Gall Bladder. H. S. Wieder, Philadelphia.  
35 Investigation on the Nature of the Bacteria in the Filtered Water Supply in Philadelphia. J. B. Rucker, Jr., Philadelphia.  
36 \*Fractures of the Head of the Radius. T. T. Thomas, Philadelphia.  
37 Scopolamin-Morphin Anesthesia. H. Norris, Philadelphia.  
38 Fat Content of Liebig's Meat Extract and of Witte's Peptone. J. Marshall, Philadelphia.  
39 Treatment by Electricity of the Secondary Contractures Occurring in Hemiplegia. C. S. Potts, Philadelphia.

36. Fractures of the Head and Radius.—Thomas concludes that the skiagraph is not infallible in the diagnosis of the uncomplicated fractures of the radial head. The fragments are frequently so closely approximated by an intact orbicular ligament that the line of fracture may fail to show, especially if the place is an obscure one, or if the rays are directed in an incorrect plane. The fracture of the radial head is always partly and frequently entirely intracapsular, except for the thin attachment of the capsule to the lower edge of the fragment. This attachment probably furnishes an ample blood supply for the nutrition of the detached fragment, even if non-union occurs. Except in very rare cases, such a fragment will not become a movable body in the joint, in the ordinary sense, since the orbicular ligament, the irregularity in the fractured surfaces, and the attachment of the fragment below will prevent movement of it. The part of the head which is broken off in the usual fall on the hand is anterior at the time of the fall; but, according to the later position of the forearm, may occupy any position within the arc of rotation of the forearm, which is approximately 180 degrees. Instead of being an exceedingly rare fracture, as hitherto believed, it is a common one, its peculiarly obscure nature having rendered it especially difficult of recognition. There are more cases of this fracture, represented by skiagraphs, in the hands of a few skiagraphers in Philadelphia (55), than Thomas could find after a thorough search of the literature (48), making a total of 103. Fractures of the neck of the radius are also common



and are usually associated with fractures of the head. They are frequently impacted, and are due to the same cause as the usual fractures of the head, i. e., to a fall on the hand with the elbow extended. Fractures of the radial head are frequently associated with posterior dislocations of the forearm bones at the elbow and with fractures of the coronoid process. In the usual skiagraph of a posterior dislocation of the elbow, showing a lateral view, the head of the radius is largely obscured by the ulna, and sometimes, also, by the condyles of the humerus; so that this fracture is probably often overlooked in such cases. In a fall on the hand the ground acts as a resisting body. The force is from above, the momentum of the falling body being exerted through the bones of the upper extremity. In extension of the elbow, only the anterior surface of the radial head is in contact with the capitellum, and, as the force is transmitted to the ground chiefly through the radius, this part of the radial head receives the brunt of the force and is frequently broken off. In an uncomplicated case, with distinct crepitus, the diagnosis will easily be made, providing ordinary care is taken in localizing the injury, even without a skiagraph. When available, however, the *x*-ray should always be employed. Severe complications at or near the elbow may render the diagnosis difficult, but the *x*-ray picture, if properly taken, should settle the question.

#### Ohio State Medical Journal, Columbus.

October 15.

- 40 \*Surgical Pathology of One Hundred Mammary Tumors. W. J. Stone, Toledo, Ohio.
- 41 The Mammary Gland; When and How Shall It Be Removed. B. R. McClellan, Xenia.
- 42 \*Observations on Cancer of the Breast. G. W. Crile, Cleveland.
- 43 Quarantine. G. B. Spencer, Weston, Ohio.
- 44 Quarantine of Diphtheria and Scarlet Fever. J. G. Wilson, Colerain, Ohio.
- 45 Laboratory Diagnosis of Diphtheria and Tuberculosis. E. G. Horton, Columbus.
- 46 Roentgen Pictures in Orthopedic Surgery. H. O. Feiss, Cleveland.
- 47 Typhoid Fever, with Special Reference to Treatment. J. B. Woodworth, Delaware, Ohio.

40. Surgical Pathology of Mammary Tumors.—Stone discusses particularly the class of true neoplasms comprising 100 cases. Of this number 79 per cent. were carcinomata of some kind, 5 per cent. were sarcomata, 15 per cent. were adenofibromata (four of which showed evidence of beginning carcinoma) and one patient had tuberculosis of the breast. Therefore, the malignancy of the entire series is 88 per cent.

42. Analysis of Ninety-one Cases of Breast Cancer.—The mean age of Crile's patients was 49; the oldest, 71; the youngest, 24; 64 per cent. occurred in patients between the ages of 40 and 60. Fourteen per cent. had never married; 35 per cent. had not borne children. In but 11 per cent. was there a distinct history of lactation complications of importance. In 33 per cent. there was retraction of the nipple. In 17 per cent. there was a discharge from the nipple. In 78 cases it was found that 37 per cent. had a definite hereditary history of malignant tumors. In 94 per cent. the disease was first discovered as a tumor, 67 per cent. of which were painless. In 6 per cent. the first symptom was purely subjective. The mean known duration of the tumor was 11 months; the greatest, 24 years; the least, 2 days. The right breast was involved in 54 per cent.; the left in 46 per cent. Dividing the breast into a central portion and four quadrants, the frequency of location is as follows: Upper outer, central, upper inner, lower outer, lower inner. In the upper hemisphere the tumor appeared precisely four times as frequently as in the lower. There were 61 cases of scirrhus, 9 of adenocarcinoma, 7 of medullary and 3 of alveolar carcinoma, 2 cases each of cancer cyst and carcinoma simplex and 1 case each of perithelioma, sarcoma, and epithelioma, and 4 cases of cancer. For the purpose of clinical study, the cases have been tabulated in three groups: The favorable, which includes those in which the breast tissue only was involved; unfavorable, including those in which there was local or regional extension, but not clearly without operative chance; and palliative, which includes those patients operated on for relief of intolerable local conditions without hope of ultimate cure. Of the 91 cases, 87 were classified as favorable, unfavorable or palliative. Of this number, 53 were favorable, 25 unfavorable, and 9 palliative. This classification was made on the clinical evidence prior to the operation, entirely inde-

pendent of the later pathologic findings. In this series there was no immediate operative mortality. Up to the present time there have been but two instances of local recurrence of the disease. Deaths from the disease were due to metastases in the thorax, in the liver, the kidneys, the long bones, peritoneal cavity, pelvic organs, vertebral column, the stomach, and opposite axilla. In several instances metastasis occurred after the three-year period. Of the patients in the palliative group none is living; of the unfavorable group 14 per cent. are living; of the favorable group 80 per cent. are living without evidence of the disease. The surgical technic employed was essentially that described by Halsted.

#### American Journal of Urology, New York.

October.

- 48 Causes Retarding the Recovery of Gonorrheal Urethritis. A. Ravogli, Cincinnati, Ohio.
- 49 Treatment of Chronic Urethritis in the Male. G. S. Peterkin.
- 50 \*Lavage of the Renal Pelvis in the Treatment of Lithemia, Pyelitis and Certain Forms of Nephritis. F. M. Johnson, Boston, Mass.
- 51 \*Anesthetic Impotence. F. W. Robbins, Detroit, Mich.
- 52 Choice of Technic in Prostatectomy. J. R. Wathen, Louisville, Ky.
- 53 Experience with the Methods of Determining Physiologic Kidney-Function for Operative Procedure. M. Krotoszyner and W. P. Willard, San Francisco, Cal.

50. Lavage of Renal Pelvis.—Johnson is of the opinion that lavage of the kidney is not alone justifiable, but is a procedure whose importance demands recognition from the entire medical profession. Patience, gentleness and experience are necessary attributes in the successful application of this procedure. Lithemia is more quickly eradicated when, in addition to the usual treatment, lavage of the kidney is employed. Pyelitis is a condition that should be recognized at any stage as a danger signal and promptly treated. If possible, the cause should be ascertained and removed. Very mild cases require only rest, and the administration of salol or hexamethylenamin (urotropin) for all others, catheterization and irrigation with boracic acid or silver salt solutions once or twice weekly are indicated. Pyelonephritis may be treated in the same manner with similar agents. Ureteritis will heal under lavage with at first soothing and later mildly stimulating fluids. Chronic parenchymatous nephritis can be alleviated, and in certain phases cured, by proper irrigation combined with appropriate diet and internal medicaments; other forms of nephritis also are amenable in a degree to lavage.

51. Anesthetic Impotence.—Robbins reports an unusual case of impotence occurring in an able-bodied man, aged 36. The patient denied any venereal disease or other serious ailment. He never had any impelling desire of a sexual nature. Never has he had any temptation to masturbation or to sexual intercourse. Never has he had any seminal emission, except at night, and these have occurred since puberty at intervals of three or four weeks, and occasionally three or four times in one week. The cause has been looked on as psychic, but this explanation scarcely harmonizes with the fact that never from puberty has the patient had a normal sexual impulse, never felt any desire or temptation to masturbation and never experienced any frictional excitation. The only basis on which Robbins explains this condition is that of lack of sensitiveness in the nerve terminals of the glans penis and frenum. Various attempts were made to render those parts more sensitive, but without effect. Hypnotic suggestion has been considered but not employed. The possibility of there being some defect of the nerve arrangement in the cord has been thought of, but Robbins believes the anesthetic theory most reasonable.

#### Wisconsin Medical Journal, Milwaukee.

October.

- 54 \*Causes and Symptoms of Cardiac Insufficiency. J. D. Madison, Milwaukee.
- 55 Mucous Colitis. W. H. MacDonald, Lake Geneva.
- 56 \*Placenta Prævia. G. A. Hipke, Milwaukee.
- 57 Treatment of Scabies. L. Schiller, Milwaukee.

54 and 56.—See abstracts in THE JOURNAL, July 1, 1905, page 66.

#### Western Medical Review, Lincoln, Neb.

October.

- 58 Incomplete and Some Wrong Diagnoses. G. Haslam, Fremont.
- 59 Diagnosis of Cancer of the Stomach. H. L. Akin, Omaha.
- 60 Diagnosis of Gastric Ulcer. H. J. Lehnhoff, Lincoln.
- 61 Actinomycosis of the Lung. E. F. Ingals, Chicago.



**Pennsylvania Medical Journal, Athens.**

October.

- 62 Medical Education. A. Koenig, Pittsburg.  
 63 \*The Mastoid Operation. E. B. Dench, New York.  
 64 \*Mastoiditis—Its Importance in General Practice. S. Mac C. Smith, Philadelphia.  
 63 and 64. Id.—Oct. 21, 1905, page 1271.

**Detroit Medical Journal.**

October.

- 65 Sir William Read, Queen Anne's Quack Oculist. M. Frank, Chicago.  
 66 The Pharmacopeia of 1900. A. B. Lyons, Detroit.  
 67 Case of Endocarditis, Multiple Abscess of Spleen, Intestinal Stenosis, and Hemorrhagic Pancreatitis. J. Flintermann, Detroit.  
 68 Nail in Appendix. H. C. Wyman, Detroit.

**Vermont Medical Monthly, Burlington.**

October 25.

- 69 Idiopathic Epilepsy and Its Treatment. D. A. Shirres, Montreal.  
 70 Tumors Complicating Pregnancy. P. E. McSweeney, Burlington.  
 71 The Physician as an Educator. M. L. Chandler, Barre.

**Medical Fortnightly, St. Louis.**

October 25.

- 72 Postgraduate Study for American Physicians in European Capitals. C. H. Miller, Chicago.  
 73 Special Symptoms in Phthisis. A. M. Hall, Philadelphia.  
 74 Relation of Man to Nature (a Study Prompted by Testimonies of the Sepulchres). A. S. Ashmead, New York.

**Kansas City Medical Index-Lancet.**

October.

- 75 Case of Blastomycetic Dermatitis. H. M. Lyle, Kansas City.  
 76 Practical Points in Obstetric Practice. C. L. Hall, Kansas City.  
 77 Importance of Making a Thorough Examination of the Abdomen in All Acute Bowel Diseases. A. J. Simpson, Chillicothe, Mo.  
 78 Employees' Hospital Association vs. First Aid by Transportation Employees. B. F. Fortner, Vinita, I. T.

**Medical Bulletin, Philadelphia.**

October.

- 79 Curriculum of the Scientific Professional College. J. M. Anders, Philadelphia.  
 80 Febrile Type of Influenza as Frequently Seen in Young Children. W. C. Hollopeter, Philadelphia.  
 81 Injuries of the Liver and Their Treatment. M. P. Warmuth, Philadelphia.  
 82 Danger of Venereal Diseases and Their Prophylaxis. S. L. Gans, Philadelphia.

**New Orleans Medical and Surgical Journal.**

October.

- 83 Prostatism Without Prostatic Enlargement. G. F. Lydston, Chicago.  
 84 Treatment of Pneumonia. P. L. Bellenger, Waterproof, La.  
 85 Relation of Pleurisy to Tuberculosis. S. von Ruck, Asheville, N. C.  
 86 Use and Abuse of Glasses by Young People. O. Dowling, Shreveport, La.

**Journal of Michigan State Medical Society, Detroit.**

October.

- 87 Administrative Control of Tuberculosis. C. H. Johnson, Grand Rapids.  
 88 Treatment of Ophthalmia Neonatorum. E. Smith, Detroit.  
 89 Frequency of Ectopic Pregnancy. J. A. King, Manistee.  
 90 Thrombosis of Anterior Tibial Artery in Gunshot Wound. L. W. Gardner, Harbor Springs.  
 91 Dispensing by Physicians. H. B. Garner, Traverse City.

**FOREIGN.**

Titles marked with an asterisk (\*) are abstracted below.

**British Medical Journal.**

November 4.

- 1 Oliver Wendell Holmes and the Contagiousness of Puerperal Fever. C. J. Cullingworth.  
 2 Solitary Non-Parasitic Cysts of the Liver. J. Bland-Sutton.  
 3 Case of Actinomycosis of the Lungs. P. S. Hichens.  
 4 Epidemic of Influenza Occurring in the Midlothian and Peebles Asylum. J. P. Sturrock.  
 5 Epidemic Cerebrospinal Meningitis in Northern Nigeria. K. McGahey.  
 6 \*Treatment of Puerperal Eclampsia. A. C. J. Wilson.  
 7 Plea for Evacuation of the Uterus in Unrelieved Cases of Puerperal Eclampsia. E. Brice.  
 8 Removal of Iron from the Interior of the Eye by Electromagnet. A. S. Percival.  
 9 \*Preventing Acute Middle-Ear Suppuration from Becoming Chronic. W. Milligan, E. B. Waggett, T. G. Ouston, A. A. Gray, and others.  
 10 Pathologic Condition Found in a Subject Who Had Been Deaf During Life. A. A. Gray.  
 11 \*Treatment of Laryngeal Tuberculosis. W. J. Horne, S. H. Hebarshon, H. Barwell, C. St. Thomson, and others.  
 12 Symptoms, Diagnosis and Treatment of Chronic Suppuration in the Sphenoidal Sinus. H. Tilley.  
 13 Advantages of the Submucous Resection Operation Over All Other Methods for Strengthening Septal Deflections. H. Smurthwaite.

- 14 Comparative Value of Septal Fissure on Moure's Principle, and Submucous Resection in the Treatment of Septal Deflections. L. H. Pegler.

- 15 New Form of Forceps for Removal of the Anterior Wall of the Maxillary Antrum in the Radical Operation. W. S. Syme.

6. Puerperal Eclampsia.—Wilson's treatment of eclampsia consists in the early administration of chloroform, giving it slowly until the patient is fully under its influence. The patient is kept anesthetized until the labor is terminated, so that she shall be partially under its influence for some time afterward. Wilson has found this treatment to be very successful, and has never seen any recurrence of the convulsions after labor, provided a short time only has elapsed after the first convulsion before the administration of chloroform is commenced.

9. Prevention of Middle Ear Suppuration.—Milligan directs attention to the following points: 1. The desirability or otherwise of removal of nasopharyngeal adenoids, enlarged tonsils and various forms of nasal obstruction during the acute phases of septic middle-ear disease. 2. The exact value of routine bacteriologic examination of secretion removed from the tympanic cavity in acute septic inflammation of the middle-ear cleft. 3. The employment or otherwise of inflation of the middle-ear cleft during the early stages of acute otitis media. 4. The value and limitations of palliative treatment as opposed to the early drainage of the mastoid antrum in cases of septic otitis media. The treatment which, in his opinion, conduces to the rapid cure of acute septic otitis media is the following: 1. Early and free incision of the swollen and bulging membrana tympani. 2. Maintenance of free drainage through the incised membrane. 3. Avoidance of inflation during the acute phases of inflammation of the mucosa lining the middle-ear cleft, the more especially if exudation has already taken place, and in the presence of a small perforation of the membrane. 4. Early removal of nasal and nasopharyngeal pathologic entities tending either to impair the physiologic function of the Eustachian tube or to favor reinfection of existing exudation within the middle-ear cleft. 5. Early provision of drainage from the postero-external end of the middle-ear cleft in those cases in which drainage through the membrana tympani has proved insufficient.

11. Laryngeal Tuberculosis.—Horne pleads for the conservation of the larynx by rational therapeutic and surgical treatment. Postmortem examinations have shown: 1. That when the larynx is infected with tubercle the disease is already established in the lung. Primary tuberculosis of the larynx is a negligible quantity. 2. That the disease in the larynx progresses *pari passu* with that in the lungs; when the disease in the larynx presents ulceration that in the lungs has advanced to cavitation, and, *vice versa*, when that in the lungs has become arrested, then that in the larynx heals. 3. That when the disease in the lung is confined to the pure miliary form the larynx is not infected. 4. That infection of the larynx takes place by the sputum from the lungs. Therefore, improvement in the larynx following treatment will coincide with the improvement in the lung. Remedies directed toward rendering the lungs aseptic Horne believes to be of considerable value in preventing infection of the larynx. He also believes that sanatorium treatment, both directly and indirectly, is beneficial to laryngeal disease. It improves the pulmonary condition and reduces the frequency of laryngeal complications; it affords rest of voice and promotes healing of laryngeal lesions. Local applications, both palliative and remedial, should form part of the sanatorium treatment. In the more advanced cases, surgical methods may be necessary; an enlarged epiglottis may have to be reduced or removed. Edema of the larynx may be overcome by linear scarifying. Infiltrated and thickened parts may be treated with the galvano-cautery or by longitudinal incisions with a sharp knife. Indolent ulcers may be curetted and treated with lactic acid; but lactic acid applied to an unbroken surface is of no avail and only causes distress. The surgical treatment of the disease has its limitations, but within those limitations Horne has seen benefit afforded. He does not, however, favor extreme surgical measures; at their best they are only mechanical means of overcoming physical difficulties and are seldom called for.



## The Lancet, London.

November 4.

- 16 Morgagni to Virchow: An Epoch in the History of Medicine. J. L. Steven.
- 17 Ocular Tuberculosis in Children. J. H. Parsons.
- 18 \*Subtotal Hysterectomy for Fibroids: After-histories of Sixty Cases. A. H. G. Doran.
- 19 \*X-rays in the Treatment of Cancer. C. Williams.
- 20 Chronic Hyperplastic Tuberculosis of the Ascending Colon, with General Lymphatic Infection. A. Hall and G. S. Simpson.
- 21 \*After-Treatment in Cases of Suprapubic Cystotomy; New Dressing for the Purpose. G. H. Colt.
- 22 Case of Intrathoracic Dermoid Cyst. H. B. Shaw and G. E. O. Williams.
- 23 Impaction of a Gallstone in the Large Intestine; Laparotomy; Recovery. F. V. Milward.
- 24 Malignant (?) Tumor of the Right Hypochondrium; Removal with Cure. F. W. Forbes-Ross.
- 25 Cerebrospinal Fever. P. L. Blaber.

18. Subtotal Hysterectomy for Fibroids.—This paper is mainly an analysis of a series of 60 cases of subtotal or supravaginal hysterectomy for fibroids in which the operations were performed by Doran; in every instance the patient had not reached the menopause and a sufficiently long after history was not obtainable. Each patient was traced for at least two years, and most of them were under observation for a much longer period of time. The main object of Doran's research was to determine: 1, How far the patients received lasting benefit from subtotal hysterectomy; 2, how far they are liable to certain discomforts, and 3, how far the preservation of more or less ovarian tissue may save them from those discomforts. There can be no doubt, says Doran, that so far as the removal of the tumor is concerned, the immediate results of this operation, after convalescence, are highly satisfactory, but uncomfortable or even distressing symptoms not rarely follow the operation; hence, the operator can not absolutely guarantee the patient against them. The surgeon must be careful how he urges an operation when the patient has a fibroid of small size, which is not growing, which does not press on any important structure, and which is not the cause of hemorrhage. The presence of a small fibroid above the lower segment of the uterus does not justify any surgical procedure which may sterilize the patient, for pregnancy and labor often end normally in such cases. In many instances, however, the removal of the fibroid uterus is demanded, so that certain possible discomforts must be risked. Here the saving of the ovarian tissue has proved a direct benefit, and Doran's statistics confirm the value of that practice. A piece of the uterine mucosa should be saved whenever possible in order to anticipate and to prevent trouble from a premature menopause. In 28 cases of the series both ovaries were removed. In 3 cases the menopause was neither immediate nor complete; in 6 it was complete, with distinct but mild symptoms; in 10 it was complete, with severe symptoms. In 26 cases one ovary was saved. In 8 of these cases the catamenia was regular for a longer or a shorter period after operation; in 5 cases it was irregular, and in 13 cases the menopause was complete and immediate after operation. In 6 cases both ovaries were saved. In 3 cases the catamenia was regular after operation; in 2 cases it was soon suppressed, and in 1 case the menopause was complete and immediate after operation. In 5 of 16 young patients both ovaries were removed. The youngest patient was 30 years of age. She comes under the "severe menopause symptoms" class, but her flushings did not appear until eighteen months after the operation. Doran spared one or both ovaries in every patient under 30 years of age, with good results, and also saved ovarian tissue in several other relatively young women with benefit. He assumes that these patients would not have done so well had he sacrificed both ovaries. In 5 cases in which he was compelled to do so, bad symptoms appeared in 3. The majority of the 60 patients enjoyed good health when last heard from, two years or more after the operation. Doran concludes that the results obtained in these cases decidedly favor the conservative treatment of ovarian tissues, and that they tend to support the theory that it is necessary to spare some endometrium as well as some ovarian tissue.

19. X-Rays in Cancer.—Williams advises exposing cancer to the x-ray directly the diagnosis is made whether the case goes to operation or not. After operation, directly the scar is

healed or even before that time, if it shows the slightest appearance of being sluggish, it should have immediate treatment whether in the scar or not; this requires constant observation by the medical attendant. A weekly examination is of the utmost importance to the patient. Even healthy wounds will heal the more readily under the stimulation of x-rays cautiously applied and in small doses, sufficient protection to the surrounding parts being all that is necessary. The x-rays used before operations, for even a few weeks, will tend to arrest further infection, and the glands, if enlarged with simple inflammation or only slightly affected, may disappear, with a certain amount of shrinkage of the original tumor.

21. After-Treatment of Cases of Suprapubic Cystotomy.—Colt says that there is great need of a suitable dressing for application to the patient during the period which elapses between the removal of the skin sutures and tube and the closing the urinary fistula. This time is at least one week; it is generally about three weeks and often longer still. The requirements are: 1, A dressing which shall be applied on the surface of the skin and which shall not enter the fistula at all—which shall not, therefore, tend to prevent it from closing or cause harm in any way; 2, a dressing which shall collect faithfully all the urine flowing by the fistula and allow it to drain away to a receptacle without wetting the patient's skin; 3, a dressing which shall in no way inconvenience the patient either by its bulk or by causing irritation of the skin or by its attachment to parts remote from the wound, as might very reasonably be necessary; 4, a dressing which shall only need occasional inspection and attention, just so much as may also be necessary for proper attention to the edges of the fistula, when, for instance, the granulations become exuberant; 5, a dressing which shall be transparent and so allow the wound to be seen easily, and, last of all, 6, a dressing which shall be easy of application, simple, unlikely to go wrong, and which shall also be cheap, aseptic, and easily cleaned and sterilized. Colt believes that he has met these requirements by the dressing which he has devised. This dressing consists of two parts, one being made of clear glass and the other of sheet rubber. The glass portion is a lightly blown hollow cylinder five-eighths of an inch in diameter and modified in that the top is partially closed and the bottom turned outwards as a flange. From the cylinder juts out a tube at right angles to its axis. The sheet rubber portion is a circular disc of the best, most flexible and elastic, untearable, black sheet rubber, three inches in diameter and one thirty-second of an inch thick. It has a central circular hole five-sixteenths of an inch in diameter and, therefore, can be easily sprung over the glass flange and arranged to lie in continuity with the concave portion of it. This is important for the proper application and stability of the apparatus. The joint so made is absolutely water tight. The two pieces when adjusted together and to a patient lying on his back are situated so that the cylinder is vertical and the rubber sheet horizontal. The total weight is 3 drams. A larger size is provided for use in the early stage, if necessary. The dimensions are a compromise of several, each of which has its own advantages and disadvantages. The rubber solution employed is made by dissolving pure rubber in naphtha. It is better put up in wide tins than in tubes. It is highly inflammable and the solvent quickly evaporates, both good reasons for keeping it securely sealed. The two parts of the dressing are sterilized separately, and the application is made as follows: The skin of the patient is shaved over an area of two inches all round the external opening of the fistula. It is then cleared of grease with a swab soaked in ether. The tin of rubber solution is opened and the surgeon sterilizes his hands. He dries them and both parts of the dressing thoroughly with a sterilized towel or with wool, fits the two parts of the dressing together correctly, and adapts the long rubber drainage tube to the short connecting arm. A small swab of absorbent wool is kept on the orifice of the fistula so that the skin around may be dried and kept perfectly dry until the dressing is applied. This swab should be renewed quickly if it becomes soaked, and it should be small enough to allow the rubber solution to be applied close up to the opening. The surgeon dips his finger in the rubber solution and thoroughly coats the patient's skin with a thin even layer right up to the



opening and round it for a distance of two inches, rubbing the solution well in. Care should be taken not to continue the rubbing if the solution begins to peel off. The under surface of the rubber disc is then covered all over with solution, but not within one-eighth of an inch of the glass flange or the spring of the rubber is weakened and thereby also the security of the water-tight joint. The rubber flange bends back of its own accord into three most convenient folds like a three-cornered hat. Then the surgeon waits until the two surfaces are nearly dry, as tested with the finger. That on the skin takes longer and it is immaterial how dry the surface of the rubber is. To refuse to wait is to court failure. As soon as the correct moment arrives the central swab is removed for good and the glass flange is placed around the opening of the fistula, and before any urine can escape the rubber disc is pressed evenly down all round. In making the adjustment it should be remembered that the drainage tube should either point toward the pubes with the rubber tube arranged for the side on which he lies, or it should be turned one-eighth of a circle or so to that side. There should be no attempt at rectification when once the application has been made. The excess of solution is rubbed off the skin round the disc with the finger. It comes off readily enough in little pellets while it is still damp with the solvent. The rubber tube is now bent round in a curve and fixed to the skin by a broad band midway between the anterior superior iliac spine and the orifice of the fistula, and in such a manner that the glass is kept in correct position partly by the elasticity of the drainage tube itself. The top of the glass is lightly covered with a piece of gauze or wool, or the hole is lightly filled, to prevent sepsis. The drainage tube is threaded through the cradle if one is being used and allowed to hang into the pail. It should be as short as can be contrived. The patient should be instructed to raise up any bedclothes he may have on the dressing when the nurse has to change them or attend to him, otherwise they will catch in it and it will be swept off. He should also be told not to strain to pass urine. When carefully applied the dressing is usually efficient for at least four days. If urine leaks under the rubber the dressing should be removed by peeling it off from the edge, another rubber substituted, and the whole reapplied. It is generally impossible to readjust it without reapplying it as a whole, though often a strip of plaster applied over the rubber will prevent leakage for one day longer.

#### The Practitioner, London.

October.

- 26 \*Hygiene of the Mother Before the Birth of Her Child. J. W. Ballantyne.
- 27 \*Points Regarding the Mother's Milk in the Early Weeks of Infant Life. M. Handfield-Jones.
- 28 \*Artificial Feeding of Infants. E. Cautley.
- 29 \*Use and Abuse of Condensed Milk and Patent Foods in Infant Feeding. G. F. Still.
- 30 \*Municipal Feeding of Infants. G. F. McCleary.
- 31 \*Consultations for Infants in France. L. Robinson.
- 32 \*Infantile Mortality. A. Newsholme.
- 33 \*Infantile Diarrhea. G. A. Sutherland.
- 34 Convulsions in Early Infancy. J. Thomson.
- 35 \*Vaccination, Its Treatment, and Conditions of the Infant, which Preclude Its Being Done. M. Greenwood.
- 36 \*Infantile Scurvy. W. S. Colman.
- 37 Infantile Atrophy. J. Burnet.
- 38 Disorders Associated with Primary Dentition. L. Guthrie.
- 39 Diseases of the Eye in Infants. H. W. Lyle.
- 40 Diseases of the Skin of the Young Child. T. C. Fox.
- 41 Pharmacopeia for Infants. O. F. F. Grünbaum.

26. **Hygiene of Mother Before Parturition.**—Ballantyne discusses the influence on the fetus of various conditions affecting the mother, dividing the antenatal life of the child into the germinal, the embryonic and the fetal. He advises examining the placenta chemically and histologically in every case of labor, and comparing the results obtained with clinical data in order to determine, if possible, the microscopic appearances characteristic of a placenta capable of transmitting power and those of one in which the transference of materials, nutritive, medicinal or poisonous, was difficult or impossible. It should be determined how pathologic changes in the decidua, amnion and chorion are related to the previous health of the mother and the present condition of the embryo. Again, a strict comparison ought to be instituted between the health of the mother and the state of her offspring in succeeding pregnancies. The maternal influence on the fetus is a complex matter, and until such time as definite information about

the feto-maternal interchanges is forthcoming, the treatment of these conditions must be empirical. The hygiene of the pregnant woman is discussed in detail.

27. **Mother's Milk.**—Jones divides causes of non-lactation into four groups: 1, Women who can but refuse to nurse their infants; 2, women who have serious difficulty in nursing because of some anatomic defect; 3, women who have an abundant supply of milk during the first three or four weeks and then run dry; 4, women the chemical composition of whose milk does not agree with the digestive organs of the child. In some instances the milk is of low nutritive quality and deficient in fats; the infant's digestive organs may be at fault; the mother may be extremely nervous and excitable, or she may be ingesting something which produces a disturbance of the child's digestive system. If the infant can not be nursed by its own mother, Jones advises procuring the services of a wet nurse. Failing human milk, the physician must choose between modified milk, either of the cow or of some other animal, and artificial foods.

28. **Artificial Feeding of Infants.**—Nothing new is presented in this article. Cautley emphasizes the importance of weighing the child regularly for the purpose of regulating the diet so that there is a constant gain in weight. The time of feeding, the preparation of the food and the kind of food to be used are also considered. Cautley says that by the intelligent use of properly prepared milk and the plain cereal decoctions, it is quite easy to bring up infants successfully without having recourse to laboratory mixtures or to any of the death-dealing condensed milks and proprietary foods, although there are cases of disease in which they are valuable, when used with discrimination by those who thoroughly understand the art of infant feeding.

29. **Use and Abuse of Condensed Milk and Patent Foods.**—Still calls attention to the fact that the suitability of a particular food for prolonged use is not proved by the fact that it is taken well and produces no immediate ill-effects. The evil results of unsuitable food may not appear until the food has been continued several weeks or months. An objection to all prepared foods is their deficiency in fats. As for condensed milk and the other substitutes for fresh cow's milk, Still says that no manner of simple dilution of water can make the resulting mixture a suitable food for the prolonged use of infants; nevertheless, these foods may be of value for short periods under special conditions. The starch-containing patent foods are useful sometimes for infants over nine months of age, when starch is gradually to be introduced into the diet, but they must be given cautiously and with due regard to the digestive apparatus of the infant. The more the medical man knows of the many simple methods of adapting fresh milk to the needs of the infant, the less use he will find for condensed milk or patent foods.

30. **Municipal Feeding of Infants.**—McCleary outlines the methods pursued by various municipalities in England, especially in the borough of Battersea. These methods are based on the consultations in vogue in France.

31. **Consultations for Infants.**—Robinson describes these institutions which have done so much to reduce the infant mortality from gastrointestinal diseases in France. There are seven consultations for infants in Paris, and two in the immediate suburbs, exclusive of those connected with maternities. Each consultation must contain an apparatus for washing, cleaning and drying the empty bottles returned daily by the mothers. The milk is sterilized by the female caretaker, assisted by one helper; it is only delivered to infants according to the physician's prescription. The hygiene and feeding of the infant out-patients is under the supervision of the physician in charge of the consultation. Thanks to these institutions, more mothers feed their infants at the breast, the general infantile mortality is lowered and infantile diarrhea disappears. Stronger healthy children who resist every ailment better are seen because their digestive tube has not been deteriorated.

32. **Infantile Mortality.**—Newsholme's paper is a statistical study from the public health standpoint of facts derived from



the annual reports of the registrar general of births, deaths and marriages in England and Wales.

**33. Infantile Diarrhea.**—The treatment of the early stage of infantile diarrhea advised by Sutherland consists in the thorough cleansing of the intestinal tract as quickly as possible. He prefers castor oil administered in small repeated doses. It is given as follows:

R. Olei ricini.....m. x	6
Tinct. rhei	
Glycerini, āā.....m. v	3
Tragacanthæ .....gr. 1/2	03
Aq. menthæ piperitæ ad.....3i	4

This may be given in teaspoonful doses every four hours for the first thirty-six hours, and then less frequently. It is usually well tolerated by infants, but if there is much gastric disturbance and vomiting, it may be necessary to wash out the stomach first. Instead of the castor oil one may use small doses of mercury. Gray powder, in one-quarter grain doses, or calomel in one-sixth grain doses, may be given every two hours, until six doses have been taken. When the acute symptoms are subsiding, and the motions are becoming less frequent, this sedative mixture may be given:

R. Sodii sulphocarbollatis	
Bismuthi subnitratiss, āā.....gr. ii	1
Tragacanthæ .....gr. 1/2	03
Glycerini .....m. x	6
Aq. dest. ad.....3i	4

One teaspoonful of this mixture is given every six hours. Associated symptoms are treated as they arise.

**34. Convulsions in Early Infancy.**—Thomson gives a general review of this subject.

**35. Vaccination.**—Greenwood says that in considering the conditions that contraindicate vaccination and render postponement advisable, the presence of smallpox locally, in a sporadic or epidemic form, is of the utmost importance. Where postponement might be desirable and even imperative in the absence of smallpox, when this disease is epidemic or has broken out in the house where the child resides, vaccination ought nearly always to be performed. When smallpox is not present and there is no immediate fear of the infection, the child should be vaccinated when its health is at its best. If the child has been exposed recently to an infectious disease, vaccination should be postponed until a reasonable time has elapsed from the convalescence of the last patient. When a child suffers from any form of wasting disease it is better not to urge the operation unduly. Care should be taken that the condition of the child's skin is healthy. With regard to postponement in general, it must not be forgotten that it is an evil; anything that can be done to avoid the necessity of postponement is, therefore, important. One method is to offer vaccination as soon after the first month as possible. The operation must be carefully performed under aseptic precautions.

**36. Infantile Scurvy.**—Colman details the clinical history of this affection, laying particular stress on the morbid anatomy and frequency of occurrence of the bone lesions.

#### Intercolonial Medical Journal of Australasia, Melbourne. September.

- 42 State Medicine and Medical Ethics. G. A. Syme.  
43 Abdominal Manifestations of Syphilis. F. D. Bird.  
44 Etiology and Treatment of Hernia in Adults. R. H. Russell.  
45 \*Simplified Operation for Hernia in Children. E. K. Herring.

**45. Simplified Operation for Hernia in Children.**—Herring describes his method, a simple and rapid one, as follows: "Cut down on and into the sac in the usual position over the rings, and having dealt with the contents, pull the sac down, i. e., out from the abdomen, sufficiently to insure the subsequent retraction. Extend the incision in the sac right up to the ring margin, and turn this upper portion of the sac inside out through the incision, exposing the peritoneal surface. Then, with a knife or pair of sharpened scissors, cut the peritoneum (only) transversely right across. The proximal cut edge will retract within the abdomen, so catch it here and there as you cut with catch forceps. Thus the sac is severed from side to side, and the proximal opening is held by forceps. Arrange these forceps to draw the edge into a line, and whip

it together by a catgut suture. Take off the forceps and the sutured opening will retract within the abdomen. Close the wound with a subcuticular or other stitch and seal it." The operation is done in a few minutes, instead of the ordinary three-quarters of an hour. Nothing further is absolutely necessary. When there is a large lax abdominal ring, or when the little patient has a cough, it may be advisable to put one or two stitches through the pillars as a temporary support. The contents of the inguinal canal are practically not disturbed. The sac is left in the canal to shrivel up; the cord has not been touched nor pinched; the testicle has not been dragged out and exposed; no vessels have been cut, so no ligatures are left behind, and the chances of sepsis are very slight.

#### Semaine Médicale, Paris.

- 46 (XXV, No. 44.) \*De l'influence de l'alcoolisme sur la glande thyroïde. F. De Quervain.  
47 Report of Fifteenth Italian Congress of Internal Medicine, Genoa, October 24-29.

**46. Influence of Alcohol on Thyroid Gland.**—De Quervain has previously published a study of acute, non-suppurative thyroiditis and of the participation of the thyroid gland in acute infections and intoxications. In this article he studies the influence of alcoholic intoxication. The thyroid gland reacts in about the same way to microbial intoxications as it does to chemical poisons. The colloid substance becomes more or less granulous and filled with vacuoles, while it diminishes in amount. It ceases to stain with eosin and takes hematoxylin, while there is intense epithelial desquamation and hyperemia. In examining the cadavers of pneumonia subjects he noticed that those with a history of alcohol addiction showed these changes to a marked degree, while they were absent in the non-alcoholic cases. The thyroid must be added to the list of glandular organs susceptible to injury from alcohol. It might be interesting to study the indications of lacking or defective thyroid functioning in cases of chronic alcoholism. The knowledge of the changes induced in the thyroid gland by alcohol throws light on the development of spontaneous myxedema or "hypothyroidism" in the children of alcoholics. Such modifications as those described, if they occur in the thyroid of the fetus, might well explain its defective functioning later.

#### Beiträge zur klin. Chirurgie, Tübingen.

Last indexed page 1363.

- 48 (XLV, No. 3.) \*Erfahrungen bei der operativen Behandlung des kompletten inneren Darmverschlusses (ileus). O. Simon.  
49 Ueber die isolierte Ruptur der Symphysis ossium pubis. W. Cohn.  
50 Luxatio femoris centralis. W. Simon.  
51 Zur Entstehung von Pankreas Cysten durch Trauma. Zimmermann.  
52 Zur Anatomie und Klinik der Fussgelenks Tuberkulose (of ankle). R. Stich.  
53 \*Zur Dauerheilung des Brustkrebses (mammary cancer). H. Schröder.  
54 Ueber Bruchsack Divertikel (in hernial sac). E. Hagenbach.  
55 Ueber umschriebene Knochenverdichtungen im Bereich der Substantia spongiosa im Röntgenbilde (localized thickening of bone). A. Stieda.  
56 Ueber den Albers'schen Beckenfleck im Röntgenbilde ("spot in pelvis"). Id.  
57 Struma intratrachealis. T. Grünwald.  
58 \*Die Darstellung der Trachea im Röntgenbild, besonders bei Struma. O. Föster.  
59 (XLVI, No. 1.) \*Erfahrungen über Spinal-Analgesie. C. Pfeiffer.  
60 Zur operativen Therapie der seitlichen Kniegelenks-Verkrümmungen (lateral curvature of knee). A. Wittek.  
61 Ueber Skoliose bei Halsrippen (cervical ribs). F. Meyerowitz.  
62 Ueber Divertikel-Bildung bei Appendicitis. M. v. Brunn.  
63 Zur Kasuistik der Pfählungsverletzungen des Beckens (impalement injuries of pelvis). K. Flick.  
64 Erfahrungen in der Appendicitis-Frage am städtischen Krankenhaus zu Nürnberg (experiences at Nuremberg City Hospital). W. Hagen.  
65 Die Heilungs-Resultate der Unterschenkelbrüche (fractures of leg). F. Sauer.  
66 Totale Querriss des Pankreas durch Nalht geheilt (transverse laceration cured by suture). C. Garré.

**48. Operative Treatment of Complete Occlusion of the Intestine.**—Simon reviews the cases treated at Czerny's clinic between 1890 and 1903, separating them into eight classes according to the cause, etc., of the occlusion. He proclaims as the lessons learned from this extensive experience that all cases of internal occlusion in which strangulation is probable, and also of volvulus and invagination, should be treated operatively, but that in case of gangrene, the intestine should merely be drawn out and opened instead of attempting more



radical measures. In complete occlusion, especially with preceding chronic obstipation, internal medication should be given a trial, but the response must be obtained in the first or, at the most, in the second twenty-four hours, not to allow the favorable moment for intervention to slip past. Every operation for complete intestinal occlusion should be preceded by lavage of the stomach. In case of much meteorism, the intestine must be emptied at the time of the operation. In case of existing peritonitis it is always wise, Simon states, to leave a fistula into the intestine, notwithstanding the restoration of the permeability of the bowels.

**53. Permanent Cures of Mammary Cancer.**—Schröder's article is devoted to the experiences with mammary cancer at Müller's clinic at Rostock, 1875-1901. The total number of patients treated by a complete operation was 347. Out of this number 45 are still alive and well, one after twenty-seven and a half years, and 14 after from ten to fifteen years. In 15 of the 182 patients who succumbed to metastases there was no local recurrence of the neoplasm. In a majority of cases in which a second operation was required the recurrence was in the cicatricial tissue. In 5 cases the recurrence appeared between the fourth and fifth year after the operation; in 4 between the fifth and sixth year, and in 6 between the sixth and eighth; in one after eleven and in another after thirteen years. The fact that in 51 out of 83 cases of recurrence the latter occurred in cicatricial tissue, suggests that the operation spared too much skin. Cancer germs must have been left in the skin, and this should have been excised more freely. Some of the patients had showed the lump to their physician and he had advised waiting "to see if it got any larger." There will always be a small proportion of cases in which the growth is still apparently in its incipency, but yet the patients succumb to speedy metastasis in lungs or pleura. The lymph vessels in the mammary gland communicate with the mediastinal glands, which explains this group of cases. Fortunately, this communication is less extensive than that with the axillary glands.

**58. Trachea in Roentgen Picture.**—Füster proclaims that the trachea can be inspected with great precision in the Roentgen picture even in case of large goiters. It enables the part of the goiter encroaching on the trachea to be determined, and gives a number of other hints valuable for surgical intervention.

**59. Spinal Analgesia.**—Pfeiffer's communication issues from von Haeker's clinic at Graz, and describes 235 cases of operations performed under spinal analgesia. No by-effects were observed in 75 per cent. of the cases and in the others, with a single exception, they were slight and brief. In only 10 cases was there absolutely no analgesia after the injection. General anesthesia after a preliminary spinal analgesia requires much less of the anesthetic and seems much less serious than under other conditions.

**Centralblatt f. d. Grenzgebiete d. Med. u. Chir., Jena.**

*Last indexed page 429.*

- 67 (VIII, No. 10.) \*Der subphrenische Abscess. F. Perutz. Critical review of literature, 1894-1904. (Commenced in No. 4.)
- 68 (No. 13.) \*Ueber den klinischen Wert der Kryoskopie von Blut und Harn (value of cryoscopy). II. Ziesche. Critical review. (Commenced in No. 5.)
- 69 (No. 16.) \*Das Diverticulum ilei. A. Dreifuss. Critical review of the literature. (Commenced in No. 11.)
- 70 \*Hyperemesis gravidarum. R. Pollak. Critical review of the literature, 1895-1904. (Commenced in No. 9.)
- 71 (No. 17.) \*Die akute Magenerweiterung (dilatation of stomach). Neck. Critical review of the literature. (Commenced in No. 14.)
- 72 Zur Kenntnis der Meningocele spuria. Bauerthal. One case. Young man.

**67. Subphrenic Abscess.**—Perutz reviews 158 articles in his text and adds several more to the list in correcting the proof. He classifies the cases as they originate: In the stomach, 67 cases; duodenum, 3; appendix, 55; liver and biliary passages, 17; echinococcus cyst, 5; intestine, 7; pancreas, 4; spleen, 4; perinephritic structures, 7; ribs, 1; thorax, 8; female genitals, 6; of traumatic origin, 8; metastatic, 5, and unknown and various causes, 11—a total of 208 cases, with 6 added in the proof, bringing the total number to 214. Ulcerative processes in the stomach and appendicitis are the principal causes of subphrenic abscess formation. The symptoms

may be acute or more insidiously chronic. The patients may grow thin and appear very ill without any local symptoms to attract attention to the site of the lesion. As a rule, however, some of the organs in the vicinity are pushed up when fluid accumulates on the lower aspect of the diaphragm. The affected side protrudes more than the other, and there may be fever and extreme difficulty in breathing. The affected side may lag in making the respiratory excursions. The area of dullness over the tumor corresponds to the convex outline of the diaphragm, and the limits of the lungs above can be differentiated in some cases, but not in all, as the excursions of the pleura are generally hindered by extension of the inflammation or by exudation. If the abscess contains gas, then the picture is that described by von Leyden as subphrenic pyopneumothorax. The remarkably extensive lymphatic communication between the pleura and the subdiaphragmatic space renders the participation of the pleura in the inflammation almost inevitable. It is favored by the movements of the diaphragm. The pleural exudate is generally less virulent than the contents of the abscess. Grüneisen found the pleura involved in 40 out of 60 cases of subphrenic abscess. In 3 instances the subphrenic abscess was the result of a bullet wound. In another it developed after a strain from lifting a weight, and in some others after contusions. In these cases an extravasation had probably become infected. The abscess was of typhoid origin in a few individuals and it followed furunculosis in others. The possibility of a subphrenic abscess should be borne in mind when confronted with furuncles, especially when on the face. In 2 cases the abscess followed tuberculous peritonitis, and in a third the pus contained pneumococci. In a few other puzzling cases pneumonia or pleuritis was diagnosed at first, but the atypical course, the high fever, and the general ill feeling, supplemented by the puncture findings, cleared up the diagnosis. In one case in this group the patient succumbed to thrombophlebitis of the splenic vein. The others recovered, one man requiring counteropenings and several months in bed before he was finally cured.

**68. Clinical Value of Cryoscopy.**—Ziesche concludes his long analysis of what has been published on the study of the freezing point of blood and urine with the remark that the extravagant claims made for this new diagnostic measure at first have not been substantiated, but that it is valuable in supplementing other diagnostic measures, and states that it will well repay further study. Defective technique has been responsible for some of the conflicting reports which have been published. He reviews the works on osmosis and on the determination of the freezing point which preceded Koranyi's application of cryoscopy to the clinic. Very little has been done in pediatrics with cryoscopy. It seems to have been demonstrated that in liver affections the freezing point of the blood is higher, while in diabetes it is lower. This may be due to irritation of the kidney or to weakness of the heart, or to accumulation of acetone in the blood. Koranyi regards the acetone as similarly responsible in case of inanition. In diabetes insipidus the freezing point of the urine is very high; Strauss has observed a patient with an output of 6 liters and a freezing point of 0.11 C. The smallest figure yet recorded in man for the freezing point of the blood was found by Dienst in a case of eclampsia, namely, 0.40 C.

**69. Meckel's Diverticulum.**—Dreifuss has sifted 398 articles and discusses the subject from every point of view as presented in the literature. He summarizes his conclusions in the statements that an open diverticulum should receive the most radical treatment at the earliest possible moment. In secondary prolapse of the intestines Barth's technique is preferable, as it provides for all eventualities. Enterostomata should be extirpated, and the diverticulum in a hernial sac should be removed as completely as possible, as under all circumstances. Inflammations in the diverticulum and ileus—whatever their origin—must be regarded as surgical affections and preferably treated according to Hilgenreiner's technique. An operation was performed in 111 of 192 cases of occlusion of the intestines by a Meckel diverticulum. In 32 cases the patients were saved, but in the other 79 the fatal termination could not be arrested. Hilgenreiner thinks that these figures



will grow better when it is generally accepted that every case of ileus should be regarded from the first as a surgical affection—not that the surgeon has to operate in every case, but that expectant treatment should be with the knife in hand.

**70. Hyperemesis Gravidarum.**—Pollak recapitulates the views and methods of various authors as set forth in 242 articles published between 1895 and 1904. The prognosis is given as more favorable in these later works. Many writers preach against the use of medicines, claiming that when this method of treatment is successful it is merely from suggestion. Olshausen gives 4 gm. of potassium bromid in rectal enemata during the day, keeping the patient in bed. Kehrer gives 1 gm. of sodium bromid three times a day and 15 drops of nux vomica once, with a solution of cocain. Antonschwitsch gives salts in large doses, ascribing the trouble to a deficiency in salts. Neustube gives 10 drops of a 50 per cent. solution of cocain, repeating the dose in an hour if the desired result is not attained, and once again, with half the dose, three times the next day. He inserts a tampon with a 2 per cent. cocain salve in the vagina at the same time. Pozzi has also reported success from subcutaneous injection of cocain, Bauer with cocain internally and morphin subcutaneously. Opium is recommended only by Priest and Tuszkai in the literature of the last ten years. The latter gives it in large doses. Oelschläger reports that he has never had a failure in fifty years' experience with sodium bicarbonate combined with tincture of strychnin. Dirmoser gives 0.05 gm. calomel every hour until the bowels move and then morphin. Dow prescribes a teaspoonful of a 1 per cent. solution of carbolic acid by the mouth after failure of other measures. Some writers reject medication, as its almost certain failure destroys the patient's confidence in her physician, and time is wasted. Geoffroy noted that the vomiting ceased after prolonged palpation and consequently proposes massage as a remedy. He ascribes the trouble to reflex contraction of the pylorus, duodenum and junction of ileum and colon, and consequently advises massaging these parts. His suggestion does not seem to have been adopted by others. Several writers have reported cessation of the vomiting after correction of some displacement of the genitals. A number of authors recommend treatment as for hysteria, especially with authoritative suggestion. Frank wonders that more use is not made of hypnosis by gynecologists. A number of instances have been recorded in which hyperemesis gravidarum was noted in the previous history of patients with polyneuritis. Eulenberg has observed 3 such cases.

**71. Acute Dilatation of the Stomach.**—Neck has collected 44 cases with postmortem findings published in the literature. The stomach generally reached to the pubic bone and in some instances the floor of the pelvis. The signs of the distension of the organ came on suddenly usually, without any previous history of gastric disturbances. In 28 of the cases the dilatation occurred after an operation under chloroform. In 17 the operation had been on the abdomen, with a possibility that the stomach might have been pulled or injured in some way, directly or indirectly, but in the other cases the operation had been resection of the knee or elbow, amputation at the hip joint, or operations on the foot or knee. It is more than probable that the stomach was injuriously affected by the chloroform, entailing paralysis and stretching of the walls. In a case recently observed a man took chloroform several times without harm, but sudden dilatation of the stomach followed two hours after a single dose of 0.1 gm. of veronal. Neck cites this instance to illustrate the idiosyncrasy of the stomach against some drug which is probably the cause of the sudden acute dilatation of the stomach in certain cases. In the other cases inordinate or inappropriate eating or drinking had preceded the dilatation—four bottles of champagne in one case, two bottles of lemonade in another. Acute dilatation has also been observed after contusions of the abdomen or other trauma. Vomiting generally occurs, but not invariably, and it may cease abruptly. There may be considerable pain at various points. Certain symptoms suggest the action of toxins. In all but 2 of the cases the temperature remained normal throughout. Out of the total of 64 cases which he has collected only 17 terminated in recovery. Differentiation from

ileus and peritonitis is very difficult, as a rule. In treatment, the use of the stomach pump three times a day best answers the indications; it must be continued until the stomach has returned to normal size and the signs of functional disturbance have subsided. It is a good plan, Neck says, to evacuate the stomach with the patient's pelvis raised, as this facilitates the emptying of the organ. Interference with the bowel functions by the distended stomach can be counteracted by having the patient lie face downward or change to the knee-elbow position for fifteen minutes every two hours. Kelling's patient obtained relief by lying on the left side with the legs drawn up. Borchardt had an unfavorable experience with the prone position, and thinks that it is liable to interfere still further with the motions of the diaphragm, and possibly to arrest the heart action. If the prone position is ordered, the stomach must be systematically evacuated from time to time. Surgical intervention is the last resort, but a gastroenterostomy might be tried. It has been done in a few instances, but too late to benefit the patient. The cause of the acute dilatation may be manifold, but experience has shown that in addition to and in consequence of the dilatation there may be compression and kinking of the duodenum which in turn increase the dilatation. The compression of the duodenum generally occurs just below the superior mesenteric artery. Sometimes the duodenum is kinked by traction or torsion from the enlarged stomach. The dilatation of the stomach is the primary lesion.

#### Deutsches Archiv f. klinische Medizin, Leipsic.

*Last indexed page 1284.*

- 73 (LXXXIV, Nos. 5-6.) Balance of Acids and Alkalies in Animal Fluids.—Ueber Bestimmung der Bilanz von Säuren und Alkalien in tierischen Flüssigkeiten. F. Moritz. (Metric Analysis of Ash in Gastric Juice and Urine.)
- 74 \*Pathologie der Arteria basilaris. Saathoff (Kiel).
- 75 \*Klinische Beobachtungen über Blutdruck, pulsatorische Druckzunahme (Pulsdruck), sowie ihre Beziehungen zur Puls-Kurve. B. Fellner.
- 76 \*Embolie der Lungen-Arterie. C. Hart.
- 77 Ein Spirochäten-Befund bei schwerer Anämie und carcinomatöser Lymphangitis. O. Moritz. One case.
- 78 Zur Kenntnis der Influenza und Influenza-Bazillen. G. Jochmann.
- 79 \*Zur Symptomatologie der Milz- und Nieren-Infarkte (of spleen and kidney). G. Riebold.
- 80 \*Zur Pathologie des Blutdrucks (blood pressure). Killbs (Kiel).
- 81 Action of Fluorescent Substances on Fungi.—Wirkung der fluoreszierenden Stoffe auf Spalt- und Fadenpilze. A. Jodlbauer and H. v. Tappeiner.
- 82 \*Is Transfused Homogeneous Blood Preserved?—Bleibt artgleiches Blut bei der Transfusion erhalten? W. Schultz.
- 83 Ueber Isohämolyse und Hemagglutinine beim Kaninchen (in rabbit). Id.
- 84 Atypische Leukämie mit Osteosklerose. C. Nauwerck and P. Moritz. One case.
- 85 \*Influence of Changes in Circulation on Composition of Urine. Einfluss von Kreislaufsänderungen auf die Urinzusammensetzung. A. Loeb.
- 86 \*Laparotomie bei Peritoneal-Tuberkulose. Göschel.

**74. Pathologic Conditions of the Basilar Artery.**—Saathoff's attention was called to the mechanism of aneurism of the basilar artery by the case of a man carrying a load of bricks on a scaffold, who stepped on the loose end of a plank and fell through to his thigh. This kind of trauma caused an impact of the skull on the neck and resulted in the rupture of the sound basilar artery. In 3 other cases thrombosis in the basilar artery was evidently a syphilitic process. Saathoff is convinced that the peculiar location of the basilar artery exposes it to great injury from an accident such as the one just described, the impact of the weight above forcing the artery against the rough bone below. Examination of 100 skulls showed that the bed of the artery was smooth in only 43, while all the others exhibited more or less numerous jagged projections. Injury of this kind might pass unperceived, but would leave a place of lesser resistance on which a syphilitic process would locate by preference. He has found in the literature reports of 10 cases in which the basilar artery was the sole seat of syphilitic gummatous arteritis. In another group, which he also illustrates with examples, the syphilitic process had involved the neighboring arteries, while a third group includes those in which the adjacent membranes as well as the arteries were involved. This causal chain of trauma, thrombosis, syphilis and aneurism explains also the hitherto puzzling fact that the region of the chiasma seems to be a favorite site for syphilitic lesions. The pecu-



liarily sheltered position of this part always rendered its predilection for syphilitic lesions inexplicable. But if we ascribe causal importance to trauma affecting the basilar artery, then the propagation of the process to the region of the chiasma is not improbable. In a large number of the cases on record trauma is expressly stated.

**75. Study of Blood Pressure and Pulse Curve.**—Fellner's work issues from Nothnagel's clinic. The conclusions state that the measurement of the blood pressure, according to the Masing-Sahli-Strasburger technic, denotes great progress in this line, especially in the determination of the diastolic with the systolic pressure, and also the extent of the pulsatory increase in pressure (pulse pressure). This enables us to determine the condition of the circulation at any time, the degree of compensation, the diagnosis of various disturbances in the circulation and allows exact control of many therapeutic measures. It gives extremely characteristic and important diagnostic findings in certain affections, especially in case of aortic stenosis or insufficiency, and of nephritis. The pulse pressure is, further, the only means of determining accurately the degree in which the pulse is gaining or losing. This can not be determined by the ordinary sphygmogram, but can be learned with precision from Sahli's "absolute sphygmogram." The viscosity of the blood has considerable influence on the origin and shape of the pulse curve. The Riva-Rocci sphygmomanometer is more reliable than any other, Gaertner's tonometer giving only approximate findings. By the Strasburger technic, the Riva-Rocci cuff is slipped on the forearm as usual and connected with the manometer. The maximal pressure is estimated by the height of the mercury column when the pulse vanishes peripherally from the point of compression. The diastolic (minimal) pressure is estimated at the moment when the previous maximal radial pulse commences to grow smaller with increasing compression. Sahli's technic consists in applying Jaquet's sphygmograph, instead of the fingers, to the radial artery, and then compressing the brachial with the cuff. As the sphygmogram record grows smaller, this corresponds to the diastolic pressure. When the systolic pressure is reached in the cuff, the index marks a horizontal line without elevations. The findings by both these technics are practically identical. The Strasburger shows the minimal pressure = heart diastolic pressure; maximal pressure = heart-systolic pressure. The pulse pressure is the difference between the maximal and the minimal pressure. The blood pressure quotient = the quotient obtained by dividing the pulse pressure by the maximal pressure. Sahli's work on methods of clinical investigation was reviewed on page 1673. Some of his communications have been summarized in *THE JOURNAL*, for example on page 1819 of volume xlv, and page 2002 of volume xliii. Fellner does not regard the blood pressure quotient as a reliable index of conditions, as various factors combine to influence it; but Sahli's absolute sphygmogram, he thinks, can be relied on. The ordinary sphygmogram represents a curve with an unknown base. We have no means of knowing with the ordinary sphygmogram the base line representing the distance from zero. A pulse with a minimum of 60 mm. and a maximum of 90 mm. would show exactly the same findings as another with a minimum of 160 mm. and a maximum of 190 mm. Sahli draws on "millimeter paper" the time of one pulse phase (0.2", according to Jaquet's sphygmograph 10 mm.). The height of the minimal pressure is then marked on the zero line (the minimal pressure is determined by the Riva-Rocci, for instance 1 mm. mercury = 1 mm. on the vertical line), corresponding to the height of the pulse curve, that is, the maximal pressure is marked at the point to correspond to the time distance. In an absolute sphygmogram thus drawn, the height corresponds in fact to the pulse pressure. The future of the sphygmogram is for the exact study of rhythm, frequency and regularity of the pulse and its disturbances. In solving other questions, however, the study of the venous pulse and of the cardiogram should supplement sphygmography and sphygmomanometry, with also plethysmographic findings and analysis of the blood. The entire arsenal of hemodynamics may be called on before the problem is solved in certain cases. In conclusion he cites von Frey to the effect that if the study of the pulse is to be more

than a mere pastime, it should be applied to several parts at once, investigating the pulse in various regions, if possible, with different apparatus and simultaneously.

**76. Embolism of Pulmonary Artery.**—Hart describes 2 cases in which the main trunk of the pulmonary artery had evidently been completely obstructed by an embolus. The far advanced organization testified to the long existence of the lesion, but weeks elapsed after the embolism before the patients succumbed.

**79. Infarcts in Spleen and Kidneys.**—Riebold's article is based on 2 cases. The patients were young women, and the first sign of trouble was a sudden excruciating pain in the region of the organ affected, strictly localized, not radiating, persisting for some time unmodified without essential remissions, but gradually subsiding in the course of a few days. An infarct in the spleen or kidney may occur with severe symptoms suggesting ileus or peritonitis, probably of reflex origin (collapse, vomiting, retention of feces and urine). These symptoms may be accompanied by slight temperature and possibly also by moderate leucocytosis. Head's zones of hyperalgesia on the skin are sometimes noted, and their location on the right or left side may sometimes have diagnostic importance to determine whether the left kidney or the spleen is affected. Enlargement of the spleen and friction in the splenic region point to this organ. In case of infarct in the kidney, oliguria is sometimes observed or anuria, with hematuria and albuminuria, and yet it is possible for the urine to be entirely normal even in case of very extensive and bilateral kidney infarcts. In some cases the infarcts occur with no symptoms to suggest their presence. In one of the cases described an embolus was found in the basilar artery, and was the cause of the acute bulbar paralysis that had been observed, but a small isolated hemorrhage in the thalamus optici had failed to cause facial paralysis.

**80. Pathology of the Blood Pressure.**—Külbs describes a dozen cases in which he observed a temporary increase in the blood pressure in persons addicted to tobacco or alcohol. It was accompanied by subjective sensations, with a very tense, regular pulse and acute dilatation of the heart. The patients complained of a pain or sense of oppression, as if a great weight were lying on their chest. Conditions were restored approximately to normal by rest in bed, baths and restriction of intake of fluids.

**82. Is Homogeneous Blood Retained on Transfusion?**—Schultz relates experiments which he thinks demonstrate that carefully defibrinated rabbit blood transfused into other rabbits is preserved for the receiving organism for the most part.

**85. Behavior of Electrolytes in Urine During Changes in Circulation of Blood Through the Kidneys.**—Loeb's conclusions from the extensive clinical research reported are to the effect that in healthy individuals the elimination of urine increases when they change from the reclining to the upright position, and the relative elimination of salt increases also. In individuals with disturbances in the circulation the changes are just the reverse. Those with orthostatic albuminuria show modifications in the urine which indicate that the circulation through the kidneys is not so good when standing. Nitroglycerin has an unfavorable action on the circulation through the kidneys in case of nephritis. In the changes indicated in the urine by upright position or by nitroglycerin, salt behaves differently from the other solid constituents of the urine, as the changes in concentration occur in an opposite sense to those of the other solid constituents.

**86. Laparotomy in Tuberculous Peritonitis.**—Göschel reports that one of the 3 patients whom he reported as cured (see *THE JOURNAL*, page 1035), later returned with progressing lesions. After six years of apparent cure the tuberculous peritonitis resumed a progressive course.

#### Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 1612.

87 (LXXVIII, Nos. 1-3.) Zwei Fälle von Struma baseos linguae.

K. Meixner.

88 Ueber Laminektomie bei spondylitischer Lähmungen (paralysen). C. Sultan.

89 Die Lagerung des Nervus radialis bei Oberarmbrüchen der Diaphyse (position of nerve in case of fracture of upper arm. J. Fessler.



- 90 Zur Frage der operativen Behandlung der intrakapselären Schenkelhals-Frakturen (of neck of femur). II. Ito and S. Asahara.
- 91 Die Medullar-Anästhesie mittelst Cocain-Suprarenin. L. Kurzweily (Braun's service, Leipzig).
- 92 Zwei Fälle von Volvulus des Meckelschen Divertikels. Fehre.
- 93 \*Zur Frage der Contagiosität des Erysipels. Franke.
- 94 \*Experimentelle Untersuchungen über die Einwirkung der Roentgen-Strahlen auf das Knochenmark, nebst einigen Bemerkungen über die Roentgen-Therapie der Leukämie und Pseudo-Leukämie und des Sarcoms. H. Heineke.
- 95 Surgery of Stomach.—Modifikation der Kocher'schen Magen-Resektion. F. Schultze.
- 96 Ueber lokalen Tetanus beim Menschen. Axhausen.
- 97 Experimentelle Studie zur Colostomie-Methode nach v. Mose-tig-Moorhof. M. Silbermark and P. Dömény.
- 98 Ein neuer Rollen-Apparat zur Extensions-Behandlung. Lin-nartz.
- 99 \*Operation on Kidney for Scarlatinal Anuria. Recovery.—Decapsulation and Stichelung der Niere wegen 4tägiger Anurie nach Scharlach. Herstellung der Diurese, Genesung. M. Schmltdt.
- 100 Zur Frage der Struma-Metastasen. C. Goebel.

93. Contagiousness of Erysipelas.—Franke's research has demonstrated, he thinks, that the streptococcus enters through some solution of continuity in the skin or mucosa, possibly so minute as to be imperceptible. The coccus penetrates into the lymphatics beneath and sets up erysipelas or an abscess, according to the depth of its penetration or its virulence. It never comes to the surface in the vesicles or cast off epidermis, any more than in case of a phlegmon in a tendon sheath. The erysipelas patient is no more dangerous, he states, as a source of contagion than a patient with a phlegmon of this kind, so long as he does not scratch the patches. If they are scratched the lurking places of the streptococcus are liable to be disturbed and the exuding fluid may contain virulent streptococci. An erysipelas patient should have the patch covered with a protecting dressing the same as any abscess or phlegmon, and when this can be done effectually the patient, Frankel says, is no more dangerous to those around him than any patient with an infectious process. If the patch is on the face or where it can not be effectually protected, the patient had better be isolated until the symptoms of inflammation have subsided. When these are gone isolation can be suspended, as there is no danger of contagion from the scaling.

94. Action of Roentgen Rays in Leukemia.—Heineke expatiates on the remarkable harmony between clinical experience and the results of experimental research in respect to the action of the Roentgen rays on the cells of the blood-forming organs. After exposure of guinea-pigs for several hours to the rays, the white cells of the bone marrow, with but few exceptions, are destroyed. This destruction of the white marrow cells commences at nearly the third hour, reaches its height at about the eleventh hour, and the process is terminated by the end of five or six days. The lymphocytes succumb first and the ungranulated myelocytes, then the eosinophiles and the mast and giant cells, while the neutrophile polymorphous polynuclear cells remain intact longest. The injured bone marrow is capable of regeneration, which commences at about the second week and is complete by the third or fourth. During regeneration the ungranulated and the giant cells appear first, while the eosinophiles and the mast cells are the slowest to appear. These findings were obtained in 150 guinea-pigs after a single exposure of several hours' duration. They harmonize perfectly with what has been observed in the clinic, but the lymphoid tissue in man does not react so promptly and decidedly as in animals. The glandular tumors of pseudo-leukemia generally respond to Roentgen exposures with prompt retrogression, though some cases prove refractory. The soft, rapidly growing glandular tumors, abounding in lymphocytes, respond best to the exposures, as he illustrates by the report of a case personally observed. The possible rapid regeneration of the tumors when the exposures are suspended is one of the facts which testify that the rays do not reach the causal agent. Experiences with sarcomata indicate that those whose cells approximate most closely the lymphoid tissue are most susceptible to the action of the rays. In man the rays seemed to exert a favorable action on the red cells and the hemoglobin, but no confirmatory findings of this have yet been obtained in animals.

99. Decapsulation of Kidney for Scarlatinal Anuria.—The patient was a boy of 6 with acute, threatening anuria for several days, but no signs of nephritis, on recovering from scarlet

fever. The kidney was exposed under chloroform anesthesia and the capsule slit. The kidney was a dark brownish, bluish red in color, soft but not distended, and when the puncture needle was introduced for 1 cm. half a dozen times very little blood escaped. The wound was sutured over a gauze drain and the child rapidly recuperated and soon regained his usual health.

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Last indexed page 881.

- 101 (LVII, Nos. 3-4.) \*Zur Diagnose der relativen Insuffizienz der Mitralls und Trikuspidalis und über den positiv-zentrifugalen Venen-Puls bei Anämischen. W. von Leube (Würzburg).
- 102 Experimentelle Untersuchungen über Glykolyse. L. Rapoport.
- 103 \*Klinische und exp. Beiträge zur Kenntnis der Krankheitsbildes der Polycythämie mit Milz-Tumor und Zyanose (polycythemia with enlarged spleen). P. Reckzeh.
- 104 \*Hämatologische Untersuchungen über einige Fälle von Splenomegalla leucopenica. L. d'Amato (Naples).
- 105 \*Ueber die Folgen subkutaner Kochsalzzufuhr nach Nephrektomie (consequences of saline infusion after nephrectomy). Brandenstein and Chajes.
- 106 Behavior of Red and White Corpuscles in Infections and Intoxications and After Administration of Albuminoids and Curative Serums.—Experimentelle Untersuchungen zum Verhalten der Blutkörperchen, etc.; ein hematologisch untersuchter Fall von Katheter-Fleber beim Menschen. J. Arneth.
- 107 \*Klinische und path.-anatomische Beiträge zum Bronze-Diabetes. E. O. Hess and E. Zurhelle.
- 108 \*Ueber die Dilatatio et Hypertrophia coli (Hirschsprung). A. Mülberger.
- 109 Vergleich zwischen den organischen und anorganischen Fermenten (comparative study). P. Bergell.
- 110 Ueber Ausstossung röhrenförmiger Ausgüsse aus Oesophagus und Magen nach Verätzung (expulsion of cast of esophagus and stomach after destruction by caustic). H. Grau.

101. Relative Valvular Defects in Anemia.—A positive centrifugal pulse is sometimes noted in the jugular vein in case of anemia, von Leube announces. It may be slight or pronounced, and is evidently the consequence of the functional muscular insufficiency of the tricuspid valve, the result of anemia. The origin is the same as for the relative mitral insufficiency in chlorosis. The symptoms in each case subside as the patients progress toward recovery. The relative tricuspid insufficiency in anemic individuals appears at the same time as the relative mitral insufficiency, in which it differs from the tardily appearing tricuspid insufficiency in the course of an endocarditic mitral defect. This early coincidence with mitral insufficiency and its persistence without severe disturbances in the circulation, are grounds for assuming the relative character of the mitral defect. A positive centrifugal venous pulse is also observed at times in anemic subjects without signs of tricuspid insufficiency. In some of these cases at least, this must be referred to a latent tricuspid insufficiency which may eventually become manifest.

103. Polycythemia and Enlarged Spleen.—Reckzeh states that reports of 29 cases of this affection have been published, and he adds to the list 5 personally observed. It seems to be an established fact that the symptom-complex of polycythemia with enlarged spleen and cyanosis can be observed in connection with primary tuberculosis of the spleen, but it is equally well established that the syndrome can occur without a tuberculous affection of the spleen. In one of Reckzeh's cases a young man presented a slowly growing malignant tumor of the thymus and lung which caused gradual compression of the superior vena cava. The result was cyanosis, polycythemia and enlargement of the spleen. Experiments on animals confirmed the lesson learned from this case, namely, that compression, causing stagnation of the blood, is alone sufficient to induce the development of the syndrome. Stagnation of the blood is probably, therefore, the cause of all the cases. This stagnation may be the result of diminished tonicity of the veins. The prognosis is generally bad, the cases progressing slowly to a fatal termination although showing marked and prolonged remission at times. Iodin, quinin and arsenic failed to produce any permanent benefit in his experience. Ehrlich recommends quinin and regulation of the diet to avoid iron. In one case Türk gave up to 30 drops of Fowler's solution daily for months and beheld the symptoms subside under this treatment. Symptomatic improvement has been obtained by withdrawal of blood, but it proved merely transient. Splenectomy has been proposed, especially for the cases with tuberculosis of the spleen. Reckzeh comments that it is impossible to diag-



nose positively a tuberculous affection of the spleen even with an exploratory incision. The hemorrhagic diathesis displayed by these patients should also suggest caution. In 3 cases on record splenectomy had an unfavorable effect, but, on the other hand, 8 cases are on record of isolated tuberculosis of the spleen in which a cure followed extirpation of the organ. Roentgen treatment has been tried and Vaquez and Laubry report improvement in the general condition in one case after three exposures with seven-day intervals; the composition of the blood remained uninfluenced.

**104. Leucopenic Splenomegaly.**—D'Amato concludes from his examination of 2 cases of Banti's disease, 2 of chronic malaria and one of syphilis affecting predominantly the liver and spleen, that the cause of splenomegalic leucopenia can not be sought in the distribution of the leucocytes in the different vascular regions, nor in any leucotoxic action on the part of the blood serum. He ascribes it to the condition of the blood producing organs, especially the bone marrow and spleen.

**105. Consequences of Saline Infusion After Nephrectomy.**—This article issues from Senator's clinic and is a contribution to the question as to the origin of hydrops renalis. Both kidneys were removed from rabbits and 1 per cent. salt solution or pure water was injected afterward. Among the various conclusions drawn from the results observed is that not all the molecules retained in case of insufficiency of the kidneys are of equal value in respect to the development of dropsy. When salt solution was injected whose percentage of salt was higher than that of the blood, the percentage of salt in the blood serum scarcely showed any rise, while the figures representing the osmotic pressure and the percentage of residual nitrogen showed a more or less marked rise. At the same time the refraction coefficient of the blood serum became reduced. It was evident that the main part of the retained salt was held in the juices and not in the parenchyma of the liver. Edema, hydrothorax and ascites were observed in nearly all the animals, more pronounced in the saline-injected animals than in those injected with water alone. It seems to have been established that certain organic substances contained in the residual nitrogen and the hydremic composition of the blood alter the walls of the vessels so that they become abnormally permeable for fluids. On account of these changes the masses of fluid which have gradually accumulated in the blood pass over into the tissues. An abnormal accumulation of fluid in the blood and lymph vessels first occurs in case of renal insufficiency when the salt accumulated in the vessels retains a corresponding amount of water. In advanced stages the insufficiency of the kidneys aids as a further factor in the accumulation of the water by direct disturbance also of the water-eliminating function of the kidneys.

**107. Bronzed Diabetes.**—Hess and Zurhelle conclude from their study of 2 cases that the cirrhosis of the liver and the hemochromatosis long precede the diabetes. They are independent of each other, but are probably all due to a single cause, some peculiar disturbance in the metabolism, possibly fostered by alcoholism. They accept Murri's theory that some permanent injury in the economy of the general metabolism leads to a general "dystrophy of the cells." This is manifested in the appearance of two abnormal properties, a capacity on the part of the tissues to take up the blood pigment (liberated by the enhanced destruction of the red corpuscles), and by a capacity for proliferation of the connective tissue, especially in the liver. The other abnormal property acquired is the reduction of the normal capacity for oxidizing carbohydrates (diabetes).

**108. Dilatation of the Colon.**—In pondering on the fatal termination in a case of dilated colon and sigmoid, Mülberger asks whether or not the patient, a boy of 13, might not have been saved by exclusion of the entire colon and an anastomosis between ileum and rectum. The disturbances are generally too slight to warrant such a serious operation, and when the syndrome becomes threatening it is usually too late for interference. The prospects for recovery would be much better if the diagnosis could be made in the early stages, when the dilatation is still within reasonable bounds. He remarks that there are about 80 cases of this disease on record. He recog-

nizes two types, that with stiffening of the intestines, peristaltic unrest and excessive development of gas, and the form in which there is no peristalsis, the gas development does not surpass the normal range and the accumulation of fecal masses predominates in the syndrome.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

**SCIENTIFIC MEMOIRS.** Officers of the Medical and Sanitary Departments of the Government of India. Issued under the Authority of the Government of India by the Sanitary Commissioner with the Government of India, Simla. Calcutta: Office of the Superintendent of Government Printing, India, 1902.

No. 1. Standardization of Calmette's Anti-Venomous Serum with Pure Cobra Venom: The Deterioration of this Serum Through Keeping in India. By G. Lamb, captain, I.M.S. and W. W. Hanna, Esq., M.B. Price, 3 annas (4d). From the Plague Research Laboratory, Bombay.)

No. 2. Malaria in India. By Captain S. P. James, M.B., I.M.S. (On Special Duty with the Royal Society's Commission on Malaria.) Price 1 real, 8 annas, or 2s. 3d.

No. 3. Some Observations on the Poison of Russell's Viper. (*Daboia russellii*). By G. Lamb, Captain, I.M.S., and W. Hanna, Esq., M.B. Price, 5 annas, or 6d.

No. 4. The Action of the Venoms of the Cobra (*Naja tripudians*) and of the Daboia (*Daboia russellii*). On the Red Blood Corpuscles and on the Blood Plasma. By G. Lamb, Captain, I.M.S. Price, 8 annas, or 9d.

No. 5. Specificity of Antivenomous Sera. By G. Lamb, M.D. (Indian Medical Service). Price, 3 annas, or 4d.

No. 6. First Report of the Anti-Malarial Operations at Mian Mir, 1901-1903. By Captain S. P. James, M.B., I.M.S. Price, 12 annas, or 1s. 2d.

No. 7. Some Observations on the Poison of the Banded Krait (*Bungarus fasciatus*). By Captain G. Lamb, M.D., I.M.S. Price, 8 annas, or 9d.

No. 8. Preliminary Report on a Parasite Found in Persons Suffering from Enlargement of the Spleen in India. Lieut. S. R. Christophers, M.B., I.M.S. Price, 1 rupee 8 annas.

No. 9. Second Report of the Anti-Malarial Operations at Mian Mir, 1901-1903. By Lieut. S. R. Christophers, M.B., I.M.S. Price, 10 annas, or 1s.

No. 10. Specificity of Antivenomous Sera. (Second Communication). By Captain G. Lamb, M.D. Price, 8 annas, or 9d.

No. 11. A Parasite Found in Persons Suffering from Enlargement of the Spleen in India. Second Report. By S. R. Christophers, M.B., I.M.S. Price, 2 rupees, or 3s.

No. 12. The Morphology, Teratology and Decline of the Flowers of Cannabis. By Major D. Prain, M.B., I.M.S. Price, 14 annas, or 1s. 4d.

No. 17. Snake-Venoms in Relation to Hemolysis. By Capt. G. Lamb, M.D., I.M.S. Price, 6 annas, or 7d.

No. 18. Hemogregarina Gerbilli. By Lieut. S. R. Christophers, M.B., I.M.S. Price, 10 annas, or 1s.

No. 19. Kala Azar, Malaria and Malaria Cachexia. By Captain S. P. James, M.B., I.M.S. Price, 1 real 4 annas, or 1s. 11d.

**POST-OPERATIVE TREATMENT.** An Epitome of the General Management of Postoperative Care and Treatment of Surgical Cases as Practiced by Prominent American and European Surgeons. By N. C. Morse, A.B., M.D., 155 Illustrations and 5 Plates. Cloth. Pp. 468. Price, \$4.00. Philadelphia: P. Blakiston's Son & Co., 1905.

**TREATISE ON DISEASES OF THE SKIN.** For the Use of Advanced Students and Practitioners. By H. W. Stelwagon, M.D., Ph.D. Fourth Edition. Thoroughly Revised. 258 Illustrations, and 32 full-page lithographic and half-tone plates. Cloth. Pp. 1136. Price, \$6.00 net. Philadelphia: W. B. Saunders & Co., 1905.

**CLINICAL AND PATHOLOGICAL PAPERS** from the Lakeside Hospital, Cleveland. (Comprising 40 articles from workers in the different services of the hospital, which have appeared in various medical journals). Series II, paper. Published by the Hospital, 1905.

**TEXT-BOOK OF MEDICAL AND PHARMACEUTICAL CHEMISTRY.** By E. H. Bartley, B.S., M.D., Ph.G. Sixth Edition, thoroughly revised; 90 illustrations. Cloth. Pp. 734. Price, \$3.00. Philadelphia: P. Blakiston's Son & Co., 1905.

**NATIONAL ACADEMY OF SCIENCES.** Vol. X. Third memoir. A Research on the Action of Alcohol on the Circulation. By H. C. Wood and D. M. Hoyt. Paper. Pp. 68. Washington: Government Printing Office, 1905.

**REPORT OF THE SURGEON-GENERAL, U. S. NAVY,** Chief of the Bureau of Medicine and Surgery, to the Secretary of the Navy. 1905. Paper. Pp. 203. Washington: Government Printing Office, 1905.

**A TEXT-BOOK OF PHYSIOLOGY.** For Medical Students and Physicians. By W. H. Howell, Ph.D., M.D., LL.D. Illustrated. Cloth. Pp. 905. Price, \$4.00. Philadelphia: W. B. Saunders & Co., 1905.

**MANUAL OF THE DISEASES OF INFANTS AND CHILDREN.** By J. Ruhräh, M.D. Illustrated. Flexible Leather. Pp. 404. Price, \$2.00 net. Philadelphia: W. B. Saunders & Co., 1905.

**THE PHYSICIAN'S VISITING LIST FOR 1906.** Fifty-fifth Year of its Publication. Leather Cover. Pocket. Price \$1.00. Philadelphia: P. Blakiston's Son & Co., 1905.

**ANATOMY AND PHYSIOLOGY FOR NURSES.** By L. Lewis, M.D. Illustrated. Cloth. Pp. 317. Price, \$1.75 net. Philadelphia: W. B. Saunders & Co., 1905.

**BOARD OF HEALTH, Register of Physicians of State of West Virginia,** to Dec. 31, 1904. Paper. Pp. 143. Press of the Herald, Huntington, 1905.



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## Original Articles

### ARE THE PROTEOLYTIC AND MILK COAGULATING EFFECTS OF GASTRIC AND PANCREATIC JUICE DUE TO ONE AND THE SAME ENZYME?\*

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BALTIMORE.

The distinguished St. Petersburg physiologist, J. P. Pawlow, associated with S. W. Parastschuk, has published<sup>1</sup> a series of experimental investigations under the above heading. The view hitherto held and still held by most physiologists is that the proteolytic and milk-coagulating effects of gastric juice and pancreatic juice are due to specific enzymes. The earlier investigations on the subject date from Hammarsten.<sup>2</sup> In order to state precisely the direction of the inquiry, it is necessary to emphasize that Pawlow and Parastschuk attempt to prove that a separate and distinct milk-curdling enzyme does not exist, but that the milk coagulation is only a property of the pepsin. The *Fragestellung* here is not precise as might be desirable, for proteolytic and milk-coagulating effects might be conceived as attributable to one and the same proteid ferment, and yet pepsin and chymozin may be two different enzymes, for we may conceive that pepsin, the proteolytic enzyme, possesses also, to a certain extent, a milk-coagulating effect, which is only developed in an acid reaction and not in a neutral reaction, and, as far as human gastric juices are concerned, it can be stated that such an enzyme occurs which will curdle milk in the presence of an amount of HCl which, as a rule, is normal to human gastric juice (two parts per thousand), but will not curdle milk if the gastric juice is exactly neutralized. This disappearance of milk-coagulating power in the case of canine gastric juice, after it had been neutralized with sodium bicarbonate, was noticed by Pawlow and Parastschuk (p. 422), but they attributed this disappearance to a destructive effect of the alkalies employed, particularly to  $\text{Na}_2\text{CO}_3$ . When the juice was neutralized with  $\text{NaHCO}_3$ , the ferment could be preserved. To the destruction of the pepsin by alkalies they attribute their inability to separate these two enzymes by Hammarsten's method (shaking of gastric juice with magnesium carbonate, by which the pepsin is torn down by this insoluble powder), while the chymozin remains in solution. The third and fourth filtrates prepared in

this way will coagulate milk energetically, but will not digest raw fibrin in twenty-four hours, not even if raised to the normal acidity. But Pawlow asserts that when this fibrin was diluted five to ten times its volume with 0.1 to 0.2 per cent. solution of HCl, the proteolytic effect on fibrin became distinctly evident.

The two enzymes, however, can be separated in a much simpler manner; by heating gastric juice to 65 degrees C. for ten minutes the chymozin can be destroyed. When chymozin is in solution together with HCl, three parts per thousand, the enzyme can be destroyed completely if the solution is kept at a temperature of 37 to 40 degrees C. for forty-eight hours.<sup>3</sup> The pepsin is not destroyed by this process. In this manner a pepsin solution free from chymozin can be obtained. A solution of parachymozin free from pepsin can also be prepared in a similar manner.<sup>4</sup> Bang's investigations have made it very highly probable that the chymozin enzymes of different animals are by no means identical, but show striking differences in milk-coagulating power. Accordingly it becomes necessary in testing the results of previous investigators, to use the chymozin from the same animals as they employed.

In experiments with milk coagulation which extend over ten hours it must not be overlooked that milk may coagulate spontaneously when drawn and preserved under absolutely sterile conditions. Pawlow and Parastschuk, in attempting to demonstrate that proteolytic and milk-coagulating effects are attributable to one and the same enzyme, offer as proof of their assertion the parallelism of effects and proportionality of work done. The degree of proteolysis was measured in millimeters of a column of boiled albumin (Mett's method, devised in Pawlow's laboratory), and the degree of coagulating power was measured by the time that was required to coagulate 10 c.c. of milk by varying amounts of gastric juice. The coagulation of the milk always occurred in an acid reaction. The acidity of the various portions of the gastric juice was equalized by 0.5 solution of HCl. In Table 1, Pawlow<sup>1</sup> demonstrates that the least chymozin was secreted when the test food was milk (10 c.c. of milk coagulated in fifty minutes), and the most chymozin was secreted when the test food was bread (10 c.c. of milk coagulated in two and one-half minutes by the juice of the same animal). This same animal digested 5.8 mm. of albumin column (Mett), showing that the proteolytic power was very active also in the same bread juice. But in Table 2 we are told that a bread juice which digested 4.8 mm. did not coagulate 10 c.c. of milk until three minutes and ten seconds had elapsed, forty seconds longer than the previous juice, which had digested the same length of albumin column. In Table 2 the coagulation time is approximately the same for bread, meat and milk juice, 190 to 195 seconds, but the relative concentration of

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Hoppe-Seyler's Zeitsch. f. physiol. Chemie, vol. iv, pp. 415 to 452: "Ueber die ein und denselben Eiweissfermente zukommende proteolytische und milchkoagulierende Wirkung verschiedener Verdauungssäfte."

2. Maly's Jahres Berichte, vol. II, 1872, p. 118. See also Hammarsten's Lehrbuch der physiol. Chemie, 5th edition.

3. Hammarsten, p. 271.

4. Pfliiger's Archiv, vol. lxxix, p. 425. Article by Ivar Bang.



the ferments is placed at 1 for bread juice, 4.29 for meat juice, and 8.41 for milk juice. On page 419 the authors assert that this Table 2 shows a perfect proportionality of proteolytic effects and of milk-curdling power. The further efforts of these investigators were directed toward showing a parallelism of these two effects of gastric juice under the (a) influence of putrefaction of the juice; (b) the influence of heat (Table 5), and (c) the influence of chemicals, salts, bile and alcohol, etc. Similar experiments are then narrated concerning pancreatic juice obtained in various ways. It is interesting to learn that the pancreatic juice as secreted was inactive for curdling milk, and had to be activated by the addition of succus entericus and that the activation of the milk-curdling agent occurs at the same rate as the activation of the proteolytic agent, under the influence of succus entericus (enter-kinase).

On page 432 we are told that Table 12, which shows the proteolytic power and milk-coagulating power of juice (1) from the gastric pepsin glands, (2) from pylorus glands, and (3) from Brunner's glands, gives the evidence that the two powers correspond perfectly. Table 12, however, does not show this convincingly. In the second column of that table the proteolytic power is shown to shrink from 2.5 mm. (Mett) for pepsin gland juice to 0.5 mm. (Mett) for Brunner's gland juice. But the milk-coagulating time for pepsin gland juice is 27 minutes, for Brunner's gland juice is 18 minutes. In order to show an exact proportionality, the milk ought to have been coagulated in the same periods of time, as is shown in Table 2. But it is apparent from Table 12 that as the proteolytic power sank the coagulating power became intensified. Possibly an involuntary distinction is made between these two effects on page 439, where dilution is said to favor the proteolytic power, restoring it when it had been destroyed by the cold sodium acetate.<sup>5</sup> But, on the other hand, dilution is said to destroy the coagulative power. A reduced proteolytic power under the checking influence of salts, or dilution, does not necessarily indicate that the ferment is present in smaller quantities. It may be that the substance which is to be acted on proteolytically—the albumin or the fibrin—is so altered by the salts or other substances employed as to render them more insoluble. This can be demonstrated by performing experiments with known strengths of pepsin, allowing it to act first on ordinary pure fibrin, and then on fibrin which has been allowed to become saturated in a 20 per cent solution of sodium acetate. The proteolysis will be markedly less in the last case.

Hammarsten<sup>6</sup> objects to the main conclusion of Pawlow and Parastschuk that the two effects spoken of are due to one and the same enzyme, on the ground that two different rules exist, according to which these two effects depend on the quantity of ferments. According to Pawlow, however, the time of these reactions varies with the conditions influencing them. Some may accelerate and others may prolong the time of reaction. The chief conditions which he cites are alkalinity, acidity of the medium, and the degree of dilution. The authors recognize three rules under such conditions. A neutral solution of chymozin causes milk coagulation provided it is present in the solution in a certain definite concentration: (1) Then coagulation occurs according to the rule of inverse proportionality between the quantity of the ferment and the coagulation time; (2) when

the chymozin is in acid solution the quantities of the ferment are inversely proportional to the square root of coagulation time, that is, the reaction is progressively accelerated; (3) when, in a very much diluted neutral solution of ferments, the quantities of the enzymes are proportional to the square of the coagulation time. These three varying conditions concern mainly the milk-coagulating power. In a similar way, Pawlow shows that the rules of the dependence of the effects of enzymes on the amounts of the enzymes can be influenced by external conditions. All such rules are reliable only within very narrow limits.

After reading the article as abstracted, we are justified in asking whether parallelism of effects and proportionality of work done in two different catalytic actions, really constitute satisfactory proof that the two actions are due to one and the same catalyzer. Pawlow and Parastschuk demonstrate that the proteolytic and milk-curdling effects of pancreatic juice show a parallelism and proportionality under varying conditions. But the same can be shown to be true of the amylolytic and fat-splitting power of pancreatic juice. Why, then, not assert that the amylolytic and lipolytic effects are due to one and the same enzyme also? Neilson<sup>7</sup> has shown that colloidal platinum, like lipase, can bring about hydrolysis and synthesis of fats. He also shows that this hydrolysis by platinum increases with the concentration of the platinum, increases with the temperature, is independent of the concentration of the ethyl butyrate, and that poisons<sup>8</sup> reduce the hydrolysis by platinum black. These same variations of effects, under the influence of concentration, temperature, poisons and salts, can be shown to exist with regard to the effects of a number of organic enzymes. For example, in the case of saliva it can be shown that the amylolytic action, the conversion of starch into maltose, is increased by concentration of the ferment, and by heat, but is injured by certain chemicals almost in the same manner as lipase is injured in its hydrolysis of ethyl butyrate (experiments of Loevenhart). If, therefore, we should execute a series of experiments in two series, one with colloidal platinum on ethyl butyrate under these varying conditions, and the other with saliva under varying conditions, certainly a rising or falling of the amount of catalytic work done, that is, a parallelism of effects, could not be asserted as proving that the two different effects are due to one and the same catalyzer in this case, for we know that two different agents are used in the experiments. The figures of the hydrolytic effect of colloidal platinum are given in the article by Hugh Neilson.<sup>7</sup>

When chymozin or rennet is separated from the stomach of a calf by Blumenthal's method,<sup>9</sup> an amorphous, white, gelatinous substance is gained, which greatly resembles aluminium hydrate in appearance. This precipitate is nearly pure rennet, and a very small portion of it speedily causes coagulation of milk. It has no odor or taste when prepared by this method, readily dissolves in water, and forms a clear solution. Blumenthal asserts that the same treatment will separate two enzymes from the so-called pepsin essences of commerce, and that the mother liquid from which the rennet is removed has no curdling action. The trypsin and chymozin of the pancreatic juice was separated by Roberts. A salt solution extract of a pancreas was slightly

5. Criticism of Glessner's experiments in Beitr. z. chem. Physiol. u. Path., vol. i, 1901.

6. Lehrbuch der Physiologie. Chemie.

7. Am. Jour. Physiol., vol. x, p. 191.

8. Ibid., table, p. 197.

9. J. Reynolds Green, Soluble Ferments, etc., Cam. Nat. Sci. Man., 1899, p. 237.



acidulated with HCl and kept at 40 degrees C for three hours. When neutralized, it was found that the trypsin had been destroyed, while the rennet or chymozin was unharmed.

W. D. Halliburton and Brodie draw a distinction between gastric and pancreatic rennet which has not been noted by previous observers. According to them the clotting indicated by pancreatic rennet is not a true coagulation, but a precipitation which takes place in a warm bath at 35 to 40 degrees C. The precipitate is finely granular and can not be detected by the naked eye. On cooling it to the temperature of the air, it sets into a coherent curd which can be again broken up by warming to 35 degrees C., when the granular condition returns, and the milk appears fluid. This may be repeated several times. Halliburton and Brodie call the proteid in this condition "pancreatic casein," and they say it can be converted into tyrein by gastric rennet.

The chymozins of different animals are not identical, and the chymozins of different organs in the same animal, as Halliburton and Brodie have shown, are not identical. The differences in the chymozins of various animals are considerable.<sup>10</sup> Most of the experiments with chymozin or rennet made prior to the publication of Pawlow and Parastschuk were made with the chymozin of the calf's stomach, and not until a comparative and quantitative study of the various chymozins has been made can it be proved that the milk-coagulating power of all chymozins is alike, or that this power is governed by the same rule with all forms of this ferment. Dilution, for instance, affects the milk-curdling power of chymozin from the pig in a different manner from the chymozin obtained from the dog. For comparing the effects of their chymozin with the results of previous investigations, it would have been necessary for Pawlow and Parastshuk to use the chymozin from the same animal.

Pawlow and Parastschuk, in attempting to prove that proteolysis and milk-curdling effects are due to one and the same enzyme, laid greatest stress on the demonstration of parallelism of effects under various chemical and physical influences, and, secondly, on proportionality of work done. To subject a digestive secretion that gives evidence of two strikingly different effects to varying external influences, and thereby showing that the effects increase and diminish together, or disappear together, can hardly be considered a satisfactory form of experimental logic to prove that these two different effects are due to one and the same molecule. The work of these authors proves that the technic and method of experimentation may be objective and perfect, and yet the interpretation or subjective deduction therefrom may be unsatisfactory.

In order to make clear my meaning I will cite the example of two well-known digestive enzymes, the actions of which occur best in a mildly alkaline medium, ptyalin of the saliva, and trypsin of the pancreatic juice. Both trypsin prepared by Kühne's<sup>11</sup> method and ptyalin can be shown to be augmented and inhibited in their characteristic effects on fibrin and boiled starch, respectively, by temperature, by chemicals and poisons, by concentration and dilution. The amount of ptyalin and the amount of boiled starch in the one case, and the amount of trypsin and the proteid on which it acts, either fibrin or boiled egg albumin, can be so adjusted that a parallelism of effects and proportionality of work done can be

EXPERIMENTS WITH DOG SALIVA AND TRYPSIN (PANCREATIC JUICE),  
DEMONSTRATING EFFECTS OF INCREASE OF TEMPERATURE, ON  
DIGESTION OF BOILED STARCH AND ALBUMIN  
RESPECTIVELY.

Canine saliva and trypsin solutions were subjected in different and separate portions to the various temperatures stated in column 1, and thereafter their amylolytic and proteolytic power tested.

Temperature. Deg. C.	SALIVA.	PANCREATIC JUICE—TRYPSIN.
	Mm. of Boiled Starch Column Digested.	Mm. of Albumin Column Digested.
10	4.20	5.52
12	4.15	5.5
15	4.25	5.9
20	4.25	6.
30	5.1	6.5
40	4.95	5.9
50	3.5	4.5
52	2.75	3.62
54	2.	3.
56	0.5	0.9
58	0.3	0.5
60	0.	0.
62	0.	0.
64	0.	0.

Both enzymes exhibit at first a slight increase of their characteristic effects followed by a gradual diminution until the enzymes are completely destroyed at 60° C., a parallelism of effects—which can also be demonstrated if both saliva and trypsin solution are poured together and a starch, as well as an albumin tubule, placed in the combined solution simultaneously. But here the action of amylpsin requires exclusion.

TESTS FOR ANY CHANGE OF ACIDITY VALUES IN THE GASTRIC JUICE  
ON STANDING AT ROOM TEMPERATURE.

Comparisons of work done by pepsin and chymozin of human gastric juices, together with quantitative determination of the free HCl and the total acidity. Gastric filtrates allowed to stand at room temperature for varying periods.

Notes.—1. Same gastric juice of Spencer when left in incubator at 36° C. began to lose its proteolytic power in 20 days. The milk-curdling power diminished more rapidly and disappeared entirely on the eighteenth day.

2. From Spencer a very large test meal was drawn, amounting to 760 cubic centimeters of gastric chyme, which was kept under experimentation 56 days.

3. In this table the figures show the proteolysis to diminish gradually from 8 mm. on January 3, to 4 mm. on February 28, but the milk-coagulating power diminishes much more rapidly and out of all proportion to the rate in which the proteolytic power diminishes. No parallelism in the diminution of these effects is here detectable.

Date . . . . .	WEINBERG.		November.					
	17	18	19	21	22	23		
Free HCl . . . . .	39	42	44	42	42	41		
Total acidity . . . . .	62	64	63	65	56	70		
Proteolysis in terms of millimeters of Mett al- bumin tubes.	4.5	4	4.5	4	4.5	4		
Chymozin: 10 c.c. milk coagulated in minutes.	3'	3'30"	3'	3'	3'30"	3'		

Date . . . . .	CARTRIDGE.		January.							
	17	18	20	23	25	26	28	30	31	
Free HCl . . . . .	74	76	76	74	74	76	72	78	74	
Total acidity . . . . .	100	104	108	104	104	104	102	106	106	
Proteolysis in terms of millimeters of Mett albumin tubes.	8	8	8	8	8	8.5	7	7.5	6	
Chymozin: 10 c.c. milk coagulat- ed minutes.*										

Date . . . . .	Dec.	January.									
		3	5	7	10	12	14	18	20	22	26
Free HCl . . . . .	65	60	64	66	70	62	64	68	70	66	68
Total acidity . . . . .	110	110	116	120	124	120	118	118	120	118	118
Proteolysis in terms of millimeters of Mett al- bumin tubes.	6.5	6	6.5	6.5	7	6	6	6.5	7	6.5	6.5
Chymozin: 10 c. c. milk coagulated in minutes.*	4'	4'10"	4'	4'	3'10"	3'40"	3'40"	3'45"	3'10"	4'	4'

\*Increasing cloudiness of gastric filtrate made the exact time of turning of the dimethyl amido benzol more difficult to recognize as the filtrate became older.

10. Pflüger's Archiv., vol. lxxix, p. 425.  
11. Unters. a. d. Physiol. Institut der Universität Heidelberg, vol. 1, p. 222.



DAWKINS.	January.				February.							
Date . . . . .	25	28 30		1	4	7	8	10	14	18		
Free HCl. . . . .	60	62	62	62	62	60	60	62	62	62		
Total acidity. . . . .	90	100	88	88	98	96	100	110	105	100		
Proteoly-is in terms of millime- ters of Mett albumin tubes.	5	4	5	4.5	4.5	5	5	5	5	5		
Chymozin: 10 c. c. milk coagu- lated by 2 c. c. gastric filtrate in minutes.	1'	1'	1'5"	1'5"	1'5"	1'5"	1'5"	1'5"	1'5"	1'5"		

WARNER.		February.											
Date . . . . .		1	2	4	6	8	10	14	16	20	21	24	26
Free HCl . . . . .		26	24	24	26	26	26	28	26	28	26	28	28
Total acidity . . . . .		66	70	72	74	72	72	72	70	70	68	70	68
Proteolysis in terms of millimeters of Mett albumin tubes.		3	3	3	3	3	3	3.5	3.5	3	3	3.5	3.5
Chymozin: 10 c. c. milk coagulated in minutes.		5'	5'	5'	5'	5'	8'30"	10'15"	10'5"	10'5"	11'	12'	15'10"

SPENCER.		February.											
Date . . . . .		1	3	6	10	14	16	18	20	22	24	28	
Free HCl . . . . .		60	59	59	58	57	55	50	50	48	48	46	
Total acidity . . . . .		65	66	66.5	67	68	67.5	68	69	70	72	74	
Proteolysis in millimeters of Mett Albumin tubes.		6	5.5	5	5	5	5	4.5	4.5	4	4	4	
Chymozin: 5 c. c. sterile milk coagulated by .2 c. c. gastric filtrate in minutes.		1'0"	1'2"	1'2"	2'0"	3'5"	3'5"	4'0"	5'5"	10'	12'5"	20'5"	

WARD.	November.														December.		
Date . . . . .	16	17	18	19	21	22	23	24	25	26	28	29	30	1	2	3	
Free HCl. . . . .	34	31	34	34	32	32	34	32	32	32	34	32	32	31	32	32	
Total acid. . . . .	48	47	48	48	48	48	48	50	50	50	49	48	50	48	48	49	
Proteolysis in terms of millimeters of Mett albumin tubes.	5	5	5	5	5	5	5	5	4.5	4.5	5	4.5	4.5	4	3.5	3.5	
Chymozin 10 c.c. milk coagulated by 0.2 c.c. gastric filtrate in minutes.	3'15"	3'15"	3'15"	3'15"	3'15"	3'15"	3'15"	3'10"	3'20"	3'20"	3'24'	5'	5'	3'	6'	8'	

PYLE.		November.			December.									
Date . . . . .		22	24	25	1	2	3	4	5	6	7	8	9	10
Free HCl . . . . .		29	29	30	30	31	30	30	31	30	31	31	31	32
Total Acid . . . . .		64	64	66	65	65	64	65	66	64	65	64	64	64
Proteolysis in terms of millimeters of Mett albumin tubes.		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.5	5.5	5.5	5.5	5
Chymozin: 10 c. c. milk coagulated in minutes.		3'30"	4'	4'	3'50"	3'50"	3'50"	3'50"	3'50"	3'20"	3'20"	3'20"	3'20"	3'20"

SPENCER.		January.																	
Date . . . . .		3	4	5	6	7	9	12	14	15	18	20	21	24	26	28	30	31	
Free HCl . . . . .		60	60.5	60.5	61	60	60	61	60	61	61	66	65	65	65	65	60	59	
Total acidity . . . . .		64	66	64	66	66	64	65	65	66	65	60	60	59.5	59.5	60	65	65	
Proteolysis in terms of millimeters of Mett albumin tubes.		8	8	8.5	8.5	8	8	8	8	8	8	8	8	8.5	8	7.5	7.5	7.5	
Chymozin: 5 c. c. sterile milk coagulated by .2 c. c. gastric filtrate in minutes.		30"	30"	30"	30"	30"	30"	30"	30"	30"	30"	30"	30"	30"	30"	1'8"	1'8"	1'8"	

shown to exist between these two ferments. If the same logic were applied to these phenomena as Pawlow and Parastschuk apply to milk-curdling and proteolysis, it would be equally possible to assert the amylolysis and proteolysis are due to one and the same enzyme, if it were not positively known that two definite enzymes were employed.

The method employed in Pawlow's laboratory to determine the degree of amylolysis is similar to that of Mett for proteolysis. Mett tubes are employed which are filled with filtered egg albumin coagulated in a

water bath, and sealed at both ends with sealing wax. For amylolysis the tubes are filled with boiled starch in a similar manner. The diastasic power is expressed by the number of millimeters of boiled starch digested in a given time.

One of the most interesting facts discoverable during persistent analyses of human gastric juices is the total absence in some of them of the milk-curdling enzyme, while at the same time the peptic or proteolytic enzyme is present. This is proved by the fact that while the filtrate from test meals, consisting of bread and water, will not curdle milk, it will give the biuret reaction after it is added to discs of boiled egg albumin or to fibrin. This occurs in certain stages of chronic atrophic gastritis, when the milk-curdling enzyme disappears before the peptic enzyme. I have also seen it in two cases of cancer of the stomach. I must emphasize, however, that I have studied the gastric juice of two persons who are normal to all subjective and objective examinations. Into the stomach of one of these persons I poured a pint of milk, and withdrawing it by the stomach tube an hour thereafter it was in the identical condition in which it was poured down through the stomach tube. Nor did this milk coagulate after it was allowed to stand in an incubator for three hours. Nor could it be made to coagulate by the addition of varying amounts of calcium carbonate, nor by the addition of 1/10 normal solution of HCl added until the normal amount which be present in the gastric juice was reached. Milk to which HCl is added in this manner will coagulate when no enzyme is present, but it takes a much longer time. Gastric juice which was boiled, and thus had its enzymes destroyed, did not coagulate milk any sooner than a solution of HCl of the same strength. In testing milk coagulation on the addition of HCl, the time in which the coagulation occurs is an important factor in the determination.

The same persons whose gastric juice could not curdle milk produced a feeble proteolytic enzyme, for the filtrate from an Ewald test meal gave the biuret reaction. This conclusion is based on the assumption that the biuret reaction is an indication of the presence of peptones. These gastric juices, although they contain no free HCl, to the ordinary color test showed a feeble dissociation of methyl acetate by the Hoffman-Ostwald method of determining the free HCl. This probably indicates that the HCl may be so loosely combined with proteoses and acid albumin that it can readily dissociate and in the presence of pepsin produce peptones, though the ordinary color tests (Congo red, tropeolin(00) phloroglucin-vanillin) are negative.

We had in these persons a demonstration of gastric juices: (1) That contained no free HCl, but combined HCl because they were capable of dissociating methyl acetate only slightly; but could form acid albumin and hemopeptone; (2) that could not coagulate milk; (3)



that gave the biuret reaction with an Ewald test meal. The conclusion seems justifiable that pepsin was present, but rennin or chymosin was absent, a conclusion which is difficult to harmonize with the view of Pawlow that the proteolytic and the milk-curdling effects are due to one and the same molecule.

As a further evidence of the differences between the chymosin of various mammalia, it should be stated that an antichymosin prepared by injecting the chymosin of the calf's stomach is not an antichymosin for the dog's milk-curdling enzyme. And, furthermore, an antichymosin (antilab) is not at the same time an antipepsin, that is, it does not arrest the proteolytic effect of the pepsin made from the stomach of the same animal from which the chymosin was prepared. If pepsin and chymosin (proteolytic and milk-curdling effects) were properties of the same molecule an antichymosin ought to be at the same time an antipepsin.

In their original article Pawlow and Parastschuk state that in their opinion chymosin acts synthetically, i. e., milk coagulation is the first stage toward the upbuilding of the new (native) proteid molecule; with this hypothesis they aim to bring their views in harmony with the modern idea of the reversible action of enzymes (Kastle and Lowenhardt). Their viewpoint then is this: Pepsin and rennin (or chymosin) represent the same enzyme molecule—only pepsin acts analytically. Rennin (or the effect we attribute to the hitherto supposed rennin) is the evidence of the synthetic effect. Recently,<sup>12</sup> however Ernst Laqueur<sup>13</sup> has given the experimental evidence that chymosin or rennin acts analytically—i. e., splitting off a part of the casein molecule.

To Dr. R. A. Warner and Dr. J. Howard Iglehart, my associates, I am indebted for control analyses and tests in arranging above tables.

### MINIMAL ALBUMIN REQUIREMENTS IN HEALTH AND DISEASE.\*

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In 1891 I published<sup>1</sup> a series of experiments on the subject of the quantity of albumin necessary to keep a human individual in a normal nitrogen equilibrium.

At that time the quantity of albumin considered necessary for an adult in 24 hours was 118 grams, these figures resting on experiments made by Voit and his pupils.

I experimented on myself for a period of thirty days. The food, which was the same in quantity and quality for every twenty-four hours of the thirty days of experimentation, consisted of meat, rice, potatoes, bread, corn-starch, eggs, milk, sugar and butter, and contained 67.80 grams of albumin. The average quantity of nitrogen excreted in the form of urea by the urine, and estimated by the Kjeldahl method, amounted to 8.23 grams for every twenty-four hours, which, computed as albumin, amounts to 51.4 grams. This would leave 16.40 grams of albumin, or 2.62 grams of nitrogen unabsorbed by the gastrointestinal tract.

The organism, therefore, in these experiments, utilized 51.4 grams of albumin in twenty-four hours. Other experiments made at about the same period all tended to indicate that the figures of Voit, viz., 118 grams of albumin, could be deviated from without any apparent inconvenience. Thus, in Rubner's experiments, but 38 grams of albumin were utilized in twenty-four hours for a period of three days, while in the experiments of Hirschfeld 35.4 grams of albumin were used per diem for a period of eight days. Other experimental corroborations offered by several other experimenters at about the same period might here be detailed, but the above are sufficient to prove that at least for periods varying from three to thirty days, the Voit figures of 118 grams of albumin, could be quite materially reduced.

Munk and Rosenheim, however, have offered, separately, experimental evidence that, at least in carnivorous animals, a decided reduction of the amount of albumin in the food for any great length of time, is followed by grave inanition.

Recently, Dr. Chittenden has revived the subject of the question of the minimal albumin requirements of the healthy man. Dr. Chittenden pursued his experiments on a large number of subjects, and extended them over a longer period of time. As in the experiments performed on myself, Chittenden found that the figures of Voit (118 grams of albumin) could be materially reduced without affecting the wellbeing of the individual.

In my paper already referred to it was contended that as long as an organism is in a state of nitrogen balance it is clear that neither the separate organs nor the entire system can be in disharmony as regards its nitrogen metabolism, and it follows from this that the quantity of albumin which is necessary to maintain an organism in a nitrogen balance, expresses at the same time the quantity of albumin which is at least necessary to repair the nitrogen waste of the fully developed organism.

These experiments are of interest to us not only from a physiologic and economic point of view, but also from a standpoint of practical therapeutics. Thus, for a number of years, I have made practical use of these facts where it is desired to reduce the albumin metabolism in Bright's disease, and where it is necessary to diminish excessive uric-acid production, which accompanies various diseases.

So, too, are these facts of importance where the degree of gastric albumin digestion is below the normal, and where it is desired to burden the stomach as little as possible with albuminous foodstuffs.

Likewise is this subject of significance in some cases of intestinal indigestion, with accompanying toxic symptoms, although, unfortunately, our knowledge of the chemistry involved in this class of cases, is not as exact nor as precise as in cases of purely gastric origin.

Of significance also is the subject of minimal albumin quantity in connection with the criticism of the one or two meal a day fad, which is being so widely recommended by both lay and medical advisers. I say fad advisedly, for while there are some individuals with active digestion who thrive on two or even one meal each day, the average person, and particularly the great majority of stomach patients, fare much better where the food necessary in twenty-four hours is divided into a number of meals. In most stomach patients the question arises, how much or how little albumin should be ingested to meet satisfactorily the abnormal conditions of the gastric secretion and motility; and it is in these cases that the subject of minimal or maximal albumin

12. This highly important insertion was made possible by the arrival of the journal quoted while the proof of this article was being read.

13. Hofmeister's Beitr. z. chem. Physiologie u. Path., vol. vii., p. 273; also Biochem. Centralblatt, vol. iv., p. 333.

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Ueber die Grösse des Eiweissbedarfs beim Menschen. Deutsche med. Wochsft., 1891, No. 48.



quantity, and the number of meals necessary in twenty-four hours are of the utmost importance. A logical answer as to the number of meals we should take in twenty-four hours can only be given after making a thorough examination of the digestive and motor functions of the stomach; and it follows, therefore, that no absolute rule can be laid down which can be applied indiscriminately to every individual. It has been shown by experimentation that the average healthy individual digests the quantity of food required in twenty-four hours, more effectually and thoroughly, when it is divided into a number of meals than when it is taken at one time, and we also have learned by practical experience, as one would *a priori* expect, that in the stomach patient with weakened digestive action, this is even more true than in the healthy individual.

Further experimentation and observation will undoubtedly prove that the requisite albumin quantities necessary to maintain normal nitrogen equilibrium will more closely approach the figures of my experiments than those of Voit.

The occurrence of various digestive and metabolic abnormalities and deviations, both pathologic and physiologic, however, should warn us against an irrational acceptance and application of the minimal albumin figures.

I come in contact with scores of individuals who require large quantities of albumin to combat certain gastric abnormalities; and others, again, who likewise require an increased albuminuration in consequence of the existence of digestive and metabolic disturbances which make the normal fat and carbohydrate quantities inadmissible and injurious.

Again, there is another class of individuals which requires forced albumin feeding in consequence of the existence of some temporary or permanent condition of inanition.

It is evident, therefore, how fallacious an indiscriminate acceptance of the minimal albumin figures would be.

In fine, it may be said that while the experiments on minimal albumin quantities prove that the average individual may and usually does eat too much albumin; and while probably 60 to 80 grams of albumin are nearer the normal requirement than the 118 grams of Voit, we should bear in mind that individual cases may require even much larger quantities of albumin than those called for in the Voit formula.

#### THE FATIGUE OF COLD-BLOODED COMPARED WITH THAT OF WARM-BLOODED MUSCLE.\*

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Our knowledge of the physiology of muscle has been obtained chiefly through the study of cold-blooded animals. Especial stress has thus far not been laid on the fact that the muscles of certain animals are subjected throughout life to a moderately high and fairly constant temperature, while with others the temperature is usually much lower and variable.

The question has hardly been raised as to whether such different physical conditions connote different physiologic characteristics. *A priori* we might expect such to be the case, and the observations here reported actually demonstrate a difference in one respect, namely, in some of the physical phenomena of fatigue.

It is commonly believed that the main physical characteristics of the fatiguing, as distinguished from the fresh muscle, are a slowing of the whole process of contraction, which is manifested by a lengthening of the descending portion of the muscle curve; and a diminution in the lifting power of the muscle, which is manifested by a decrease in the height of the curve. This belief arose from a study of frog's muscle, where both these phenomena are pronounced.

Several years ago I called attention to the fact that the slowing in the process of contraction was shared in part by the phase of shortening of the muscle, as well as by that of lengthening. This phenomenon is manifested graphically on the ascending portion of the muscle curve by a progressive increase in the horizontal distance between the point of beginning and the apex and is most pronounced long before exhaustion has begun. It is far more prominent in turtle's muscle than in frog's, being there almost equally evident with the two other phenomena mentioned. At the same time I showed that a different picture is presented by the fatiguing muscles of the cat, inasmuch as with them neither the phase of shortening nor that of lengthening is slowed, as the lifting power is diminished. Here was a marked difference between the muscles of two cold-blooded animals on the one hand and those of a warm-blooded animal on the other.

The present paper deals with the question whether this difference is directly due to the temperature to which the muscles are customarily subjected.

Of cold-blooded animals, the frog and the turtle have again been studied, the gastrocnemius, the sartorius and the gracilis major of the former, and of the latter the coraco-antebrachialis profundus, the dorso-occipitis, the coraco-radialis superficialis, the pubo-tibialis, the ileo-fibularis, the ischio-caudali-tibialis. Some of these muscles are red and some white in color. In all cases the muscles were excised, suspended in a moist chamber, attached to a writing lever, subjected to a constant temperature, and stimulated electrically by single induction shocks, while the contraction curves were recorded by strictly isotonic methods. No fundamental differences were manifested by curarized and non-curarized muscles. In general, two temperatures were employed, a high and a low, of approximately 12 C. and 34 to 37 C., the latter being as high a temperature as can safely be employed without coagulating the muscle proteids. At the low temperature the customary phenomena of fatigue are present: Slowing of the phase of shortening, which is slight in the frog and pronounced in the turtle; slowing of the phase of lengthening, which is marked in both species; and diminution of the lifting power. The result is not fundamentally different when the muscles are subjected to the higher, practically mammalian, temperature. The two phases of the contraction process are quickened by the heat, but their slowing in fatigue is still present, phenomenally so in the turtle's muscles. These phenomena of fatigue are, therefore, in cold-blooded muscle independent of temperature. Furthermore, inasmuch as curarized and non-curarized muscles do not differ in these respects, the inference is justified that the phenomena in question belong to the muscle protoplasm rather than to the intrinsic nerve tissue.

Of warm-blooded animals, the cat, the rabbit, the white rat, the white mouse, the guinea-pig and the woodchuck have been studied, the muscles being the gastrocnemius and the extensor longus digitorum. It was found possible to treat the muscles in the same way as those of the cold-blooded animals. Since their nerves

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



die very quickly, no curare was employed. Their muscle substance remains irritable for a sufficiently long time to enable excellent fatigue records to be obtained. At the temperature of the body there is a progressive diminution in the height of the curves, with no lengthening of either the ascending or the descending portion. If, instead, the muscle be cooled to 12 C., and then fatigued, essentially the same result is obtained. There is, however, a broadening of the upper portion of the curves, indicating a tendency of the cooled tissue to linger in the contracted state; and this phenomenon, besides those above mentioned, is the most marked feature of the record of fatigue of the cooled mammalian muscle. While constantly present in the muscles studied, it is not sufficient to amount to a lengthening of the contraction process as a whole, with the single exception of the gastrocnemius of the white rat. In eight of the ten experiments performed with that muscle, careful measurement showed a slight lengthening, amounting in the maximum case to barely 0.7 of the original curve. This is almost a negligible quantity in comparison with the much greater lengthening exhibited by the muscles of both the frog and the turtle.

In view of the above facts, the following conclusions seem to be justified:

1. There is a physiologic difference between cold-blooded and warm-blooded animals in the mode of fatigue of their excised, voluntary muscles.

2. One of the characteristic phenomena of fatigue of the excised voluntary muscles of cold-blooded animals is a pronounced slowing of the whole contraction process manifested by a lengthening of the muscle curve. This is most pronounced at low temperatures. It is diminished, but not obliterated, at high temperatures.

3. The excised voluntary muscles of most warm-blooded animals fatigue without a slowing of the contraction process as a whole. At low temperatures there is observable a broadening of the muscle curve, caused by fatigue, which, in individual cases, may result in a minute lengthening of the curve as a whole.

4. The above facts suggest that the general physiologic differences between the muscles of cold-blooded and of warm-blooded animals are not due to immediate differences of temperature. The existence of a homeothermal condition and the constant subjection of the skeletal muscle system to a uniform temperature, seem to impress on that system distinctive physiologic peculiarities.

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## LANDRY'S PARALYSIS.

WITH REPORT OF CASE.\*

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To the pathologist and clinical observer, acute ascending paralysis is a malady of more than ordinary interest. For nearly fifty years it has been known and studied, yet little light has been thrown on the essential pathologic process which is the basis of this remarkable disorder. Since Landry, in 1859, wrote his classic treatise on the subject, many efforts have been made to work out a solution of the perplexing problem, but with far from uniform results. Reasoning from the association of a flaccid paralysis, with preserved electric irritability and absence of trophic symptoms, Gowers ad-

vanced the theory of a toxin acting on the arborizations of the pyramidal fibers in the anterior horns of the spinal cord in a manner analogous to the effect of curare on motor-nerve terminations in muscle. This hypothesis, however, has never been reinforced by the conclusions of other investigators.

There are good grounds for believing that bacteria or the products of bacteria or toxic elements elaborated within the body having a selective action on motor neurons play an important rôle in the causation of this disease. Streptococci, staphylococci, diplococci and rod-like bodies resembling those of anthrax and typhoid have been noted by competent observers in the spinal cord in typical cases. It is quite conceivable that a variety of toxins may have in common the property of exerting a more or less profound influence on motor neurons, just as there are several well-known substances, organic and inorganic, which possess this singular power. The precise way in which these toxins affect the integrity of the motor elements has not been definitely determined. Considerable difference of opinion has always existed as to whether the motor structures in the cord or in the peripheral nerves were the parts primarily subjected to the morbid change. Some authorities, notably Ross, have maintained that the affection is a peculiar form of multiple neuritis. This view is based, not on the clinical manifestations, but on the finding of degenerative changes in the peripheral nerves in certain cases. Such findings, however, are by no means frequent, and in many cases the most careful scrutiny has failed to disclose any histologic alterations in either the peripheral nerves or spinal cord. Perhaps the most constant features found postmortem in typical cases are acute enlargement of the spleen and engorgement of the lymphatic glands, especially those of the mesentery, conditions which clearly indicate the invasion of the system by a toxic principle. As far as the nervous system is concerned, wherever the primary point of attack may be, it is evident that the pathologic change is an extremely subtle one; and of late the assumption has been gaining ground that in all typical cases this change affects the gray matter in the anterior horns of the spinal cord. It is probable, also, that in cases in which the toxicant is exceptionally virulent involvement of the anterior roots may follow, and a neuritic condition be induced in the peripheral nerves as a later and secondary consequence.

In the last score of years many important advances have been made in our knowledge of the physiology of the nervous system. In the light of this knowledge we are often enabled to reason from symptoms to the exact site of the pathologic process. The light gleaned from such knowledge in typical cases of acute ascending paralysis leads us to suspect that the motor cells of the anterior cornua of the spinal cord are primarily, and perhaps in most cases solely, concerned in the morbid action, and that with improved staining technic it will yet be possible to render apparent cellular changes which can not now be made manifest. It is probable that whatever changes the motor cells undergo are of a transitory character and of a nature to affect temporarily their function only, since the majority of patients who recover do so completely. Etiologic facts support in a striking way the theory of a toxemic state or dyscrasia as an essential and antecedent condition. By far the greater number of recorded cases have followed in the wake of sundry infectious diseases, local or systemic disturbances of a septic character, or have been

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



preceded by wounds, more or less trifling, which had served as points of infection. Some cases have been ascribed by certain authors to exposure to wet and cold, especially when this exposure was associated with alcoholism, but the precise way such causes operate is difficult to determine if we are to believe Landry's paralysis to be separate and distinct from multiple neuritis. If such causes were potent factors, it would be quite easily understood why most cases have been observed in males in the third decade of life.

So closely do many cases parallel multiple neuritis that it is not always easy to distinguish between the two disorders. In typical cases the diagnosis is based largely on negative evidence. Thus, in Landry's paralysis there is generally an absence of pain or tenderness along nerve trunks and of sensory impairment, trophic symptoms or electric alterations. The mode of onset of paralysis, too, is distinctive, being, as a rule, more abrupt, speedily completed and more profound, a distinguishing characteristic being the progressive implication of groups of muscles, commonly from below upward, and never beginning in both upper and lower extremities at the same time. Perhaps the cases which offer the greatest difficulty are those in which peripheral neuritis, to a greater or less degree, coexists with the spinal lesions. Such cases may have so much in common with multiple neuritis as to render a positive diagnosis practically impossible. Landry's paralysis rivals acute anterior poliomyelitis in the rapidity of its onset, although in the latter malady the affected areas, as a rule, are more circumscribed and the muscles are paralyzed *en masse* rather than in successive groups. The nature of the paralysis has a close correspondence in the two conditions, being in both flaccid, purely motor and with abolished reflexes, the sole distinguishing point of difference being the presence or absence of changes in electromuscular excitability.

A remarkable feature of this strange malady is its extremely high death rate, contrasting sharply in this respect with both multiple neuritis and acute anterior poliomyelitis. The recorded results of several groups of cases occurring in this country and in Europe give a mortality varying from 50 to 80 per cent. In the majority of cases a fatal result follows within a week or ten days. The incidence of bulbar symptoms is of grave significance, death, as a rule, occurring from interference with the cardiac or respiratory centers. The occurrence of mental symptoms is of evil omen, as indicating a system especially susceptible to toxic influence or a high grade of virulence of the toxic agent. Recissions of mental or bulbar symptoms are hopeful indications. The degree of rapidity of onset and the degree of completeness of the paralytic condition may be taken as a criterion of the intensity or the severity of the pathologic process, and consequently of the comparative gravity of a given case. Recovery in favorable cases is always slow, but frequently complete. In protracted cases, the paralyzed limbs may or may not undergo atrophy. Considerable uncertainty exists on this point; doubtless because of the rarity of the disorder so few opportunities have presented for studying the disease in its later stages. In two rather protracted cases I have seen, the patients had become quite emaciated, but the muscles had preserved, unchanged, their electric irritability.

The following case which had been under my observation for a period of two years well illustrates the characteristic onset and symptoms of Landry's paralysis, be-

sides presenting some peculiar phases of the affection which are interesting and suggestive:

*Patient.*—J. B., a young man, aged 23, was born and reared on a farm near Saginaw, Mich.

*History.*—There is nothing particularly noteworthy in either his family or personal history. He had been a moderate smoker, but never addicted to intoxicating liquors in any form. At the age of 10 he had been operated on for appendicitis. Early in the summer of 1901 he was employed as fireman on the steamer *Mccoosta*, sailing between Cleveland and Lake Superior ports. On June 26, 1901, while at Fort William, he, in common with the rest of the crew, was vaccinated by the health officer of that port. A very sore arm followed, with considerable swelling of the glands in axilla.

*Course of the Disease.*—In a few days he became subject to chilly sensations, alternating with transitory spells of fever. He suffered, too, from occasional attacks of vertigo, and from rather profuse sweatings. In spite of these symptoms, he continued at his work all the way down to Cleveland, which was reached ten days later. Here he began to experience in the right foot a peculiar feeling of weakness, which gradually ascended the limb to the hip. In a few hours a like sensation was felt in the left foot, and steadily progressed upward. Recognizing that something was seriously wrong, he entered the Marine Hospital in Cleveland. Next day the condition of weakness in the legs had deepened into absolute paralysis. The arms soon began to suffer in a similar fashion, the right being first affected from the fingers upward. Within a period of eighty-four hours all four extremities were rendered powerless, with flaccid muscles and abolished reflexes. The paralysis of the arms was slightly less profound than that of the lower limbs, but he was unable to feed himself or to use them for any purposes whatever. Up till this time, and during the further progress of the case, there was an entire absence of pain, of nerve-tenderness in any degree and of sensory symptoms of every kind. There was no headache or mental disturbance. The functions of the bladder were not interfered with. At no time were there any edema, glossy skin or epithelial changes; nor were the coldness and lividity of the limbs, so often seen in anterior poliomyelitis, ever noticed. Before the end of the first week symptoms appeared indicating extension to the medulla. The lips became paretic, and the tongue, palate and throat were likewise affected, so that speech and swallowing became seriously impaired. Diplopia appeared and eventually convergent strabismus and ptosis. The heart, too, began to manifest disturbance of its rhythm, with slight dyspnea and occasional spells of tachycardia. So deplorable was the condition of things that a telegram was sent to the patient's father, urging him to come at once if he wished to see his son alive. On the father's arrival, he decided to take the boy home, and accordingly a journey of nearly 300 miles was made by rail, with the patient on a cot in the baggage car. He stood the trip very well, and after being for a time at home entered the Saginaw Medical College Hospital as one of my clinic patients.

During the period of several weeks the case exhibited no material change in any respect. Except at the stage of onset, the temperature was not elevated, but occasionally showed a subnormal tendency. He had no pain and no particular distress aside from the difficulty in swallowing, and the utter inability to move a limb or to express himself by the use of speech. He slept well and took a fair amount of nourishment, but his muscles had markedly diminished in volume, more, perhaps, than could be accounted for by mere disuse, yet a response, more or less prompt, could everywhere be obtained to the faradic current. After two months the bulbar symptoms began slowly to recede, and two weeks later the dysphagia, dyspnea, difficulty of articulation and ocular derangements had wholly passed away. The paralytic condition of the limbs, however, remained unchanged. No contractures or pedal deformities had occurred. The first sign of motor activity appeared three months after onset, and consisted of slight flexor movements of the left arm, the limb latest to become affected. Similar movements were soon pos-



sible in the right arm, and a little later in the left leg; the right lower limb—the first to become paralyzed—lagged considerably behind its fellow. The flexor groups of muscles, it was observed, manifested evidence of returning power very largely in advance of the extensors, which had to be reinforced by mechanical and electric stimulation. This lack of correspondence between flexors and extensors produced a condition of wrist drop and foot drop highly suggestive of multiple neuritis.

*Treatment.*—In the general treatment of the case reliance was placed on strychnia, iron, arsenic, the hypophosphites and glycerophosphate compounds.

*Result.*—The most gratifying results seemed to follow from a simple solution of the glycerophosphate of iron, together with moderate doses of strychnia. The return of muscular power, however, was an extremely protracted process, nearly eight months having elapsed from the time of onset before the patient was able to stand unaided, and fully ten months before he could walk more than a few steps without fatigue. After a year, his strength improved more rapidly, but nearly all of the second year was required in regaining something like his former vigor. In June, 1903, after two years of illness, he entered on the duties of a mail carrier over an R.F.D. route, a vocation he has since followed satisfactorily in all weathers without the loss of a single day.

Previous to his illness his usual weight was 165 pounds; since his illness his weight has never exceeded 135 pounds. He manifests at times a previously unusual tendency to trip over words in speaking. He still exhibits slight weakness of ankle on both sides, most marked on right. The knee jerks have thus far failed to return.

## MULTIPLE NEURITIS.

WITH REPORT OF FOUR CASES.\*

DAVID I. WOLFSTEIN, M.D.

CINCINNATI.

The principal interest in neuritis centers in the fact that, on the one hand, it resembles mere functional affections like neuralgia, which is a disease of the sensory nerve characterized by pain in the course of the nerve, or in its end distribution; on the other hand, it may be so extreme and grave in its manifestations as to be confounded with even the most serious affection of the cord itself. The term neuritis implies that there is an inflammatory condition of the nerve affected, though the diseased condition is not necessarily inflammation in its usually accepted sense, but may also be a degeneration, though with a tendency toward repair.

A neuritis, of course, may be confined to a single nerve when its symptoms will be those of the nerve affected.

As a matter of experience, however, we are more interested in that form of neuritis which affects many nerves simultaneously. This form we call multiple neuritis or polyneuritis. As regards causation, multiple neuritis follows various factors, which may be grouped as follows:

First. Toxic cases, due to the action of the poison derived from within the body. The poisons that produce most of the cases that we meet with are alcohol and mercury and lead, and occasionally arsenic; of course, there are many other toxic substances which produce this condition, but which will not be discussed here, as we see them less frequently.

Second. The second group is due to some agent acquired or developed within the body, that is, infectious forms which may accompany or follow most of the acute

infections. As an agent which can give rise to this condition besides many other acute infections, especial attention should be directed to influenza, gonorrhea and the puerperal state. As a matter of knowledge, it is well known that the disease sometimes takes an epidemic form, beriberi.

Third. A large class of cases is due to general diseased states of the body, of whose origin we are not informed, such as rheumatism, acute diabetes, anemia, tuberculosis, syphilis, etc.

Fourth. There is another group of cases which followed exposure to cold or developed apparently without determinable cause.

As a type of neuritis due to alcohol, let me give the history of the following case:

CASE 1.—Mrs. M., a young woman, aged about 30 years, who had been suffering for three or four months previously with very severe pains and with growing weakness in the extremities, called me to see her at a time when she was bedridden and unable to move the feet. She was very emaciated, her digestion was very much impaired, examination of the viscera revealed nothing abnormal except the heart action, which was very much accelerated, with very weak pulse. The pupils reacted promptly. There was no involvement of any of the cranial nerves. She complained greatly of extreme sensitiveness, but there was little numbness and tingling, though previously she had complained much of these symptoms. Pressure along the course of the large nerve trunks was painful. The muscles were relaxed and flabby, both of the arms and legs. The wrists and feet presented the well-known drop condition. The wrist drop was very marked, as was also the foot drop. As is well known, this wrist drop is due to a paralysis of the extensor muscles. The legs were very much emaciated and power was practically abolished. The paralysis was so complete in the lower extremities, with an inflammation of the spinal cord, that myelitis might have been suspected. A negative symptom of great importance was the absence of any interference with the function of the bladder or rectum, and another negative symptom, to which Star calls attention, was the absence of pain or anesthesia about the trunk. As is well known in the various forms of disease of the cord, like myelitis, or locomotor ataxia, such disturbance of sensation on the trunk is present frequently.

In making the diagnosis, the family history was taken into consideration, and a most shocking state of affairs was elicited. The husband was a confirmed drunkard and had induced his wife to follow in his evil tendency, and, in fact, a little child of this couple had also been taught to drink now and then. The patient had been drinking steadily for two or three years previous to the time I saw her. She finally developed a condition of mental confusion and uncertainty as to her whereabouts, and exhibited a certain hebetude of mind which is a very frequent accompaniment of severe forms of multiple neuritis, especially of the alcoholic type, and is known as Korsakoff's insanity.

There was great loss of memory of recent occurrences and much insomnia; later there were hallucinations of sight and hearing. The knee jerks were gone, as were also the ankle jerks. The paralysis began in the feet and legs, extending upward rapidly, and soon involved the arms and forearm. The muscles did not respond to the Faradic current, and when tested with the galvanic current showed the presence of degeneration.

Only a strong current elicited a contraction. There was great sensitiveness to manipulation, and the tactile sense was very much blunted. This case was so extreme and the general condition of the patient so depraved that all attempts at treatment were futile and death ensued, due to collapse.

Let me now give you an example of the milder form, in which the toxic agent was the poison of influenza, under the head of Group 2:

CASE 2.—Mr. B. came to his physician's office complaining of great pain in the lower extremities, which had not yet become severe enough to prevent him from walking. This pain in the course of two or three days increased and there was progressive

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



loss of power until patient was unable to walk and resorted to the bed. He was then referred to me about three weeks later, and when I saw him the legs could not be moved. There was much pain along the thigh and calves, the skin was very sensitive to touch, the patient could not flex the feet or the legs, and in attempting to extend or stretch the feet the very slightest pressure would overcome the effort.

The knee jerks were very feeble, but the muscles were not as yet atrophied; the distribution following the rule of multiple neuritis was quite symmetrical. The upper extremities were not involved. The patient was afflicted with an aortic lesion and developed at the same time a pneumonia, which ran a very irregular course. It was of the bronchopneumonia type and lasted about three weeks. There was no definite crisis. The neuritis ran a very favorable course, the knee jerks reappeared after about six weeks, although power and ability to move the legs slightly appeared before the knee jerks were re-established. It is rather peculiar for multiple neuritis following grip that the sensory symptoms are more pronounced than the motor symptoms and there is complete recovery usually within six weeks. The patient was able to move about, had perfect control of the legs, and there was no marked tendency to ataxia, although in the first weeks of my observation of the case there was some incoordination of movement. These cases of multiple neuritis following grip have been described by several writers, among them Mills and Star.

The third case which I wish to describe belongs to the third group, and was due to some condition of lowered nutrition of undetermined nature.

CASE 3.—Miss W. was referred to me by Dr. Belt, of Milford, Ohio. Six months previous to the time I saw her she had had pain in the epigastrium and was treated for what was evidently ulcer of the stomach. There had been pain, tenderness over the epigastrium and also over the dorsal spine, vomiting, increased acidity and emaciation. Under appropriate medical treatment this condition was recovered from, but the patient was left in a very profoundly anemic state. She was brought to the city in a pitiable condition of exhaustion with very marked hysterical mental condition. She was extremely emaciated, the arms were but slightly involved as regards movement, although she complained of great pain and marked sensory disturbance, burning and tingling and numbness in the upper extremities.

The legs were completely paralyzed, the knee jerks and ankle jerks could not be obtained. The patient was unable to move the legs at all except from the hips, although there was a slight movement in the toes. There was no disturbance of function of bladder or rectum. There was no pain or anesthesia over the trunk. Tactile sensation was diminished over the legs on both sides, but not over the thighs to any extent, but pain and temperature sense were intact.

There was some loss of muscle sensation, that is, she did not know the position of the big toe when first seen. The patient was under treatment at Christ Hospital for three months and on forced feeding and very careful electric treatment, in conjunction with tonics and, of course, rest, a certain amount of power returned.

The muscles were still flabby and wasted, the response to the interrupted current was still quite feeble, and the galvanic current produced a slow wavelike response, indicating that recovery from degeneration had not yet persisted very far.

After a further three months the patient was so far recovered that she could walk around the room, with the aid of crutches, and weight had increased very much; all pain had disappeared. Her gait was very typical for multiple neuritis. On account of the weakness of the peronei and the anterior tibialis, she lifted the whole foot as if she were tripping over her own toes, so-called steppage. She is at present almost fully recovered. This case was so extreme that a suspicion of a cord lesion due to either pernicious anemia or to subacute inflammation of the cord was entertained; however, the character of the sensory disturbance, the evidence of slight power of movement and the preservation of bladder and rectum functions, combined with other symptoms, enabled me to exclude any other condition than a grave multiple neuritis.

The fourth case was one which I saw with Dr. E. W. Mitchell of Cincinnati, in consultation.

CASE 4.—This was a little boy about 8 years old. There had been no previous history of infectious disease or of any other illness so far as known. The condition came on more or less acutely without any fever. The child complained bitterly of pain in the legs and arms, and pressure along the thigh and calves elicited shrieks. Attempts to move the legs produced great pain; the reflexes at the knee were absent. There was no evidence of any swelling of the joint, no redness, no fever. Acute rheumatism could be readily excluded.

The little patient was unable to walk, and I was informed that only the slightest motion was possible with the legs, though the arms were not involved to nearly the same degree. The involvement of both extremities, as well as lesser degree of involvement of the arms, the absence of marked wasting, the intact state of the sphincters and the absence of disturbance of sensation, except that of hypersensitiveness, enabled me to rule out in the case of this little child infantile spinal paralysis, both of the cord and of the brain, as well as myelitis. The disturbance was too marked, and the pain on pressure and on attempting movement was too pronounced to countenance a diagnosis of hysteria. I mention this because not infrequently in children we encounter cases of hysteria where no condition of paralysis is simulated.

I have quoted these four cases as fairly illustrating the different types of multiple neuritis. I do not wish to make this paper unduly long, but would like to call attention to some points in the differential diagnosis.

Neuralgia could generally be excluded, as the symptoms are sensory in character and never lead to paralysis, though sometimes there is inhibition of movement on account of pain, but it is not persistent. In nearly all cases of neuritis, even of single nerves there is an involvement of the motor fibers of the same degree as the sensory fibers. The presence of hyperesthesia and various forms of paresthesia is quite marked. The distribution of the anesthesia in well-developed cases corresponds to the distribution of the affected nerves as they course toward their periphery, and is unlike the distribution of the anesthesia of the lesions in the cord which occupies distinct zones or segments. The symmetrical distribution on the two limbs is also quite characteristic. Time is too short to take up the peculiarities in the distribution of the paralysis. This may come on quite gradually or so rapidly that within a couple of weeks the patient is helpless.

In some cases it does not advance to extreme feebleness. The extensors of the wrist and fingers and the peronei and the anterior tibial muscles in the legs are muscles first affected. It is only in very severe cases that the diaphragm or the facial muscles are involved. In my alcoholic case, above quoted, toward the end there was paralysis of the muscles concerned in swallowing. In children we must be careful to exclude infantile spinal paralysis, so-called anterior poliomyelitis. It must be remembered that as between myelitis and neuritis, if the attention be directed to the following points, the two need not be confused; in neuritis the function of bladder and rectum are maintained, girdle sensation is very rare, bed sores and cystitis likewise.

In neuritis a paralysis begins in the legs and forearms at the same time, and usually does not extend to the thighs and arms and rarely touches the trunk. It is only in the fatal cases that the abdominal and respiratory muscles are involved.

In neuritis the anesthesia is chiefly observed in the hands and feet, in the forearms and legs, and rarely reaches the arms and thighs. Tenderness in the nerves and muscles of the extremities belongs to neuritis, but not to myelitis. It ought not to be difficult to separate neuritis from locomotor ataxia. In practice it will be well to remember neuritis when attempting to establish positively the diagnosis of acute articular rheuma-



tism, but in the latter the febrile course and characteristic appearance of the joints and the well-known tendency to the fugacity of the symptoms ought to prevent any confusion.

#### PROGNOSIS.

Except in the acute, grave cases, the prognosis is relatively very good. Of course, in those who are steeped in alcohol, lead or arsenic, with impaired constitutions, we can hope for less complete or no recovery. With patience and care a favorable prognosis may be pronounced in most cases of multiple neuritis.

#### TREATMENT.

Rest and appropriate nutrition and the removal of exciting cause wherever possible are the principal indications. In the early stages, when the disease has become well established, Star thinks well of the salicylates. The hyperesthesia should be combated by wrapping the parts in wool or light bandages or by applying soothing applications. Malaria, syphilis and lead require the usual treatment.

In alcoholics much skill is required in controlling the amount of alcohol that should be given and determining when it should be withdrawn. Where there is any chronic condition I agree with Star that we obtain the best results from strychnin, arsenic and the glycerophosphates, gentle massage, warm baths, electricity, and only the galvanic current should be used. The object of these latter remedies is, in the first place, to prompt a repair of the diseased nerves and to keep the muscles in a state of good nutrition while such repair is taking place.

The object of this paper has been to call the attention of the profession more particularly to this form of inflammation or degenerative changes in the nerves and to point out in a brief way the characteristic features of multiple neuritis as distinguished from disease of the spinal cord.

#### DISCUSSION

##### ON PAPERS OF DRs. M'GREGOR AND WOLFSTEIN.

DR. H. T. PERSHING, Denver, reported briefly two cases which he saw recently and which had some bearing on the subject. In one case the patient began to have the unmistakable symptoms of multiple neuritis affecting both legs below the knees, with severe pain, preventing sleep at night, and gradual weakening of the muscles, with no disturbance of the bowels or bladder, and no affection of the trunk or of the arms. It was recognized as a case of multiple neuritis, but it was quite difficult to find the cause. The man was a metallurgist and had invented a process for the separation of different kinds of ore. That led his physicians to suspect that arsenic might be the cause of the symptoms, especially as the arms were not involved and the pain was prominent. Examination of the urine showed that the man constantly eliminated a small quantity of arsenic. Very small doses of iodid of potassium seemed markedly to increase the pain, so that he objected very decidedly to taking it. The family physician and Dr. Pershing both thought at first that this might be imaginary, but they came to the conclusion that it was not, and that the increase in the pain could be explained as Gowers explains the aggravation of the symptoms due to mercurial poisoning, as when iodid is given it makes the metal more soluble. This man made a complete recovery, although he had to be kept away from the ores that contained arsenic. In the other case, a man whose character was in general irreproachable, during the first week in July did an unusual amount of muscular work; he carried some boards, sweated profusely, and was rather exhausted by the heat. On the Fourth of July he was with some friends, and they drank a considerable quantity of beer, which he said was stale, and ate some lobster. He had a very severe attack of acute indigestion; he vomited and showed every indication of ptomain poisoning, and the prostration was great.

Before he recovered from that attack, which lasted two or three days, he noticed a weak, heavy feeling in the legs, which gradually developed into numbness and very pronounced weakness, so that about two weeks later, when Dr. Pershing saw him in consultation, he had the typical symptoms of multiple neuritis, and was barely able, with the greatest difficulty and pain, to walk about the room. The arms were slightly affected and there was some paralysis of the wrists and fingers. The prognosis seemed favorable and he made a steady and complete recovery. About a year later the knee jerks were normal.

DR. D. R. BROWER, Chicago, said that in acute Landry's paralysis his observations have led him to suppose that the great majority of cases so diagnosed are cases of multiple neuritis. He thinks that too much importance is sometimes attached to the condition of the bladder and rectum in differentiation. He has seen cases in which for a time control of both of these functions was lost, and in which the subsequent history made the question of diagnosis of multiple neuritis very easy. This is especially true of cases in which there is some mental disturbance. While it is undoubtedly the usual condition that the motor and sensory symptoms go hand in hand, yet there are cases in which there is an entire absence of sensory symptoms, and these cases are by no means rare. There is a form of multiple neuritis that requires more attention on the part of the profession than it has so far received; that is beriberi. In the republic of Panama in December, 1904, it was one of the principal causes of death, and it prevails to a very large extent in all our recent territorial acquisitions. Dr. Brower has seen a few cases in which recovery seems to have been promoted by large doses of quinin in connection with strychnia. The cause of death in Landry's paralysis, as in multiple neuritis generally, is circulatory and respiratory failure, and he thinks that all the cases should be very carefully watched with reference to these important functions and timely aid given. The next important principle in treatment is careful attention to elimination.

DR. WILLIAM HOUSE, Portland, Ore., asked Dr. Wolfstein whether the use of antitoxin has increased or decreased the number of cases of postdiphtheritic neuritis.

DR. H. G. BRAINERD, Los Angeles, asked Dr. Wolfstein whether or not in those unfortunate cases which resemble Korsakow's insanity he noted any falsification of memory, as well as loss of memory. The difficulty of making a diagnosis is great in certain cases. Dr. Brainerd remembered watching with interest a case in which there was a question as to whether or not it was ordinary chronic neuritis or leprosy neuritis. It was nearly a year before it was decided that it was a case of leprosy neuritis. Dr. Brainerd watched the case for a period of six or seven years, during which time the disease did not make much progress, and no other evidence of leprosy was shown. Recently he had under his care a patient with multiple neuritis, not a young man, whose occupation, that of a cement contractor, kept him out of doors most of the time. He was of such rugged build that he would not be supposed to be susceptible to changes in the weather. For several years he had been in the habit of using bromo seltzer daily. When Dr. Brainerd first saw him, two weeks after the beginning of the attack, his face was purple and his finger nails were blue. As there had been no unusual exposures to inclement weather, and he could learn of no other cause, Dr. Brainerd believes that the toxic effects of the bromo seltzer were the cause of the neuritis. Recently he saw a case of neuritis in a Baptist deacon just past middle life, and who, from his connection with the church, might be supposed to be beyond reproach. Thinking that the man might be in the habit of taking something containing arsenic or alcohol, Dr. Brainerd asked if he were using anything of the kind, at which the family became very indignant, but the man finally admitted that he was in the habit of taking a bottle of vinegar bitters every day or two, and had been for a period of many months. This was undoubtedly the cause of his neuritis.

DR. H. A. TOMLINSON, St. Peter, Minn., called attention to the fact that bromo seltzer is said to contain acetanilid.

DR. ROBERT MCGREGOR, Saginaw, Mich., thinks it is desirable that such cases should be reported and postmortem findings



recorded wherever possible. The systematic study of a satisfactory series of cases would enable physicians to know more clearly the line of demarcation between Landry's paralysis and multiple neuritis. It is, of course, absurd to suppose that cases of this character should conform to any conventional type. There will be considerable variations, but there are three points which Dr. McGregor believes are fairly constant and which serve as guides in the diagnosis of any form of Landry's paralysis: 1, The toxic element as a causative factor; 2, the implication of the motor elements of the spinal cord; 3, rapidly ascending paralysis and, in rare cases, descending in character—a paralysis which is flaccid and purely motor and in which the electric irritability of the muscles is little, if at all, changed.

DR. DAVID WOLFSTEIN said that a diagnosis of Landry's paralysis should not be made simply because of the severity of the symptoms. He declared that it is unfortunate that the profession has departed so far from the ideas of Landry. If one would stick to Landry's original definition of the disease as one involving only the motor nerves and rapidly ascending, very often occurring in cases in which there is no disturbance of sensation, there would be less confusion. Dr. Wolfstein said that Dr. Brower's criticisms are hardly justified. In these cases of neuritis accompanied by insanity there was no actual loss of function of the bowels or bladder. In reply to a question, he stated that there is no doubt that since the use of antitoxin the number of cases of postdiphtheric paralysis have greatly decreased.

## PHYSICIANS AND PROPRIETARY MEDICINES.

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There are several particularly objectionable features connected with the proprietary medicine evil, to which it is desirable to call attention with a view to securing the co-operation of the great body of practicing physicians in obliterating them so far as possible. Every one acknowledges that a great number of secret proprietary medicines are utterly worthless and, in fact, harmful; hence all preparations which do not emanate from thoroughly reputable firms should be viewed with reserve—if not actual suspicion—until they have been examined by competent, unbiased men.

It should also be remembered that the testimonials given are often of questionable value, because physicians and professors in certain medical colleges may sometimes be induced to give testimonials on insufficient knowledge. Finally, attention should be called to the well-known fact that mystery exerts a strong influence on the average mind, and a form of mystery may be said to be the chief stock in trade of many exploiters of the clap-trap compounds, now widely used.

While there are many manufacturers who are doing valuable work—and to them this criticism does not apply—there are hundreds of men, anxious to occupy the profitable field of proprietary medicine manufacturing or exploiting, but wholly lacking the ability and desire to pursue original research, who merely resurrect obsolete remedies, dress them anew in garb and name, and claim for them properties as marvellous as those of Aladdin's lamp.

Others use some well-known substance, acetanilid, for instance, as a basis for compounds with pseudo-scientific names, claiming entire originality and extraordinary therapeutic properties for their products. It is truly amazing that these compounds should have attained such wide use by physicians in view of their

potency for harm and the extreme simplicity of the acetanilid test.

Manifestly, every physician owes it to himself and to his patients to recommend only such preparations as are attested by men whose reputation for solid attainment and integrity is beyond question.

It is hardly necessary to say that no one is justified in prescribing any remedy before he has satisfied himself of its clinical nature and pharmacologic action, so far as can be learned. There are so many trained clinicians in the hospitals who have excellent facilities for intelligent tests—so many pharmacologists with elaborate equipment, devoting all their time to laboratory investigations, that there is no excuse for the manufacturer seeking testimonials from those who are not in a position properly to test the effects and efficacy of so-called remedies.

It is perhaps in regard to the third point, that of mystery, that the warning is to be most strongly presented. The busy practitioner is unable to keep pace with the rapid additions to the terminology of the various branches of medical science, such as the Ehrlich theory of immunity, hence he becomes accustomed to reading articles by men of repute, which may not be perfectly intelligible to him, and later he accepts with equal readiness the statements of nostrum vendors, who, adopting the terminology but not the meaning of science, give pretended concise descriptions of the methods of preparation of their own wares, in mere word jumbles, intended to impress the unwary, while the facts which are the essential ones, viz., the success of the medicine in the treatment of disease, are stated with more apparent child-like simplicity than veracity. To show how this truly astounding fraud is frequently perpetrated, I mention the following:

Circulars of three proprietary remedies, which have been widely distributed among physicians, and which pretend to give most concise details of preparation, involving processes of metabolism, actions of enzymes, etc., were submitted to three well-known physiologic chemists with a request for a perfectly simple explanation of the reading matter. The answers were essentially similar in each case, and were to the effect that the pretended concise descriptions were largely mere word jumbles devoid of meaning, or else a tissue of falsehood.

Can the average physician discern truth in that which is false or meaningless to the expert?

How the conspirators must laugh at the ease with which they can dupe educated men with gibberish, while pretending to appeal to their profundity!

It is as easy to use intelligible and simple language in describing the method of preparing an article as it is in stating clinical results, and every physician should refuse to be influenced by an advertisement which he can not readily understand, and which for that very reason may be making a bid for our too ready credulity.

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**Medical Ethics.**—The dissatisfied persons who wish to discharge their medical attendant and employ you, will sometimes contend that the rules relative to taking charge of patients, recently under care of another physician, are harsh and unjust, and peculiar to the medical profession. Neither of these statements are true, for our custom is identical with that which prevails everywhere among all classes of people, which requires the formal discharge of the old employé before a new one can take his place. Besides, no person, whether menial, mechanic or physician, can fill a vacancy till one exists.—Hart, in *Journal of Kansas Medical Society*.



## THE NOMENCLATURE OF PROPRIETARY MEDICINES. THE CRUX OF THE SITUATION.\*

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It is related of an old-time country practitioner, in a southern state, who not only had faithfully served the community in attending to the first arrivals, but also had usually been called on to name the little newcomers, that his patience finally became so exhausted that when appealed to in an especially urgent case, he petulantly retorted, "Oh name the twins Belshazzar and Beelzebub!" "Oh pa!" gleefully shouted the mother, "the doctor has named the babies Belshazzar and Beelzebub!" "Wal!" responded the fond father, "if the kids be only as good as their names they will be all right!"

The incident may or may not be true, as it may or may not have any bearing on the naming of proprietary medicines. Let us see. The names looked imposing and mysterious, they had a suggestive and familiar sound, possessed a peculiar euphony, and in this case were thought proper names because the persons using them did not know what they meant or what they stood for.

### MULTIPLICATION AND SIMULATION.

Is there any difference in the methods of naming the vast majority of proprietary medicines? Take a few examples:

Aseprol	Bromalin	Ferratin
Aseptol	Bromamid	Ferratogen
Aseptolin	Bromolein	Ferrhemin
Aseptin	Bromidia	Ferrinol
	Bromipin	Ferripton
Albargin	Bromol	Ferroleum
Actol	Bromopyrin	Ferropyrin
Argentamin	Bromosin	Ferrosol
Argentol	Bromphenol	
Argonin		Salacetol
Collargol	Dermatin	Salacatin
Ichtargan	Dermatol	Salifebrin
Itrol	Dermogen	Saliformin
Largin	Dermol	Saligallol
	Dermazon	Saliphene
		Salit
Hematin		Salophene
Hematogon	Iodipin	Salochinin
Hemoferrogen	Iodocrol	Salocoll
Hemoferrin	Iodoformal	Salocrocl
Hemoform	Iodoformine	Salol
Hemogallol	Iodoformogen	
Hemol	Iodoformsalol	
Hemorrhol	Iodogenol	Tannalbin
Hemostate	Iodolen	Tannalborin
Hemotrophine	Iodolin	Tannapin
	Iodophenin	Tannormal
	Iodosin	Tannigen
Lyptol	Iodosolvin	Tannipylin
Lysol	Iodothylin	Tannoform
Lysetol		Tannochrom
Lycorin		Tannocoll
Lygosin		Tannopin
Lysidin		Tannosol
Lysitol		
Lysoform		

### LACK OF SYSTEM.

Is there anything to suggest that a system or plan has been followed in naming these any more than in the naming of apartment houses, sleeping cars or breakfast foods? Names of the latter often rival those of proprietary medicines, the following examples having been observed recently: A house called "Eudoxin," for a well-known synthetic; "Quantzinteco-matzin," the name of a

sleeping car on the Oregon Short Line, might be a new name for hexamethylene tetramin, and "Apetizo," the iron food, may be mistaken for apetol, the strengthener that strengthens, a wonderful discovery composed of *Nux vomica*, *Gentiana purpurea*, *Calumba jateorrhiza*, *Quassia amara lignum*, *Prunus virginiana*, *Prinus verticillatus*, *Simaruba amara*, *Spiraea tomentosa*, *Cinchona rubrum*, *Sumbul moschatus*, aurantii cortex, aromatics, vinum xericum fortior; the "tonic that tones"; that "gives birth to an appetite"; made in Danbury, Conn., which in former times was famous through "Newsman" and as the home of "Synthetic Myristica," but is now devoted to the exploitation of the medical profession through a medical journal with half a dozen anonymous pseudo-chemical companies on the side.

### CONFUSION WORSE CONFOUNDED.

Besides these there are preparations entirely distinct in character, with names almost similar, e. g.:

Mercauro, Mercurol, Mercuriol.  
Euphorine and Europhene.  
Papain and Papin  
Benzosol and Benzozon.  
Glycozone, Hydrozone and Liquozone.

The last illustrious trio have demonstrated the dangers to the manufacturers in selecting names in the present haphazard, slipshod manner. The proprietor of the first two of the three allèges that the name of liquozone is unwarranted and misleading, and liable to confusion with his own. The liquozone proprietors charge business rivalry as the sole motive for the accusations against their famous germicide

"Normalin" is a serum preparation of arsenic, administered internally in teaspoonful doses, for which formalin is liable to be dispensed, and "Lavolin" is the trade name for liquid petrolatum, exploited as the solvent for agents recommended in spray medication exclusively in a certain work on rhinology. Pharmacists who have never heard of lavolin naturally dispense lanolin instead, and thus innocently became partners in the absurdity of causing a sufferer to try to accomplish the feat of spraying an ointment through an atomizer.

### SCIENTIFIC NOMENCLATURE.

It should be needless to point out to men engaged in any scientific pursuit the necessity for a scientific nomenclature. Without systematic terminologies, the sciences contributing to pharmacy can neither be studied nor learned. What botany, pharmacology or chemistry would be without scientific nomenclatures is best answered by remembering what they were before such were evolved by Linneus, Fluckiger and Berzelius. What progress was made in medical science until systematic terminologies were introduced in physiology, pathology and anatomy? Science is universal; without a universal language it can not progress. It is a fundamental object and purpose of all sciences to establish a universal language through more or less systematic terminologies. To deny the necessity for nomenclature in pharmacy is to deny that it is a science. But what are the facts? Pharmacy, or at least its original votaries, aided in developing terminologies, and in two of the sciences named the modern nomenclature was devised by pharmacists.

### THE NOMENCLATURE OF THE PHARMACOPEIA.

But before this period and beyond the present sciences, the formation of pharmaceutical terminology began, which finds to-day expression in the pharmacopeias of all nations. The pharmaceutical nomenclature, as represented by the Pharmacopeia, has not only the pres-

\* Read at the Annual Meeting of the American Pharmaceutical Association, Atlantic City, N. J., Sept. 6, 1905.



tige of tradition and almost universal harmony, but is fortified through legal enactments in every country in the world. Each of the thirty different classes of preparations of the Pharmacopeia has a distinct meaning, and with those additional in the National Formulary they afford nearly every form in which medicinal agents may be desired. Why are they ignored? Have the terms aqua, liquor, spiritus, elixir, tinctura, fluid extractum lost their meaning? Do the old names, pulvis, pilula, etc., sound too commonplace; or is it that their simplicity would be incompatible with the claims of originality or novelty or wonderful therapeutic virtue of the products of these *début de siècle* ideas? Or, perish the thought, is it that the manufacturers are not acquainted with pharmaceutic terms, or do not know of the existence of the Pharmacopeia?

#### THE MOTIVES.

Possibly, probably the scientific terms are ignored in order to impose more easily on physicians, to pander to their convenience and lassitude, to secure monopoly of products through trade-marks, to intimidate pharmacists with the cry of substitution, and, finally, to exploit the public with cure-alls.

Take these well-known proprietary medicines originally advertised to physicians exclusively:

Antikamnia	Pepto-Mangan
Bromidia	Scott's Emulsion
Fellow's Syrup	Vin Mariani

Would they have gone to the public if they had been known under the following titles, with the name of the manufacturer or other device as a trade-mark to indicate the brand?

Pulvis Acetanilidi Compositus.  
Mistura Chloralis et Potassii Bromidi Comp.  
Syrupus Ferri Mangani Quininae et Strychninae Comp.  
Liquor Ferri et Mangani Peptonatus.  
Emulsum Olei Morhuæ cum Hypophosphitibus.  
Vinum Erythroxyton.

While only two of the above, antikamnia and Scott's emulsion, are advertised directly to the public, all, except bromidia, are used for counter and pyramid window display by "cutters" and department stores.

#### TRADE-ADVANTAGE DELUSIONS.

Intelligent physicians are beginning to realize that they may just as well prescribe peruna and other "patents" at once as to patronize proprietary medicines with trade-names. Many also refuse to prescribe any trade-name article for fear that they, or the pharmacist, may confuse the names and serious results may follow. And yet, in the face of this undeniable awakening of medical men, a firm of chemists of the highest standing has recently devised the following meaningless, empiric names for three articles of its manufacture: Duotonal tablets, quatonol tablets, sextonol tablets.

"Tonol" stands for glycerophosphates, and the prefixes refer to one number of different kinds of glycerophosphates, salts of alkalies, contained in each tablet. Now, these names have been devised on the assumption that physicians will appreciate them, owing to their brevity and euphony; on the other hand, it is evident that these names will not appeal to the thinking physicians, as they would under pharmaceutical titles, with the name of the illustrious founder of the firm as the trade-mark.

#### THE NAME IS THE BEST TRADE-MARK.

The name of the manufacturer or some distinct symbol or device is the only trade-name affixed to the scientific title, that should be used to designate a brand or

make of a product. When, however, a symbol of universal significance and profoundly reverent traditions is through a sordid judicature permitted to become the trade-mark of a particular line of manufacture, the necessity for some scientific system for the selection of trade-marks becomes evident.

The protection of the public is the primary object of a trade-mark; to aid the purchaser in distinguishing the brand or "make" he desires from all other brands or "makes." Naturally, it is the maker's highest prerogative to protect the public in its right of selecting his brand. What should he choose for this distinctive designation rather than his own name—his as against the world?

But greed and avarice lay their vandal hands even on the symbol of the ancient republic of Helvetia, and trail this venerated emblem in the dust of venal trade, by the grace of the state of New Jersey. The public must be protected against such vandalism; the medical profession is finally beginning to realize its anomalous position, and mindful of the dangers of Scylla and Charybdis, will soon refuse to recognize trade-names for medicines, and the pharmacist—well, he is familiar with the fact that the highest ethically exploited trade-name article keeps company in the price lists of wholesale druggists with Lydia Pinkham, peruna and Pierce of Buffalo. The wholesale druggist is the only purveyor of medicines whose fiduciary frame of mind realizes that all articles with trade-names are primarily designed for trade.

#### THE REMEDY.

Since none of the parties mostly concerned, the public, the physician or the pharmacist, desires the perpetuation of trade-names, why should the manufacturers be allowed to use them; or rather, why should not physicians and pharmacists refuse to handle any trade-name article? Although this position may be brought on through agitation and education, the process will be too slow. The thing to do is to carry a case for infringement of a trade name to the Supreme Court of the United States and get a decision in line with former cases, such as castoria and syrup of figs, which will once and forever prevent exclusive use of a coined name for a medicine when there is no other name by which such article may be designated. The nomenclature is the crux of the proprietary medicine question; its reformation will be a boon to the physician and the salvation of the pharmacist.

#### THE DENTITION OF MAMMALS WITH REFERENCE TO THAT OF MAN.\*

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LONDON, ENGLAND.

In response to the kind invitation of your president, I have ventured to bring before you some of the results of recent researches into the tooth-genesis in mammals including that of man. Though my work on primate dentitions is still incomplete, I shall endeavor to summarize some of the problems to which I am paying particular attention, in the hope that an appreciation of the gaps in our present knowledge may suggest lines of investigation to other workers.

Before homologies and methods of tooth replacement

\* Read in the Section on Stomatology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



can be adequately interpreted it is necessary to have a clear idea of the number of dentitions represented in the *Mammalia*. The introduction by Owen of the terms "monophyodont" and "diphyodont" indicated the state of knowledge in his day, but with the application of histologic methods to the problems of comparative odontology, the words lost much of their original significance. The marsupials, regarded by Owen as monophyodont, were shown by Kükenthal to be really diphyodont since there were down-growths of the dental lamina to the lingual side of the functional teeth, a potential second series which, however, never become functional. The result of this discovery was to interpret the functional teeth of marsupials as belonging to a persistent milk series. This view became current and is still to be found in all text-books. Subsequently, in the light of this interpretation the lingual rudiments, discovered by Leeche in *Myrmecobius*, were regarded as prelacteal. Thus marsupials are now known to possess representatives of three dentitions, the middle series alone cutting the gum and usually regarded as a persistent milk dentition, but which to my mind is capable of another and more satisfactory interpretation.

Downgrowths of the dental lamina, similar to those found by Kükenthal in *Didelphys* have been discovered in a number of other mammals in which two sets of teeth are functional, e. g., man, dog, seal, hedgehog and others. The number of instances in which such post-permanent vestiges exist, warrants the belief that they are of very frequent, if not universal occurrence.

Apart from the doubtful interpretation of the so-called prelacteal vestiges in the marsupials, such are definitely known to occur in other mammals with two functional dentitions, for example in the pig and in man. In the latter they were first discovered by Rösc. I have also noted their existence and they are shown in the accompanying microphotographs. The epithelial masses become later altered in character and in a fourth-month human fetus the cells become granular and have the appearance of undergoing calcification. Unfortunately, I have as yet been unable to obtain sufficiently well preserved material to speak definitely on this point. It is interesting to notice in this connection that Professor W. B. Scott of Princeton has recently found three definitely calcified dentitions in *Nesodon*. Should it ultimately be shown that there is an attempt at calcification in the human prelacteal vestiges, it would furnish additional evidence that the primates have branched off very early from the common mammalian stem, as Wiedersheim has suggested.

There can be no question, I think, that there is a general tendency to the suppression of the earlier deciduous dentitions as evidenced by the *Rodentia*, some of the *Cynoidea*, etc. Taking these two sets of facts in conjunction it would appear to me that the simplest and most satisfactory interpretation of the condition in the marsupial jaws is that the three series represent: 1. A vestigial milk set, the prelacteal of Leeche; 2, a functional persistent series; and 3, post permanent vestiges, the downgrowths of Kükenthal. A similar line of reasoning applies also to the condition found in the *Cetacea*. Such an interpretation would bring the dentition in these two classes into line with that of the *Eutheria* generally, and would clear away many of the difficulties arising from the present usually accepted views.

Shortly after putting forward this hypothesis in 1896 additional welcome evidence was advanced by Wil-

son and Hill who independently arrived at a similar conclusion, as a result of their investigations into the "Development and Succession of the Teeth in *Perameles*."

This position was subsequently attacked by the late M. F. Woodward and also by Deppendorf, mainly on the theoretical grounds that the rudimentary condition in which marsupials were born tend to the preservation of the earlier dentition. This objection to my mind is unconvincing, as the marsupial at birth is brought into conditions very different from those of the young reptile which has from the very first to forage for itself, whereas the marsupial is transferred at once to the mammary gland and is thus fed for a considerable time and so the necessity for the retention of the earlier dentition is absent and has led to its disappearance.

The next point to which I would draw attention is the anomaly in the tooth change in the posterior premolar region. This anomaly consists in the fact that, whereas in the anterior premolars these teeth are preceded by deciduous premolars of a similar pattern, in the case of the posterior premolar the milk predecessor is molariform in pattern. This condition, so well known in the dog, occurs in a considerable number of mammals belonging to other classes. It is known to occur in the *Marsupialia*, (in which this tooth is the only one to be replaced) in the *Carnivora*, *Insectivora* and *Rodentia*. Topinard has drawn attention to the molariform pattern of the deciduous posterior premolar in man; it seems therefore likely that we have here the same anomalous condition, and this point I am at present investigating.

I think we are dealing here with a case of apparent succession only, by which I mean that the deciduous posterior premolar is not the true morphologic predecessor of ppm<sup>4</sup>, as in the case of other teeth. M. F. Woodward has stated that in the kangaroo the replacing tooth belongs to the same series as pm<sup>4</sup> and pm,<sup>4</sup> and the same I find holds true in the guinea-pig. In both these cases it is interesting to note that the successional tooth develops slightly in front of its predecessor and drops backward into its place, whereas in all other cases it develops behind the tooth which it replaces and therefore drops forward. A similar condition is to be met with in the *Insectivora* (Woodward) and in the dog (Tims). From a careful study of all the facts I have been led to the conclusion that the apparent deciduous posterior premolar is in reality the first of the molar series, the true morphologic dpm<sup>4</sup> being crowded out. The cause of this condition is I believe, to be found in the progressive shortening of jaw in relation to its breadth. Take the case of the marsupials, the time at which the single deciduous tooth is shed varies considerably; in some it is shed "in utero" as in *Dasyurus*, in *Thylacinus* before the animal leaves the mother's pouch, in others not until the animal is full grown as *Didelphys* and *Perameles*, while in *Myrmecobius* no tooth change is known.

The ratios of the palatal breadth to length works out as follows: *Dasyurus*, 1:1.6; *Thylacinus*, 1:2.03; *Didelphys*, 1:2.10; *Perameles*, 1:2.2; *Myrmecobius*, 1:3.2. It is worthy of note in this connection that *Myrmecobius* possesses at least five upper molars, a number in excess not merely of all other marsupials but of all other mammals. The same results are found in the diprotodont series.

I have elsewhere<sup>1</sup> shown that among the *Insectivora*

1. Jour. Anat. and Phys., Vol. xxxvi, p. 321.



parallel conditions are to be met with through such forms as *Centetes*, *Ericulus*, *Echinops* and *Solenodon*, in which the ratios of the palate breadth to length are as follows: *Centetes*, 1:2.76; *Ericulus*, 1:1.6; *Echinops*, 1:1.5; *Solenodon*, 1:1.1... *Centetes* has one more molar than any other insectivore, thus occupying a similar position to *Myrmecobius* among marsupials.

With regard to the rodents I have come to a like conclusion from a study of the tooth-genesis, viz.: that dpm<sup>4</sup> is in reality the first tooth of the molar series. As already stated Topinard has drawn attention to the molariform character of the posterior deciduous premolar in man. Whether the tooth replacement is of the same nature I am at present unable to say definitely but I hope shortly to have cleared up this point.

Incidentally it may be mentioned that some animals, for example the guinea-pig, have tooth vestiges to the labial side of the true molars. If the latter belong to the successional dentition as Woodward, Lataste, Magitot and others affirm, and with much I entirely agree, then it follows that the usual definition of a molar as a tooth without a predecessor breaks down in theory.

The third point to which I would direct attention is the developmental history of the complex molar crown from the simple haplodont tooth of the *Reptilia*. In 1895 Professor Osborn delivered an address on "The History of the Cusps of the Human Molar Teeth" before the New York Institute of Stomatology. In that address Professor Osborn sketched the possible course of evolution from a simple cone through the tritubercular type of tooth. Through his many excellent papers on mammalian dentitions he has made the tritubercular theory so well known to all that it is quite unnecessary to restate it.

If this theory be examined critically, however, there seem to me to be unsurmountable difficulties, to some of which I would draw attention. The evidence in favor of this theory is mainly, if not entirely, paleontologic. While admitting the enormous value of such evidence, I do not think the embryologic can be overlooked. The researches of Täckér Röse, Woodward and others, have shown that in marsupials, ungulates, carnivores, rodents, and primates the paracone develops first and not the protocone as should be the case were this theory the true interpretation. Such uniformity in embryologic results cannot afford to be neglected. In some instances the metacone also precedes the protocone in appearing. It has been urged that this is a case of accelerated development. Such a suggestion is difficult to refute, and in the face of the accumulation of embryologic evidence, appears to be quite insufficient. Secondly, the rotation of the cusps necessary to evolve a tritubercular tooth from a triconodont is purely hypothetical, embryology furnishes no evidence of it; and paleontology offers, so far as I am aware, no transitional forms. Again, the absence of the protocone, as I have elsewhere<sup>2</sup> shown is the rule in the *Canidae*, even in such a primitive tooth as dpm<sup>4</sup>, and the same is true of other animals. And lastly, there are the multituberculates, contemporaries with the trituberculates. Several other objections have been brought forward, but these alone seem to me to present great obstacles to the acceptance of this theory.

Neither does the multituberculate theory of Forsyth Major afford an adequate explanation for all mammals, though I believe it is applicable to the rodents and pos-

sibly to some other classes. The numerically reduced incisors together with the absence of canines and the presence of a diastema seems to place the multituberculates out of court as being the ancestors of animals with a full complement of teeth, such as carnivora and insectivora. Further it is I think generally admitted, that the pattern of the milk teeth is more primitive than that of their successors, and they are usually less tuberculate (Figs. 1 and 2).

The concrescence of cusps representing originally separate teeth has been observed in certain fishes, in *Sphenodon* and in the chameleon but such examples are rare. Were such a theory an adequate explanation we might reasonably expect that many more examples would have been found when the enormous amount of embryologic research in the tooth genesis of mammals is taken into consideration. It is easy to be destructive, much less easy to be constructive. Neither of the above mentioned theories is to my mind satisfactory and I venture to suggest the outlines of another alternative hypothesis, based on the cingulum as a factor in the formation of new cusps (Fig. 3).

That the cingulum is a structure of extreme antiquity there can be no doubt. It is well marked in the anodont reptiles. It is to be seen in the teeth of many fishes and is very evident in the teeth, specially those of the deciduous dentition, of mammals. Reconstructions of embryonic teeth show that the cingulum is relatively much larger than at a later period. Its function is probably that of affording protection to the gum when the haplodont teeth of the opposing jaws interlock. The effect of such an inter-action might give rise to small anterior and posterior cusps which increasing in size would give rise to the tri-conodont type of tooth such as is found in *Triconodon* and in *Amphilestes* as shown by Goodrich on full exposure of the teeth.

So far this hypothesis accords closely with that of the tritubercular theory. In passing from the reptiles to the mammals a different method of apposition of the jaws comes into play; in the former the jaws bite against one another whereas in the latter the lower jaw closes within the upper arcade. The apices of the lower cones would then fit between a cone of the upper series and the cingulum on its inner aspect causing a depression at that point and at the same time a separation inwards of the cingulum from its cone leading to a broadening of the upper tooth in the transverse diameter. The free edge of the upper internal cingulum would now act in a similar mechanical way on the lower teeth and cause them to broaden out transversely. The mechanical factors would thus operate first on the teeth of the upper jaw and this is in accord with the generally admitted fact that the pattern of the upper molars is the more primitive.

The formation of the smaller secondary cusps is due to the mechanical usage and presents but little difficulty when the problem of the initial stages of the genesis of the molar pattern is once solved.

The importance of the cingulum in cusp formation will I think be acceded by anyone after a careful examination of mammalian teeth generally. Many cusps will be found to be placed directly on it. The small cusps at the lateral margins of the milk incisors of the dog can be seen to be nothing more than the terminations of the internal cingulum which originally surrounded the base of the tooth but has now ceased to exist on the outer aspect, its protective function being

2. "Tooth-Genesis in the *Canidae*," Jour. (Zoology) Linnean Soc., London, Vol. xxv, 1896, p. 445.





Fig. 1.—Upper third of the premolar of *Hyæna*. External aspect showing external cingulum and small anterior cusps. (Mus. Zool. Univ. of Cambridge.)

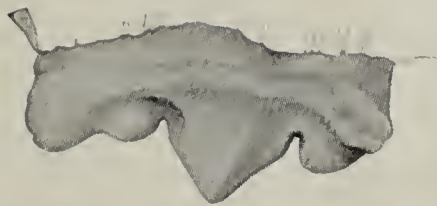


Fig. 3.—Upper fourth molar of *Felis tigris*, with external cingulum and enormously developed anterior and posterior cingulum cusps. (Mus. Zool. Univ. of Cambridge.)

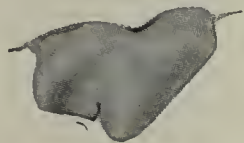


Fig. 2.—Upper fourth molar of *Canis familiaris*, with external cingulum and posterior cingulum cusp only. (Mus. Zool. Univ. of Cambridge.)



Fig. 4.—Crown surface of upper first molar of *Cyon rutilans* (Mus. Zool. Univ. of Cambridge.)

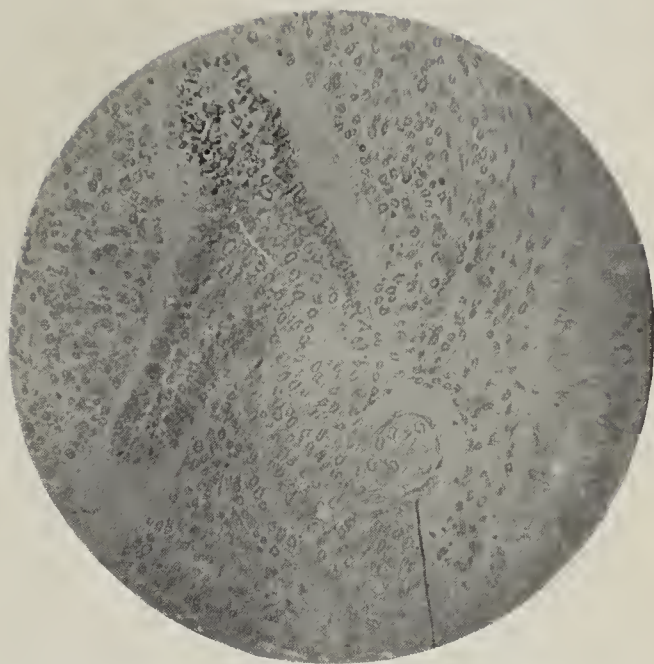


Fig. 7.—Human. Line indicates what may be pre-lacteal.

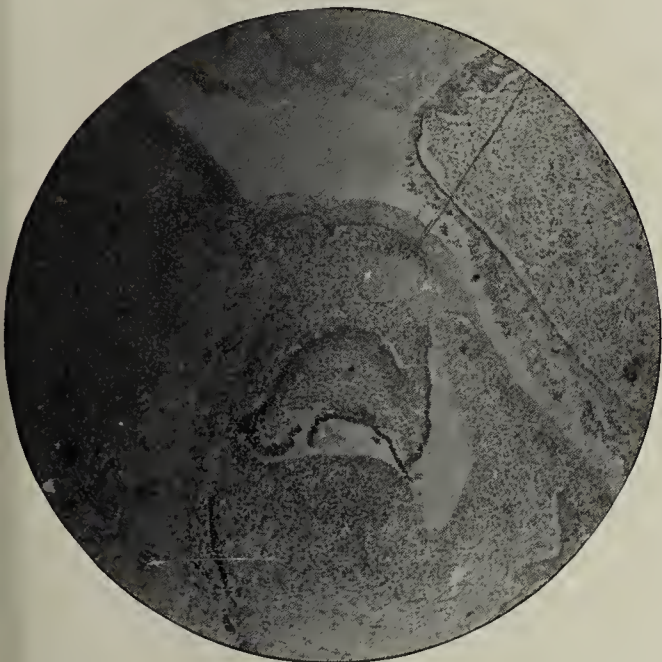


Fig. 8.—Human *di*<sup>2</sup> with labial downgrowth and perhaps pre-lacteal vestige.



Fig. 5.—Crown surface of molar teeth of rabbit. The larger one shows two teeth fused,  $\times 4$ . (Mus. Zool. Univ. of Cambridge.)

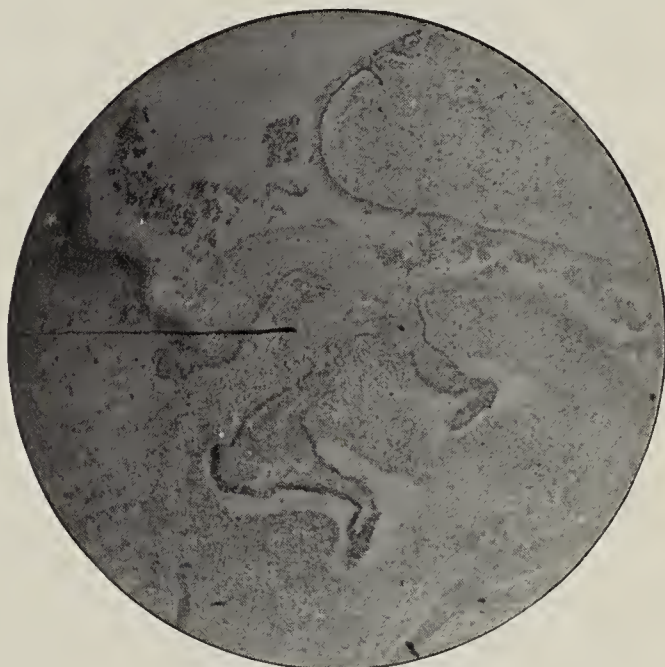


Fig. 10.—Human *dc*.



Fig. 9.—Higher magnification of portion indicated by line in Fig. 8.

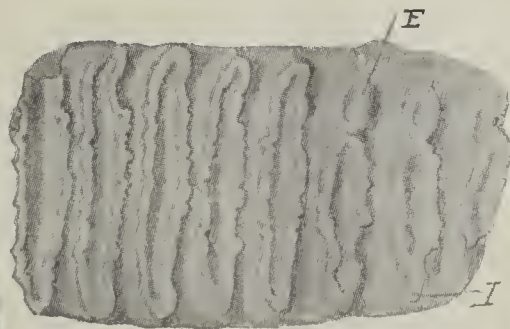


Fig. 6.—Crown surface of molar tooth of *Elephas antiquus* from the Cambridge Gravel. Eight teeth fused. E, external cingulum cusp; I, internal Cingulum cusp.  $\times \frac{1}{2}$ . (Mus. Zool. Univ. of Cambridge.)

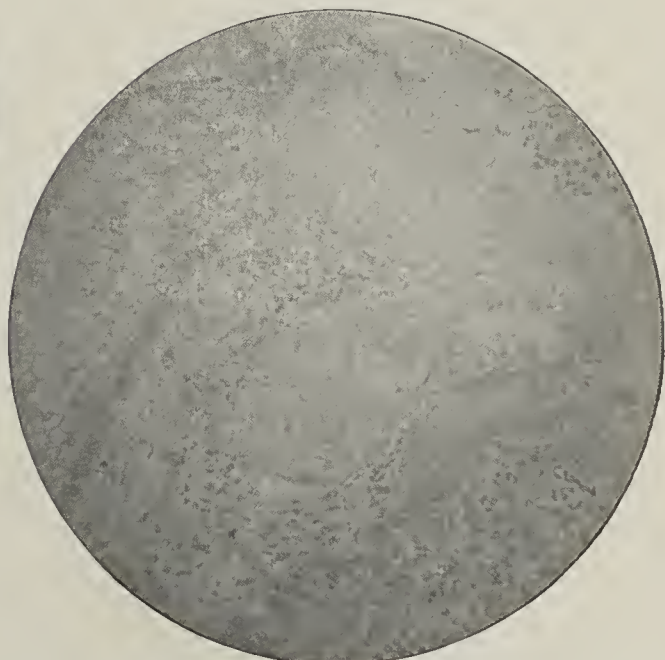


Fig. 11.—Highly magnified portion of the part indicated by line in Fig. 10.







no longer required. The cingulum is well marked in most human teeth, especially the bicuspids. For some reason, which I cannot explain, it occasionally happens that the outer portion of the cingulum persists and even gives rise to well marked cusps; such a condition is seen in *Otocyon* and in some of the *Insectivora* (Fig. 4).

The reason why the factors have not operated at the anterior part of the jaw and have allowed the incisors to retain a more primitive type, is to be found in the fact that the greater part of the force exerted by the muscles of mastication acts on the posterior teeth and indicated by the common use of the word "grinders." I take it that any theory put forward to account for the molar pattern should be expected to apply to both tritubercular and multitubercular teeth, and this I think is one great objection to the two hypotheses which go by those names. If the teeth of the multituberculata be examined it will be seen to consist of three transverse rows of cusps, though in some cases there are only two as in *Polymastodon tabensis* and in *Meniscoes*. If we suppose an anteroposterior fusion of several teeth each consisting of a main central cone with external and internal cingulum cusps, there would result the more complex crown of the *Polymastodontidae*, and at the same time would explain the great reduction in the total number of individual teeth (Fig. 5). The tendency to the reduction in the external portion of the cingulum in the mammalia is very general, and a similar condition affecting the multituberculate tooth would give the two transverse rows of cusps only as found in *P. tabensis* and *Meniscoes*.

Space will not permit of a further application of this hypothesis to individual forms, it must suffice to say that from the multituberculate type it is not difficult to derive the pattern of molars found in the *Rodentia* and the *Proboscidea* (Fig. 6). I have been led to formulate this hypothesis from a study of the tooth-genesis in the *Carnivora*, *Rodentia*, primates and others, in every one of which the tooth arises in the first instance as a single cone with a marked cingulum.

The embryologic evidence of tooth-genesis in the rodents points to a multituberculate ancestry, thus agreeing with the paleontologic conclusions of Forsyth Major. The history, however, of the cusps differs from that of such forms as the carnivores and primates which leads in the direction of seeking for their primitive origin in some forms similar to, if not identical with, the fossil trituberculates (Figs. 7-11).

The inference from these conclusions is that we must look for at least a dual origin for the mammalia in mesozoic times. This may be regarded as an unorthodox conclusion, but I may be permitted to quote the words of the distinguished American paleontologist, Doctor J. L. Wortman, in his remarks at the conclusion of Professor Osborn's address above referred to. Dr. Wortman, in speaking of a polyphyletic origin of the mammalia, says that it is a hypothesis "not wholly unwarranted by the evidence already in our possession."

I fear that I have been able to give but the barest outline of this theory, but I hope that I have said sufficient to make clear the underlying idea, and I shall be amply rewarded if it but leads other workers to inquire into its validity. Any reasonable hypothesis has its value, if it should prove adequate it is so much gained, if the reverse it has cleared some of the mist from our eyes.

## CAPITAL OPERATIONS FOR THE CURE OF TINNITUS AURIUM.\*

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I collected the material for this paper during my preparations for an excision of the auditory nerve in a case of grave tinnitus aurium, with suicidal tendencies. Several weeks were consumed in work on the cadaver and in designing special instruments. During this time my patient improved so much under enforced hygiene a capital operation no longer appeared justifiable.

*Patient.*—The patient was a psychopathic, neurasthenic man of 40, in fair physical condition and nutrition.

*History.*—He smoked to excess and had a questionable specific history. He complained of tinnitus on the left side, of inability to conduct his business, of disappointed ambitions, and of loss of sleep. Beginning in his fourth year, the left ear had continued to discharge until he was 26 years old. Some loss of hearing followed early, but a considerable part of the hearing was later lost suddenly. When he was 28 years old, the tinnitus, "a low-pitched hum in the head" when the right ear was stopped with the finger, was first noted. At the age of 37 he fell from a horse, bruised his head, and broke his leg. The tinnitus then became a high-pitched sizzling in the head or left ear, like the sound of a soda siphon. Previous to his present complaint he was strong and muscular and had great energy and endurance. At the time of examination he was weak and could not sleep or concentrate his mind on anything. He trembled and was exhausted by the effort to restrain himself and appear composed under the intolerable burden of the tinnitus.

He had consulted many specialists and others, including eight well-known practitioners of New York, because the tinnitus kept him awake. He said that at that time air did not enter the Eustachian tube. Though at first the tinnitus was only heard at night, it gradually became constant. He had received every sort of treatment. Some nasal polypi had been removed. Pilocarpin had been given to intoxication without any effect on the tinnitus. Last year a radical operation was performed. No change in the tinnitus resulted.

*Examination.*—When I first examined the patient he had a completely healed middle ear following the radical operation. The Eustachian tube was closed at the tympanic end with a dermatized cicatrix. No remnants of ossicles or tympanic membrane or other landmarks were visible.

He said that the pitch of the tinnitus would rise about one octave, and become louder before a storm, and then fall again. The tinnitus was in the head, and was loud enough to be heard above a brass band or a full orchestra. When it was imitated, the sound was much like that of a soda siphon, but no louder. The patient said that the pitch of the tinnitus varied gradually.

While he was under examination, he said that the pitch corresponded to F .512, S. V., then F .128, S. V., and again, ten minutes later, F .256, S. V., and again it dropped. In the left ear he heard nothing by air except F .1024, S. V. By bone conduction, all the normal scale could be heard. Bone conduction was equal for both ears when the right or good ear was stopped with the finger. The patient stated that the tinnitus was more annoying in a noisy than in a quiet place. When at its worst, he was forced to stop talking, and perspiration would stream off his face in his effort to endure it and to control his distress and exasperation. He had recently attempted suicide. At the time of the examination he weighed 124 pounds. At the age of 21 his maximum weight was 155 pounds.

*Subsequent History.*—After taking a vacation in the country for a few weeks, he became more composed and slept fairly well. He said that the tinnitus was perhaps a little less, but that there was no marked change. This improvement has lasted until now, for about one year.

\* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



Similar cases are met with now and again. Fortunately the number is not great. They usually end in suicide or insanity. In the psychopathic, a slight tinnitus leads to hallucinations of hearing and finally to insanity. In cases of grave tinnitus, any means of alleviation, no matter how severe or how great the risk, are justifiable. The torture which these people suffer can but be compared to the refinements of cruelty employed by the doges of Venice, when, for example, water was allowed to fall slowly, drop by drop, on the heads of the unfortunate offenders until they were bereft of reason. In a similar manner, the victims of these painless sounds become crazed, and attempt suicide for relief, or finally become demented.

On a few occasions the aid of major surgery has been sought to furnish relief for the unfortunate sufferers whom the intolerable burden of grave tinnitus had driven to desperation. The suggestions in this paper will be valuable if they add anything to the help which the medical profession has been able to give these sufferers in the past.

The work previously done in this field does not indicate clearly the operation to be followed in such cases, nor does it give any encouragement of good results. It

should also be stopped before this operation is admissible. The source of the tinnitus must be located in or about the labyrinth. A central cause for the tinnitus would remain as effective after as before the operation. The selection of cases of grave tinnitus suitable for operation is very important. Many of the failures in the past can be attributed to mistakes in this particular. To offer any encouragement for operating, the source of the tinnitus must be on the distal side of the point of nerve section. The most promising cases for nerve section show marked loss in air conduction with preservation of bone conduction. Tinnitus, with definite cochlear lesions, low-pitched tinnitus, and tinnitus of varying character and pitch, offer good operating risks.

Tinnitus of high pitch, musical tinnitus or voices and complete deafness in both air and bone conduction offer contraindications for the operation. In a case in which deafness is present by both air and bone conduction, it is probable that the tinnitus originates in some part of the auditory nerve which is still functioning and that this lies more proximally than the cochlea. In cases in which there is good bone conduction hearing with the tinnitus, it is reasonable to suppose that the cause lies peripherally to the cochlea.

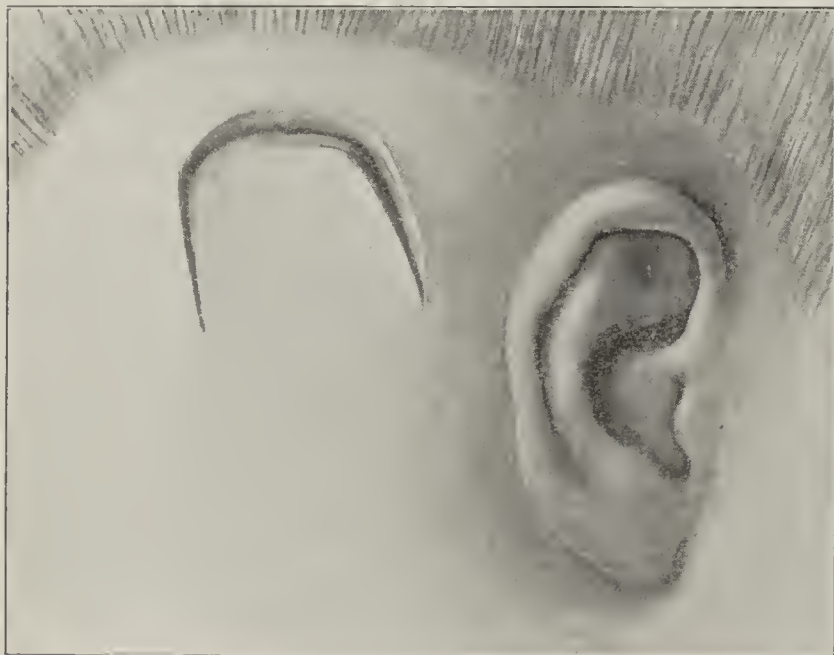


Figure 1.

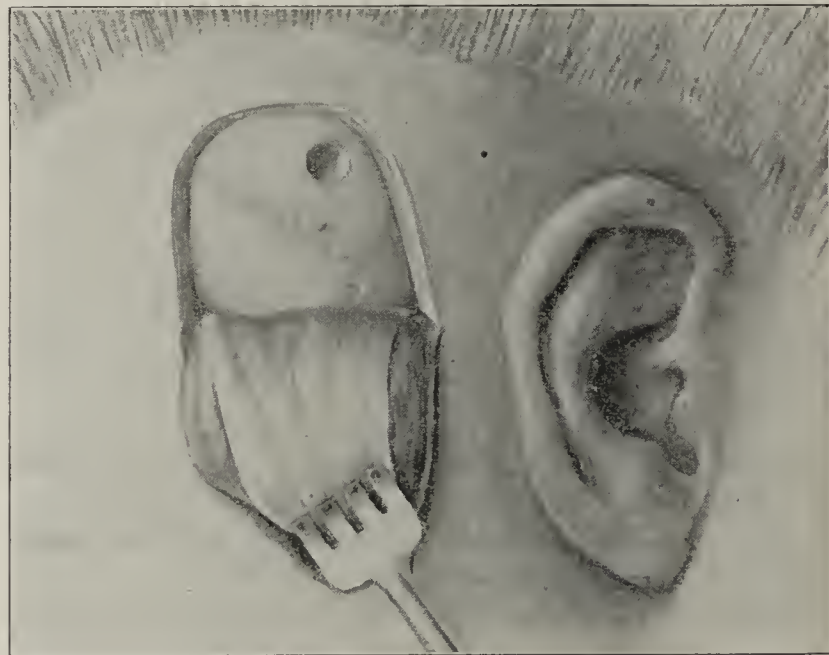


Figure 2.

does show, however, that it is most necessary to make an accurate diagnosis before operating and that an operation should be resorted to only in those cases in which the grave tinnitus is not clearly of central origin. It also shows that better technic is necessary.

#### INDICATIONS FOR OPERATION.

The indications for operating in grave tinnitus are akin to those found in trifacial neuralgia. Experience has here shown that a nerve trunk may be destroyed, cutting off all perceptions of undesirable centripetal impulses. The same must be true of the auditory nerve when the disagreeable sensations are those of sound. With the eighth pair, as well as with the fifth pair of nerves, the best results must be achieved by attacking the intracranial roots of the nerves. Ligature of the carotid is, at best, only a palliative measure. Intra-labyrinthine destruction of the auditory nerve has extremely difficult technic and frequently has not been complete. There remains, therefore, nothing but intradural section of this nerve.

On account of the severity of the operation, other means should be tried and found unavailing before this operation is recommended to the patient. Suppuration

Following a method of procedure suggested by my friend, Dr. Carleton Flynt, I performed 65 auditory neurectomies on the cadaver, besides those I did according to the methods described by others.

I acquired considerable efficiency, and by the aid of some instruments specially designed for the purpose I found no difficulty in removing the intra-arachnoid portion of the auditory nerve without any injury to the facial nerve. In most cases I was able to do this without interference with the cerebral veins which are the only possible source of annoying hemorrhage if the technic recommended is carefully followed.

#### TECHNIC.

Dr. Carleton Flynt suggested the most direct route by which the intradural portion of the auditory nerve may be reached with the least destruction of tissue and compression of the brain, especially of the cerebellum. This route goes through the middle fossa and enters the posterior fossa through the tentorium cerebelli. Inverted "U" skin and periosteal flaps are cut with their anterior limb behind the posterior edge of the mastoid process and extending about an inch and a half upward from the center of the lateral sinus. The posterior limb



extends downward to the lateral sinus about an inch and a half behind the anterior limb (Fig. 1). An osteoplastic flap may be made, but my experience shows that it is usually inexpedient, because of the great thickness of the bone and because of the impossibility of locating absolutely from the outside the position of the lateral sinus. The uncovered bone (Fig. 2) is perforated by my front-bent gouge (Fig. 3), and the opening enlarged with a heavy rongeur and carried well forward as far as the superior angle of the petrous pyramid and downward to the lateral sinus. The dura mater is cut with a "U" flap opening forward; the cerebrum is then carefully lifted with my spatula (Fig. 4) and the anterior surface of the petrous bone is explored for the eminence of



Figure 3.

the superior semicircular canal, which is the landmark for the route to the auditory nerve.

If the cerebral veins are not found lying across the field of operation, my cerebral speculum (Fig. 5) is inserted to hold the cerebrum up off the anterior portion of the tentorium (Fig. 6). If the cerebral veins are in the way, they are first pinched off. With a probe the edge of the petrous bone is located, and with a bistoury a longitudinal cut is made in the tentorium parallel to the edge of the petrous bone, but well behind it, to avoid the superior petrosal sinus.

Veins generally can be distinctly seen running parallel with the edge of the petrous bone and the incision is made posterior to them. The cut is about half an inch long and lies behind the eminence of the superior semicircular canal. With my cerebellar spatula (Fig. 7), the posterior flap of the cerebellar incision is drawn backward. To see if the cut is sufficiently long, the spatula

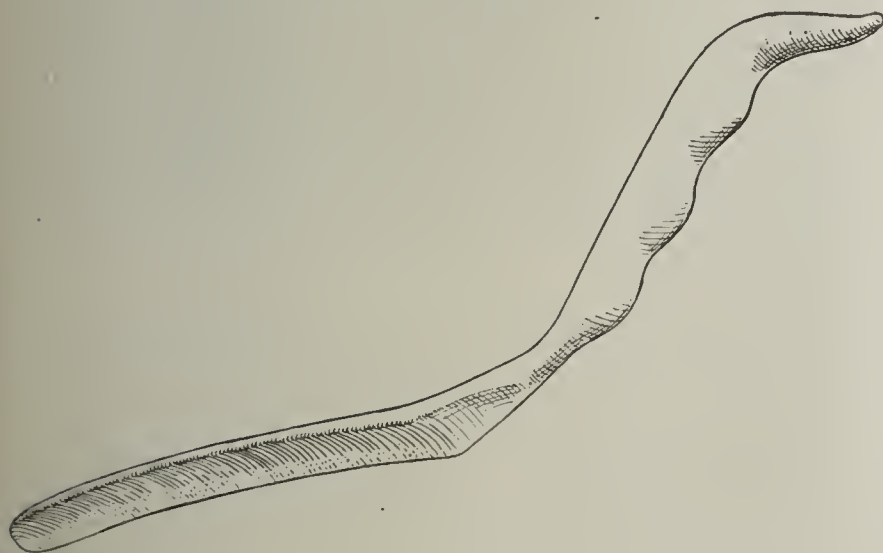


Figure 4.

is inserted from one-half to three-fourths of an inch, and the cerebellum slowly pushed backward to disclose the brilliant white auditory nerve lying at the bottom of the wound directly in line with the eminences of the superior semicircular canal. My cerebellar speculum is then inserted (Fig. 8). The nerve is easily recognized on account of its position and its glistening snow-white appearance (Fig. 9). It lies between 4 and 5 cm. from the anterior edge of the wound and nearer the opening of the wound than the facial nerve, which lies farther inward and anterior to the auditory nerve.

The auditory nerve is grasped by small lock forceps. Care must be taken to avoid pinching the facial nerve. Then the auditory nerve is pulled backward and outward

from the internal auditory meatus, and if the proximal part of the nerve is not torn by this time the nerve is pulled outward and forward; the structure of the nerve is so soft and friable that this was found the easiest means of removing it. Next the facial nerve must be inspected, and if any shreds of the auditory nerve are seen lying on it these are to be removed in the same way as the trunk. In this operation very little displacement of the cerebrum is required and scarcely any of the cerebellum.

The chief difficulty of the operation will be due to the venous hemorrhage from the cut in the tentorium, but with care in avoiding the veins which are readily seen on the upper surface the hemorrhage need not be very great. The flow of the cerebrospinal fluid will be considerable and very annoying and will require frequent mopping even in the cadaver. The wound can be kept clean by gauze packing. When the wound is closed, a small drain running from the stump of the auditory nerve through the external angle of the tentorial incision, the anterior inferior end of the dura mater incision and the anterior inferior end of the skin flap should be left. This drain is intended to facilitate the flow of cerebrospinal fluid. The tentorium need not be sutured. Its rigidity and elastic texture bring it back in place. The dura mater,

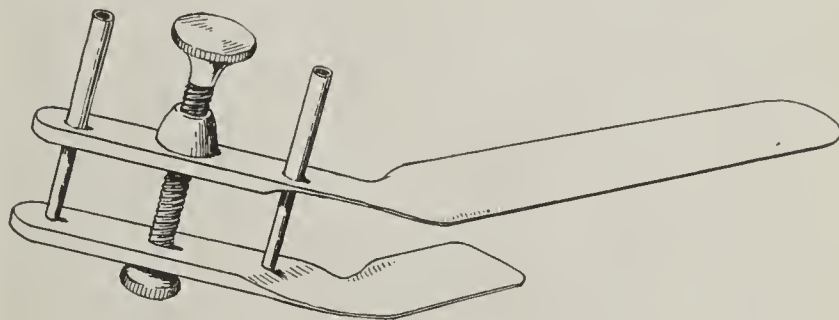


Figure 5.

the periosteum and the skin flap are sutured, leaving only space enough for the drain.

#### PROGNOSIS.

The prognosis in regard to the cure of the tinnitus in these cases depends largely on the care with which the diagnosis is made before the operation. Of course, the causes of the cerebral tinnitus, if it exists, will not be much affected by the removal of the auditory nerve; but when the cause of the tinnitus can be located in the middle or inner ear or in the peripheral end of the auditory nerve, cure can be expected.

#### SUMMARY OF REPORTED CASES.

In 1884 J. Orne Green (unpublished) curetted the cochlea for grave tinnitus. Recovery followed the operations, but the tinnitus continued. Linsmayer<sup>1</sup> ligated the carotid. The tinnitus ceased for a short time. Severe cerebral complications resulted. Grunert<sup>2</sup> also ligated the carotid. The tinnitus reappeared in four months. In 1895 Meyerson<sup>3</sup> reported a ligature of the carotid. In four hours the tinnitus returned. Krause of Berlin<sup>4</sup> published, in 1903, the report of a case of section of the auditory nerve done some years previously. There was recovery from the operation and a lessening of the tinnitus. Death resulted from pneumonia. In 1900 Milligan<sup>5</sup> published an account of three cases of

1. Linsmayer. Versuch d. deutsch. Naturforscher u. Aerzte, 1895.

2. Grunert: Archiv. p. Ohrenheilkunde, vol. xxxv.

3. Meyerson: Versuch d. deutsch. Naturforscher u. Aerzte, 1895.

4. Krause (Berlin): "Zur Freilegung der hinteren, Felsenbeinfläche u. d. Kleinhirns," Beiträge z. klinischer chirurgie, v. xxxvii, 1903, p. 734.

5. W. Milligan: Trans. of the Otol. Soc. of the United Kingdom, 1900, p. 50.



chronic catarrhal conditions, with tinnitus. The treatment consisted of the radical mastoid operation and removal of the stapes. In the first case the result was a complete failure; in the second the operation was successful, and in the third case the tinnitus was reduced. Balance<sup>6</sup> published in 1900 an account of the removal of the semicircular canals for suppuration. The tinnitus ceased. In April, 1904, Wallace and Marriage<sup>7</sup> published a description of a section of the auditory nerve. The tinnitus was diminished, but death followed in three weeks. In July, 1904, Lake<sup>8</sup> published an account of the removal of the semicircular canals for vertigo. This operation had no influence on the coincident tinnitus. Shortly after this case he opened a cochlea, with temporary relief of the tinnitus. R. H. Parry<sup>9</sup> reported, in August, 1904, the division of the auditory nerve, resulting in improved tinnitus.

*History.*—In PARRY'S case, the patient was seized with sudden giddiness six years previously, and similar attacks recurred for two years. Then came a slight improvement. A year before the operation the attacks became more frequent again and very bad. There was severe tinnitus in the left ear and occasionally in the right. The patient had always been partially deaf in the left ear, which discharged until two years before operation. There was no alcoholic or syphilitic history.

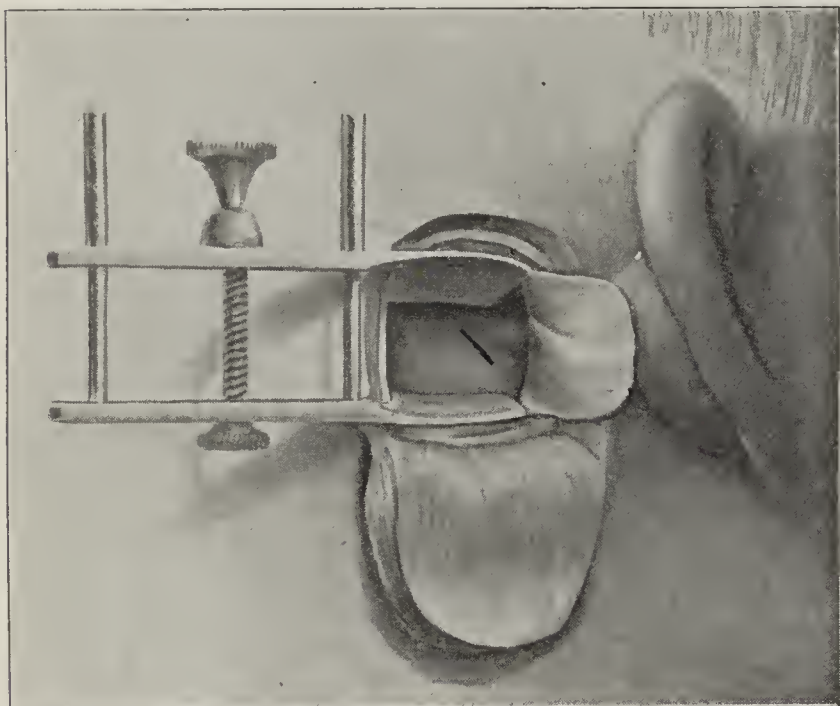


Figure 6.

*Operation and Result.*—The middle fossa was opened, and an osteoplastic flap extending from the center of the zygoma to the base of the mastoid process was made. The dura was elevated from the petrous bone to the semicircular canal. The tegmen was removed and some of the petrous pyramid. After the puncture of the dura to allow the escape of the cerebrospinal fluid, the soft parts were retracted. There was some



Figure 7.

bleeding. The removal of the roof of the auditory meatus exposed the seventh and eighth nerves. The facial nerve was torn by a spicule of bone. Giddiness and complete facial paralysis resulted, but an early improvement took place. Though

6. Balance: Trans. of the Otol. Soc. of the United Kingdom, 1900, p. 47.

7. Wallace and Marriage: Lancet, London, April 30, 1905, p. 1192.

8. Richard Lake: "Removal of the Semicircular Canals in a Case of Unilateral Aural Vertigo." Journal of Laryngology, Rhinology, and Otolaryngology. London, July, 1904, p. 350; Feb. 1905, p. 74.

9. R. H. Parry: "A Case of Tinnitus and Vertigo Treated by Division of the Auditory Nerve," Jour. of Laryn., Rhin. and Otol., London, August, 1904, XIX, p. 402.

lessened, the tinnitus persisted, and also the vertigo. The wound healed by first intention. A month later the dizziness and tinnitus were slightly better on the whole. A year later

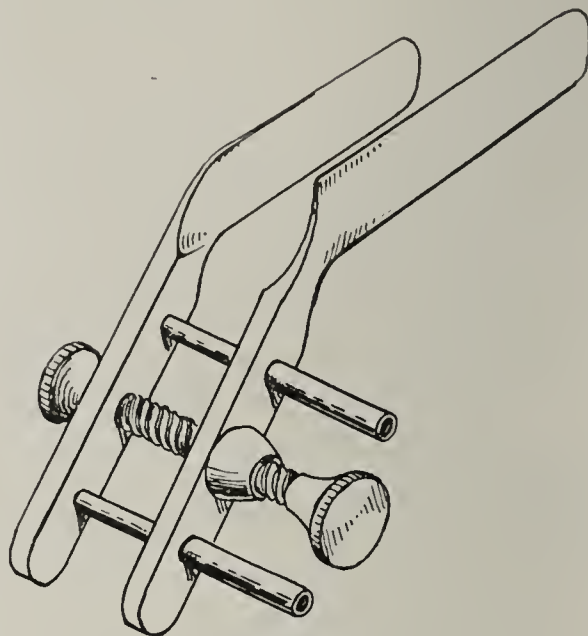


Figure 8.

anastomosis of the facial and spinal accessory was done. As a result the tinnitus was considerably improved, but not the vertigo.

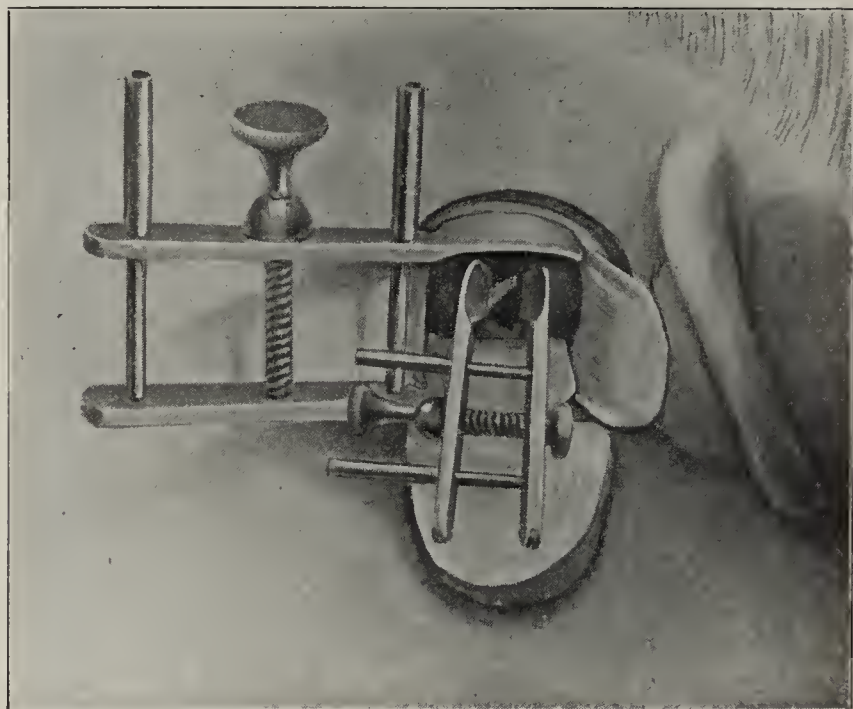


Figure 9.

In KRAUSE'S case,<sup>4</sup> the patient was a woman, 63 years old.

*History.*—In the right ear she had tinnitus, which prevented her from sleeping and rendered life unbearable. She also suffered from a "sclerotic process of the inner ear."

*Operation and Result.*—An osteoplastic flap was made of the right occipital region, with the base below. A similar dural flap was also made. The right cerebral hemisphere was displaced to the left with a spatula, and the auditory and facial nerves exposed. The bleeding of the cerebral veins was controlled by the gauge-tampon. The auditory nerve was cut. The operation lasted one hour and a half. On recovering from the anesthetic, the patient could not wink the right eye as well as the left. She said the tinnitus was not so bad as before (remarkable!), but complained of dizziness. She was very drowsy. The next day the tinnitus was noticeably less (!) and there was a slight paresis of the face. On the second day there was still less tinnitus, and the dizziness had entirely gone. The next day the patient was seized with a chill, and there was pneumonic sputa, and five days after the operation died from pneumonia.

WALLACE and MARRIAGE'S Case.<sup>7</sup>—A mastoid operation had been performed on the patient. The middle ear was lined with healthy skin. The patient suffered from dizziness and tinnitus in the ear. The wall of the bony labyrinth was intact. A loud



voice could be perceived, but not understood. A loud watch was heard only in contact with the mastoid process. The tuning fork placed on the forehead was heard only on the opposite side. When the fork was placed on the chin it was heard slightly in the affected ear, but sounded quite loud in the other ear. On the mastoid, the tuning fork was only faintly heard. On compression of the left carotid artery the tinnitus ceased. The tinnitus was like the sound of running water, and the sound of ringing bells was always present. It was most noticeable at night, especially when the patient lay on the affected ear. The tinnitus was so severe that sleep was rarely obtained without hypnotics, and was then disturbed and broken. The vertigo was of the type found in Ménière's disease. Drugs had been tried with absolutely no results, and the division of the auditory nerve appeared to be the only possible means of relief for the exhaustion of the patient.

*Operation.*—The complete mastoid operation was performed. The lateral sinus was exposed and the posterior wall of the meatus removed. The dura mater over the temporal lobe was next exposed, and then that over the cerebellum behind the lateral sinus was laid bare for three-fourths of an inch. A part of the temporal bone extending from the lateral sinus forward and inward to the horizontal semicircular canal was then removed from the groove. This exposed the dura mater in front of the sinus for three-eighths of an inch. A flat retractor, one inch broad and bent at an angle, was inserted and the cerebellum compressed. With the aid of a forehead light, the auditory nerve was readily seen. A blunt hook was passed round the eighth nerve without injuring the facial nerve, and the auditory nerve was then divided by traction or scissors.

The bleeding from the lateral sinus was so great that the wound had to be plugged. Seven days later it was opened and the operation continued. On section of the dura mater much cerebrospinal fluid escaped. The lateral sinus persisting in the way, it was ligated and divided and the cerebellum pressed aside. On account of the flow of blood and of cerebrospinal fluid, a good view of the auditory nerve could not be obtained. Finally it was torn across by a blunt hook.

*Result.*—The operation appeared to be successful. The wound was closed and a small drain left at the lower edge. The next day there was facial paralysis. The tinnitus had greatly subsided, but was still obvious to the patient. She also had considerable dizziness and headache. The dressings were soaked with cerebrospinal fluid. On the second day, the flaps were bulged by a blood clot, some of which was let out. On the third day, there was some hernia and no attempt at healing. There was slight diplopia, with occasional vomiting. On the thirteenth day, the condition was the same. The diplopia cleared up. The wound was clean, but showed no signs of healing. The discharge of the cerebrospinal fluid continued and the headache was severe. There was no longer any complaint of tinnitus (!). The ocular fundi were normal. Though diminished, the tinnitus had probably remained present and never stopped. The patient died on the twenty-first day.

*Autopsy.*—No meningitis was found. The cerebrum was healthy throughout and the opposite cerebellar hemisphere was normal. The hemisphere operated on was somewhat soft, but showed no loss of substance. The cortex was blood stained and the vessels full of blood. The cochlea and the semicircular canals were normal. With the exception of a strand as thick as a fine piece of cotton, which lay next the facial nerve, the auditory nerve had been divided. The other organs were normal, save that there were old caseous foci in the lungs. Degeneration of the auditory nerve was found, also of the descending spinal root of the fifth nerve throughout its length in the pons and the medulla, which suggested that the efferent portion of the nerve had been damaged in its extramedullary course. A hemorrhagic softening surrounded a small vessel. This degeneration was confined to the fibers of the pons extending to the middle peduncle. The vestibular nerve was found to be completely degenerated.

#### DISCUSSION OF REPORTED CASES.

In the case reported by Green and Lake<sup>8</sup> the curetting of the cochlea is not worthy of extended consideration in this connection, because it is very difficult to destroy completely the cochlear nerve within the cochlea.

The accounts of Linsmayer,<sup>1</sup> Grunert<sup>2</sup> and Meyerson<sup>3</sup> show that ligation of the carotid has, at best, only a transitory effect on tinnitus. This method need not be discussed, because it does not directly destroy the perception of the tinnitus and because its effect is only indirect and very uncertain.

Lake's<sup>8</sup> report of the removal of the semicircular canal is irrelevant, because these canals are not supposed to be implicated in tinnitus. Balance's<sup>6</sup> case is excluded from the argument, because it was a case of active suppuration. The good results followed the cure of the suppuration.

The three cases of stapedectomy cited by Milligan<sup>5</sup> are not relevant, since they belong to the class of lesser middle-ear operations.

We now come to the consideration of the three sections of the auditory nerve which have been reported.

The technique followed by Krause<sup>4</sup> required a very extensive wound and extreme displacement of the cerebellum, which was probably sufficient to cause some degeneration. The description of the ear lesion given and of the tinnitus are not sufficient to make it clear where the tinnitus had its probable origin—whether in the middle ear, cochlea, auditory nerve or in the higher centers. After the operation the tinnitus was lessened, which is to be expected after any shock. The subsequent death of the patient indicates that she was probably not in a very observant frame of mind during the five days between the operation and the autopsy. It is worthy of remark that the tinnitus did not stop, nor is there any note of its change in character except that its intensity was diminished.

In the records given by Wallace and Marriage<sup>7</sup> the patient's hearing was very much diminished in the affected ear. Bone, as well as air conduction, was affected. This did not give a very good prognosis of improvement from the operation. The route selected for reaching the auditory nerve was the continuance inward of the common mastoid operation. This is laborious, because of the cracking of the bone, and slow because of the hemorrhage which follows. A clear view of the nerve required an operation in two sittings, disturbance of the lateral sinus and considerable displacement of the delicate cerebellum.

These cases are inconclusive, because in all some fibers of the auditory nerve were left intact. After the operation, the tinnitus was diminished in intensity—a change which follows every severe exhaustion. The fact that death followed the operation so quickly and the finding of the autopsy suggest that there was considerable degeneration and disturbance of the functions of the cerebellum.

In the case recorded by Parry<sup>9</sup> the ear conditions and symptoms of the patient were not sufficiently definite to form a prognosis for the operation. The route through the middle fossa and the petrous bone to the auditory nerve shows the danger of breaking the bone, as well as the danger of the unavoidable compression of the cerebrum. The patient recovered from the operation and was reported as slightly better on the whole. A year later the tinnitus was considerably better. The slow improvement in the tinnitus might suggest that the section of the auditory nerve was not a very positive factor in this change.

The cases cited by Krause, Wallace and Parry, taken together, do not throw much light on the subject. None of these cases shows proper care in locating the source of the tinnitus previous to the operation. In each of the cases, as far as we can learn from the description, the tinnitus might have been central. Moreover, all three



operations are open to the criticism of unnecessary danger from injury to the cerebellum or to the facial nerve. The results of all the operations show that there was probably no direct connection between the irritation of the peripheral end of the auditory nerve and the tinnitus, because whatever improvement was noted came very gradually.

#### CONCLUSIONS.

The foregoing records justify the following conclusions:

1. Carefully selected cases of tinnitus, with the nerve stimulus located in the peripheral end of the auditory nerve, offer a good prognosis for cessation of the tinnitus after the section of the eighth nerve.

2. A technic which offers little inconvenience from hemorrhage, no danger from bony spicules, and a minimum of evil from compression of the cerebrum, or especially of the cerebellum, gives a good prognosis of recovery from the operation and in selected cases a cessation of the tinnitus.

3. If, after appropriate general and local treatment, grave tinnitus still exists, we are called on to recommend the section of the auditory nerve, provided the source of the tinnitus is believed to lie in the peripheral portion of the auditory nerve.

4. Section of the acoustic nerve will be as effective for the cure of aural vertigo as for peripheral tinnitus.

#### DISCUSSION.

DR. JOHN F. BARNHILL, Indianapolis, asked if all the patients in whom parts of the auditory nerve were cut died from pneumonia, and if there was an explanation for two-thirds of the patients dying from this cause.

DR. BRYANT said in reply to the first question that one patient died of pneumonia after the operation, one died apparently of hemorrhage of the medulla, and the third was alive one year after the operation. In reply to the second question he said that he thinks it due to injury to the cerebellum, which seemed to be the primary cause.

### PHLEBITIS FOLLOWING ABDOMINAL AND PELVIC OPERATIONS.\*

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Following any surgical procedure there are many remote disasters occurring with sufficient frequency to keep the thoughtful surgeon on the lookout for these unforeseen complications for days and weeks, or until the patient's convalescence is at an end. The time of the occurrence of such complications varies from a few hours to several weeks after the operation. The change in character, from a postoperative hemorrhage to a phlebitis, begins from the second to the fifth week.

Inflammation of the saphenous or femoral vein following abdominal and pelvic operations, while rare, is met sufficiently often to be of much interest to surgeons engaged in this class of surgery. I have written to a number of the leading operators in this country asking for their personal experience with this condition in their postoperative cases, and I find by the replies that their experience is about the same as my own.

In discussing the causes of this condition one is confronted with the absence of postmortem and pathologic investigations, owing to the fact that very few of these

patients die or have the diseased vein removed so that they can be examined by the pathologist. Anatomic peculiarities of the left common external iliac and femoral veins have been suggested as causes of the left side so frequently becoming the seat of a phlebitis. That the left saphenous vein is the vessel most frequently involved is true, but why this vein should be the one most often affected has not been thoroughly settled. Numerous theories have been advanced, but none of them, to me, appears tenable. The left common iliac frequently does not join at the usual place, but passes up on the left side of the aorta and enters the left renal vein. The left common iliac occasionally passes in front of the common iliac artery. In fact, when an anomaly exists in these veins, it is usually on the left side. The passage of the common iliac vein beneath the sigmoid has been mentioned as a causative factor because of the pressure on the returning blood from the left leg by an infected mass of feces in the bowel. A postoperative patient is not permitted to have an impacted sigmoid, as a rule. Malnutrition of the veins, the outcome of a venous stasis, is unquestionably a predisposing cause to a venous thrombosis, and a mild or severe infection at site of this thrombus is all that is necessary to inaugurate a secondary septic phlebitis.

One author (Favor) reports two cases of phlebitis of lower extremities resembling puerperal phlebitis, except that the patients did not have any fever, and thus, he says, the condition was non-infective. He considers such cases as due to the increase of "mineral matter in the blood, especially calcium salts, diminished oxidation, lessened elimination of urea, lessened alkalinity of blood and increased fibrin-forming material in the blood due to the puerperal state." His patients recovered within ten days. Constitutional causes usually act bilaterally, as was the case in these two patients.

The inguinal glands are among the most important glandular centers of the body. They are located in Scarpa's triangle and in close proximity to the superficial epigastric the superficial circumflex iliac, superficial external pudic arteries and their corresponding veins and the junction of the internal saphenous and femoral veins. These glands receive the cutaneous lymphatics of the abdominal walls below the umbilicus. Although these glands are in close proximity to the affected vein, they are very rarely enlarged during the attack.

The majority of the incisions for the removal of intraperitoneal pathology are made in the median line and usually slightly to the left, to avoid the wounding of the urachus. Admitting that an infection in this wound might lead to a phlebitis of left femoral, there yet remains, unexplained, why an incision over the gall bladder or appendix is equally as liable to produce the same complication in left leg.

Gerster, in an admirable article,<sup>1</sup> says: "It is significant that almost all of these mysterious cases of postoperative septicemia occur after 'interval' operations for appendicitis; that is, in those cases in which repeated attacks of a local sepsis have preceded and, presumably, have left behind deposits of an equivocal character." This statement was made in support of his position that in the so-called aseptic operations there exist, at the time of the operation, septic foci. This, I believe, is in part true, and, in the cases in which there existed no foci of infection at the time of the operation, the death of the distal end of tied-off tissues

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905

1. Septic Thrombosis of Portal Vein in Appendicitis, Med. Rec., June 27, 1903.



acted as a nucleus for the development of a mild type of local infection from the bacteria circulating in the blood at the junction of the dead and living structures. Phlebitis of these veins follows operations performed in other parts of the body than the abdomen, as the following case may incidentally illustrate. In the majority of the cases the left saphenous has been the vein involved. I operated on Mr. B. for gangrene of right lung. Two weeks later a phlebitis of left saphenous vein developed. He made a tardy recovery.

That the left femoral and saphenous veins are chosen fields for bacterial colonization no one will doubt, after analyzing the location of the phlebitis in a large series of cases (Fig. 1). I am firmly of the opinion that these germs reach these selected points through the blood, after traversing the heart, lungs and arteries, and thus reach the walls of the veins and that the thrombus, when one forms, is formed as a secondary process. If the walls of the vein received the infection from the venous blood, thrombi would form earlier in the process of the inflammation, and the disease would be of a more serious character insofar as permanent injury to the veins is concerned. Loss of muscular aid in pumping blood toward the heart has been mentioned as a cause, but this would apply equally to both legs.

Keen has suggested that "the passage of the left common iliac vein under the right common iliac artery and under the left internal, might lead to a retardation of the venous blood in left vein and thus act as a cause of venous thrombosis (Fig. 2). When we recognize that the thrombus, when one forms, is usually secondary to the phlebitis in this locality, this theory of pressure on vein loses much of its weight. If the disease of the vein proper is secondary to the thrombus formation, as some authorities claim, there must be some anatomic arrangement favorable to the development of a thrombus in the left femoral and internal saphenous that does not exist in other veins of the body. If this local condition is due alone to a general gouty dyscrasia or to pathogenic germs circulating in the blood, it would be as liable to occur in the right leg as in the left; in both, or in other, veins of the body.

I do not believe that the cause is to be found in the general circulation alone. The walls of the vein are primarily attacked, hence the agent producing the phlebitis must reach the vessel walls either through arteries, lymphatics or, if the venous circulation, there must exist in this left vein a want of resistance to bacterial invasion that is not found in the right leg. Isolated spots of infection of the affected vein are frequently noticed, those farthest away from the body appearing last in most instances. Because of this, multiple thrombi may form in the vessel.

Most of the French clinicians believe that the process is primarily an infection of the venous walls. Maurice Richardson believes that it is especially liable to follow operations in the pelvis of anemic patients and that the disease is aseptic in its origin and in its course. Schenck reports 48 cases occurring in Johns Hopkins Hospital, being about 1.5 per cent. of all abdominal operations. Of this number 40 per cent. were for removal of uterine fibroids and the great majority were seemingly aseptic cases. Noble says: "Many cases of phlebitis can not be explained on the ground of infection. Phlebitis occurs in about 1 per cent. of all cases." Dunning: "Phlebitis occurs more frequently from a suprapubic than from a vaginal hysterectomy." Richardson: "I probably see ten a year. Usually follows operations in deep pelvis, most commonly hysterectomy. After clean

operation." Carstens says: "I always consider all such of aseptic origin, although it is funny that you have no sepsis whatever in the wound, or apparently anywhere else." Welch was able in his laboratory to demonstrate the presence of bacteria in over 70 per cent. of these cases following typhoid. He believes that the thrombosis is due to localized infection of the vein's wall. In the rare instances in which the disease begins in the right leg it almost invariably will attack the left also.

It was maintained for a long time that the infection in phlebitis was transported by the white corpuscles to a thrombus already formed. The infection of a femoral vein following an abdominal operation does not appear to be one of extension by continuity from the pelvic structures. A thrombus may form in a vein from compression, as from a tense fascia, or lymphatic glandular pressure, or inflammation of perivenous tissue. In these cases, owing to the inflammatory thickening, it is not always possible to diagnose a thrombus by palpation or otherwise. Weakened heart action in debilitated patients is mentioned as one of the causes of thrombus in vessels farthest removed from the heart (marasmic thrombus of Billroth). Slowness of blood current and collapsibility of veins predispose the vessels to thrombus formation, because the collapsed walls or inflamed walls easily come in contact and a thrombus is thus predisposed, because of the fibrin deposited on one wall adheres to the opposite side and thus the canal of the vessel is occluded.

In reviewing the cases I find that about 30 per cent. followed operations for the removal of the uterus for fibroids. In all hysterectomies (abdominal) many ligatures are used and much tissue is compressed and later becomes necrotic, a septic cavity (uterine) is opened and no drainage is put in. The conditions left in pelvis are favorable for the development of a mild type of infection (local and constitutional) at the site of tied-off tissues. This would naturally occur about ten days or two weeks later. In vaginal operations (rarely followed by a phlebitis) the same structures are constricted, but here there is good drainage and Nature is not compelled to take care of the infected necrotic tissues by absorption.

Keiffer of St. Louis reports a case of left saphenous inflammation following interval appendicitis operation. The patient left the hospital too early and returned to his home, but was found dead in his bed next morning—presumably from cerebral embolism. In one of my cholecystotomies the patient developed a left saphenous phlebitis on the seventh day. On the tenth day following the operation, or three days after phlebitis began, she died suddenly from a cerebral embolism.

Pulmonary embolism follows operations for uterine fibroma more frequently than it follows any other abdominal operation. This is true also of phlebitis of femoral and saphenous veins.

Miller<sup>2</sup> reports 8 cases of phlebitis following abdominal operations which resulted in either a pulmonary embolism or a pleurisy, or sudden death. For instance: Take two patients who are in identically the same general rundown condition. In one Nature is loaded down with the disposition of pelvic tissue, as in an abdominal hysterectomy, and mild infection; in the other, as in a vaginal hysterectomy, drainage relieves the patient of this added responsibility. In pyosalpinx and other suppurative processes in the pelvis an immunity has



been established in the patient, so that at the time of the operation she is not likely to become generally septic, many of these operations being followed by drainage.

In most of my cases the first symptoms of this complication have developed in the second or third week following the operation, regardless of the character of the case operated on. If there has been any difference at all, the phlebitis has followed operations for the removal of seemingly aseptic growths, as uterine fibroids, cirrhotic ovaries and interval operations for appendicitis. It would look as though the infection was either introduced through a defective aseptic technic or was due to the absorption of the pedicle at the site of the operation. To the latter theory I am disposed to lean, but this does not explain why the left vein should be most frequently involved, even though the operation was performed on the right side, as is the case in appendi-

swelling is uniform and free from discolorations or redness, in fact, the surface is blanched. Pressure along the course of the vein elicits tenderness, and in the calf of the leg the tenderness is found all over the posterior surface. The vein is hardened and rolls under the fingers like a tendon in many cases. Pressure, if continued for several minutes, may produce pitting, but not so well marked as in the dropsical affections. Except along the course of the superficial portion of the vein, which may feel unnaturally warm, there is a death-like temperature of the surface to the examining hand. This condition must not be confounded with a postoperative neuritis of the internal and middle cutaneous or the musculo-cutaneous nerve on outer side of leg and dorsal surface of foot, as illustrated by the following case:

CASE 1.—Mrs. B., aged 36, nullipara; complained of some pain near exit of right great sciatic nerve, at its exit from

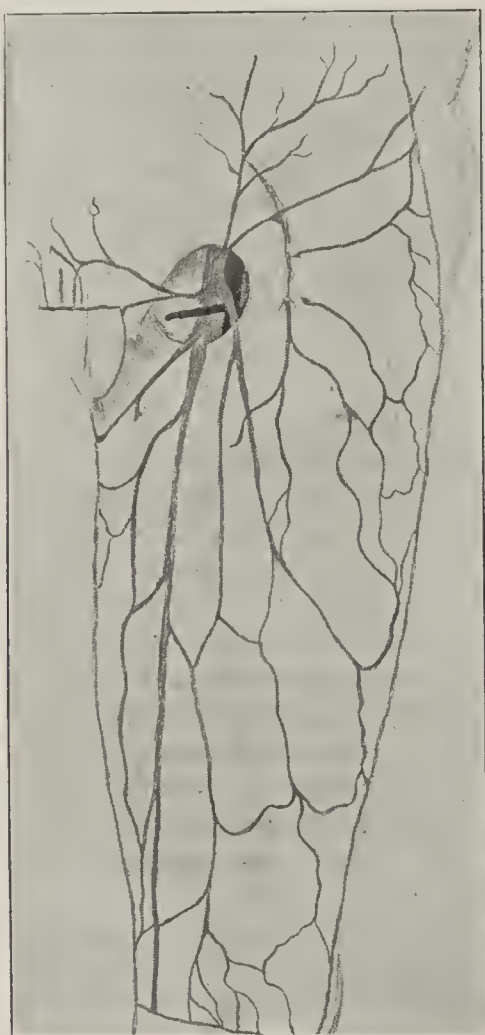


Fig. 1.—The left saphenous at its entrance into the femoral is most frequently the point first affected.

citis, common-duct operations and right oöphorectomy. The usual onset of this condition is marked by a gradually increasing pain along some portion of the long saphenous vein, usually the left and most frequently just below the saphenous opening in the fascia lata. This pain may extend along the whole course of the vein and, as a rule, does follow the vessel below the knee. An elevation of temperature of from 2 to 3 degrees is noticed and a proportionately increased pulse rate is also observed. The pain in limb is increased by moving the limb or by permitting it to remain in a dependent position, and is partially relieved by elevating the leg and thigh. On examining, in many cases, there will be noticed a redness along the course of the inflamed vein or veins. If seen early, no perceptible swelling of the limb will be noticed, but within a few days, if the case is a severe one, the whole limb will be swollen, but more particularly the calf of the leg. This

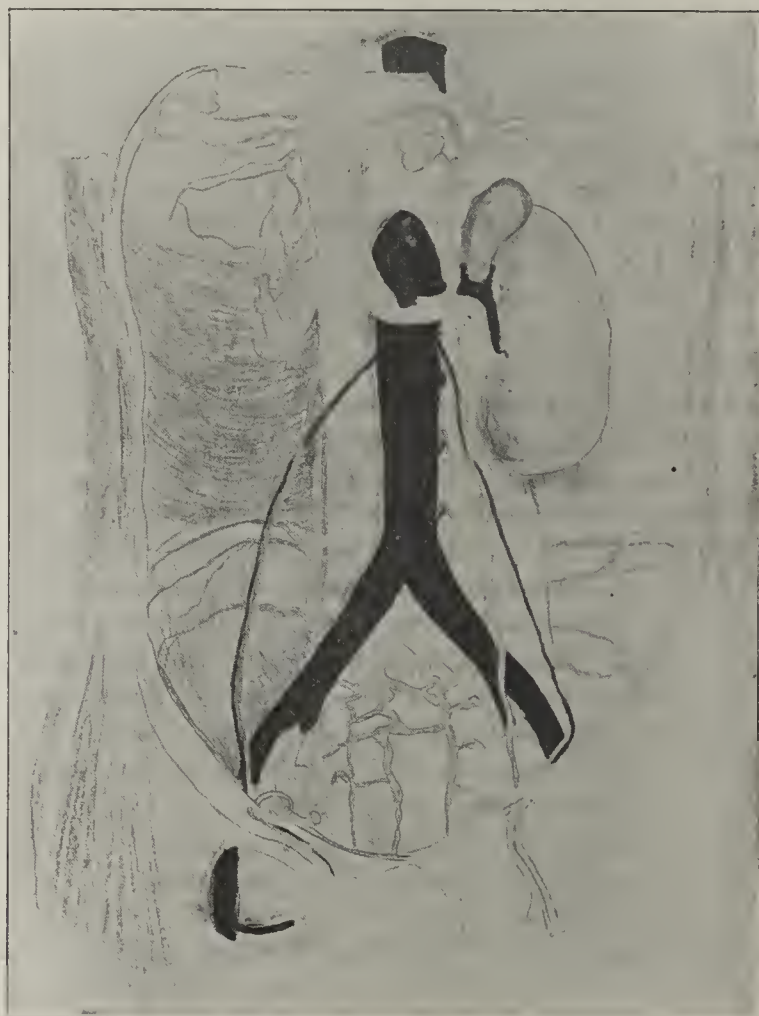


Fig. 2.—Keen says: "The passage of the left common iliac vein under the right common iliac artery might lead to a retardation of blood in vein, and thus favor a left saphenous or femoral thrombosis."

pelvis. Examination showed a small ovarian cyst. This was removed by abdominal route. Her progress was smooth for the first three weeks; then she developed the following symptoms and condition: a rapidly spreading pain over areas of distribution on internal, middle and musculo-cutaneous nerves, tenderness over limited areas, firm pressure seemingly better borne than a gentle touch. Leg swollen, but not uniformly, does not pit on pressure, as no edema was found. Position does not appear to increase or diminish the swelling. The leg to the touch feels natural in as far as concerns the temperature. Cold air increases the pain. No elevation of temperature or increase in pulse rate. Six months later I examined this woman and found her in perfect health.

CASE 2.—Mrs. Z., aged 33; nullipara. No history of sepsis in pelvis or abdomen. Uterine fibroma. Hysterectomy. Incision in abdomen healed aseptically. On the eleventh day after operation she first complained of pain near the junction of saphenous and femoral veins. This pain soon extended to the



calf of the leg. Tenderness developed along the course of saphenous to inner side of knee, later into calf; redness developed along course of upper portion of the vein. At end of four days a cord-like hardness could be made out along course of the vein. Her appetite was much impaired, tongue coated, pulse 96, temperature 100 to 101. At the end of a week the thigh and the leg were much swollen, with no general redness. Pain and swelling increased by dependence of leg. The acute febrile symptoms subsided at the end of ten days, but left the leg tender and swollen. At the end of three weeks from beginning of phlebitis she left the hospital. The leg continued tender for several months. Two years later I found the left leg one and one-half inches larger than the right. No visible enlargements or tortuosity of veins.

CASE 3.—Mr. E.: chronic appendicitis; interval operation; postoperative left saphenous phlebitis. This young man, aged 21, had suffered from mild recurring attacks of appendicitis for three years. Operation in interval of attacks. Usual post-operative history, fourteenth day, when he noticed a soreness in left leg along course of internal saphenous vein, extending to calf of same leg. Temperature 101, pulse 100. Tenderness along vein, slight swelling of leg. Symptoms subsided at end of two weeks and he left about well, save a slight stiffness about leg and thigh. A year later I found him entirely well.

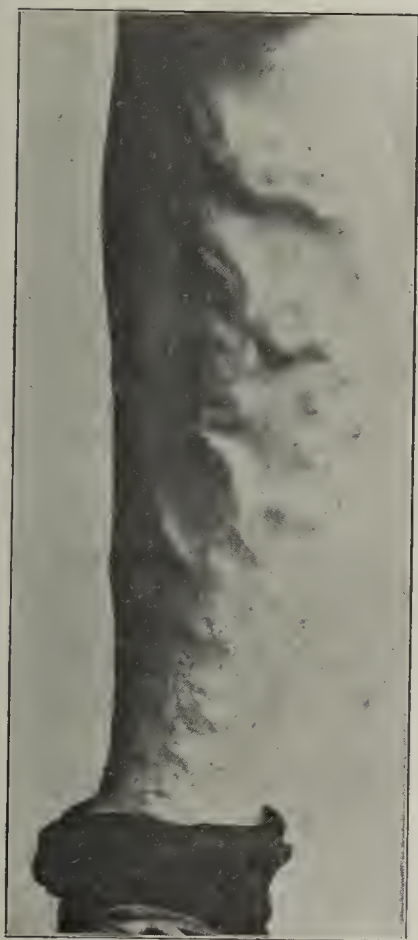


Fig. 3.—Varicosity of veins of left leg from a descending phlebitis of saphenous vein following an "interval" operation for appendicitis.

Byron Robinson<sup>3</sup> reports a sudden death following the flexing of the thigh on the abdomen in a patient on whom seventeen days previously he had performed a vaginal hysterectomy. The autopsy showed a phlebitis of left ovarian vein, and an occlusion of pulmonary artery with elongated spindle-shaped blood clots.

Dr. Lucy Waite reports a very similar condition following an abortion. The phlebitis in this case was also in left ovarian vein.

Dr. John G. Shelton, Telluride, Colorado, reports a case of phlebitis of left femoral vein following an aseptic appendectomy. Phlebitis began on the thirteenth day after operation. He also reports a case, in the practice of a neighbor physician, of left phlebitis following an interval operation for appendicitis.

Dr. Second had this complication in one of his cases (left femoral) following a clean herniotomy.

Cullen reports that on the twenty-first day following a vaginal hysterectomy one of his cases developed a phlebitis of left femoral vein. The next day she had a severe pain in the right side of the chest and crepitant râles and pleuritic friction sounds were detected. This patient recovered and the tenderness of vein and abnormal chest sounds disappeared. There was evidently an embolus, which found its way from femoral vein into right lung near its pleural surface. Cullen reports other cases in which the femoral and popliteal veins have been affected following operations for cancer of uterus.

Dr. A. L. Brittin, Athens, Ill., reports a case of acute



Fig. 4.—Occlusion of left common iliac vein from an ascending saphenous phlebitis following intravesical manipulation.

fulminating appendicitis, followed by a phlebitis of left saphenous, the latter beginning on the twenty-third day after operation and was accompanied by frequent attacks of dyspnea lasting several minutes. This case recovered.

Dr. W. S. Thayer, Baltimore, in an admirable article on post-typhoidal thrombosis, says that in 39 cases of venous thrombosis, 26 cases occurred in left leg, 9 cases occurred in both legs, 5 cases occurred in right leg, 2 cases occurred in leg not recorded. He concludes his article by the statement: "It seems to me that the evidence is decidedly in favor of the idea that these cases of venous thrombosis are for the most part due to a primary phlebitis."

Heller reports 2 cases of phlebitis following a gonorrhea in a male patient, in both patients the left saphenous was the vein involved.

3. Med. Rec., June 14, 1905.



Dr. Trumbull, Valparaiso, Chili, reports a case of left saphenous phlebitis following a follicular tonsillitis.

Detachment of the thrombi, where such is formed, in these cases, is extremely rare, yet has occurred with a frequency sufficient to warn us in the management of these cases to avoid all known causes leading to pulmonary or cerebral emboli. These thrombi usually are non-suppurative, hence are not likely to undergo deliquescence and become detached from their moorings. A recognition of this fact admonishes us to avoid all mechanical methods that might lead to a forcible detachment of the thrombus, such as massage, too early muscular exertion, etc. Some of the postoperative pneumonias are undoubtedly due to infected emboli carried from inflamed and thrombotic veins. A more fatal condition may be brought about by an embolus in the brain from the same source.

Venous obstruction from a thrombus may lead to gangrene of the limb by an extension of the obstruction in both directions, thus preventing all collateral circulation. A termination so serious is extremely rare. In fact I have been unable to find such a case recorded where the phlebitis followed an abdominal operation. Where the disease extends or involves the internal iliac and obliterates that vessel, as it has been known to do, the anastomotic circulation is carried on through the internal mammary, the superficial epigastric, the external pudic and its corresponding vessel of opposite side. (Fig. 4.) Nature seemingly gets rid of the thrombus in this position by the same process of absorption as is the case with the fibrin extravasated in other tissues.

Massage should not be used in the early history of the disease for fear of dislodging fragments of a thrombus, thus causing embolic, pulmonary or cardiac symptoms of an alarming character or even sudden death. A patient suffering from a phlebitis should avoid all undue or violent exertion, as the detachment of a fragment of a thrombus may result in a fatal embolic injury of a cardiac or respiratory center in the floor of a fourth ventricle or a multiple infection of lung or other remote organs.

An increase of the calcium salts in the blood has been mentioned as a probable source of phlebitis and venous thrombosis, by increasing the coagulability of the blood. Sodium citrate has been recommended as a prophylactic agent by its tendency to decrease the powers of the blood to coagulate. Tavel recommends ligation of saphenous above inflamed portion in order to prevent embolism, a procedure I feel that will rarely, if ever, be necessary.

The acute symptoms of a phlebitis usually disappear within a few weeks under proper management, while the late history is one of a tedious recovery and the use of the elastic stocking extending over a period of months and sometimes years.

Elevation of the affected limb and bandaging it loosely and keeping it moist with witch-hazel or other cooling lotions, constitutes the local treatment for the acute phlebitis. The administration of cathartics and tonics completes the treatment of ordinary cases. Later, massage and the use of an elastic stocking may be necessary.

From various sources I have collected 232 cases. The tables appended show some very interesting facts. Of the 232 cases, phlebitis followed the following operations the number of times stated:

Nephrorrhaphy .....	9
Appendicitis, mostly so-called aseptic cases.....	27
Cholecystotomy .....	4
Oöphorectomy (cystic, cirrhotic, etc.) .....	16

Hysterectomy fibroids, so-called aseptic cases....	69
Vaginal operations, character not stated.....	8
Alexander's operation .....	3
Hernia .....	4
Pyosalpinx .....	7
Pelvic operations, not specified.....	9
Abdominal and pelvic, character not stated .....	56
Ectopic pregnancy .....	4
Vaginal hysterectomy for cancer .....	9
Suspension of uterus .....	7
Splenectomy .....	1

#### SPECIAL FEATURES.

- In 213 cases, left saphenous or femoral veins were affected.
- In 8 cases, both left and right veins were affected.
- In 11 cases, right veins alone affected.
- In 182 cases, proximal part of vein first affected.
- In 36 cases, distal part of vein first affected.
- In 14 cases, portion of vein affected not mentioned.
- In 166 cases, sepsis was not present at time of the operation.
- In 56 cases, no mention of sepsis or a sepsis was made.
- In 10 cases there was pus present at time of operation. In the great majority of cases, the first symptoms appeared from the tenth to the fifteenth day.
- In 6 cases, pleuritic and lung complications.
- In 3 cases, sudden death occurred.

#### DEDUCTIONS:

1. This complication occurs in about 2 per cent. of all abdominal operations.
2. It follows operations on anemic patients most frequently, as in abdominal hysterectomies for bleeding fibroids.
3. Vaginal hysterectomies for the same conditions are rarely followed by this complication.
4. It is more liable to follow so-called aseptic operations where no drainage is used.
5. It is due to a mild type of infection and often to absorption of the necrotic pedicle at site of operation.
6. The disease attacks the left femoral or saphenous veins in over 90 per cent. of the cases.
7. Anatomic peculiarity of veins on left side have not been found that satisfactorily explains why the disease has a predilection for left side.
8. That a *locus minoris resistentiæ* exists in left saphenous and femoral veins is proved by the frequency of the involvement of these veins.
9. The disease is, primarily, an inflammation of the walls of the veins and the thrombus, when one forms, is secondary, as a rule.
10. Many cases of postoperative pneumonias, pleuritis and cerebral emboli have their origin in this source.
11. Treatment consists in elevation of affected leg, tonics, etc.

I wish to return my sincere thanks to the following surgeons, who have aided me very much in the preparation of this paper by sending me the reports of their postoperative cases of phlebitis and otherwise: Drs. Wm. S. Thayer, Maurice Richardson, Benjamin R. Schenck, A. H. Vander Veer, Weller Van Hook, Franklin E. Martin, Byron Robinson, A. J. Ochsner, A. H. Ferguson, W. J. Mayo, W. W. Keen, Wesley Bovée, W. D. Haggard, L. S. McMurtry, J. B. Murphy, Joseph Price, E. E. Montgomery, R. B. Hall, M. B. Ricketts, Edwin Walker, S. E. Lanphear, W. B. Dorsett, L. H. Dunning, H. L. Longyear, C. P. Noble, H. A. Kelly, J. M. Baldy, J. H. Carstens, R. T. Morris and A. C. Bernays.

#### DISCUSSION.

DR. C. O. THIENHAUS, Milwaukee, Wis., said that several years ago Lennander, from Upsala, published a paper on thrombosis and phlebitis of the lower extremities following operation and stated that this occurrence could be avoided by keeping the patient in the Trendelenburg position for from eight days to two weeks immediately following the operation. For the past four years Dr. Thienhaus has done this in all cases in which there is reason to believe that there might be a tendency to thrombosis of the lower extremities.

DR. A. GOLDSPOHN, Chicago, said that the reason for the greater frequency of this condition on the left side may be



somewhat akin to the reason for the prevalence of varicocele on the left side and the frequent affections of the left ovary in women. Many gynecologists claim that this is due to the fact that the left spermatic vein in man and left ovarian vein in women enter into the splenic vein at a right angle, whereas the right spermatic vein in man and the right ovarian vein in women enter into the vena cava almost directly, so that the venous flow going from the left testicle or left ovary passes around a right angle. This should be thought of in this connection.

DR. A. H. CORDIER said that Dr. Goldspohn's remarks would be applicable were this condition of thrombus of a primary character. This is not the case, it is secondary to the inflammatory conditions in the venous wall. The anatomic character could be easily explained were it of a thrombotic nature, but it is not of thrombotic origin. It is simply a mild type of infection. Inflammatory changes take place in the venous wall and this condition is secondary thereto.

### SITE OF ORIGIN OF GALLSTONES.\*

L. L. McARTHUR, M.D.

CHICAGO.

If excuse were necessary for again raising the discussion relative to the site of origin of gallstones, it might be found in the evidence offered by the actual specimen I herewith present, as well as by the anomalies its unique clinical history offers. So startling were the findings both at the time of operation and at necropsy that I feel justified in claiming your attention while presenting them for your consideration. I will first give as briefly as possible an abstract of the clinical history, leaving for future publication the more complete details, temperature chart, analysis, etc., and then such conclusions as may be drawn from the review of the current literature.

*Patient.*—M. G., Austrian, aged 25, clerk, single. Admitted to Michael Reese Hospital Nov. 28, 1904. Died Dec. 12, 1904, fourteen days after admission and on the twenty-third day of illness.

*History.*—Family history negative. Past history, "Always well and strong." Denies all previous sickness. No venereal history. Drinks some, but not to excess.

Present trouble of ten days' duration. Patient states that he "caught cold" two weeks previous to onset. Onset was sudden, with severe, cramp-like pain in right hypochondriac region. Pain localized and aggravated by deep inspiration and coughing. Tenderness on pressure. No icterus. Had a chill on third day, followed by high temperature. No nausea or vomiting, though an emetic had been given to induce vomiting. Appetite good until recently. Bowels regular. No hemoptysis. No night sweats. No urinary trouble.

*Examination.*—When patient entered hospital the physical examination showed only a slight tenderness in the epigastric region just below ensiform. Skin chocolate colored. Spleen palpable. Temperature 102.4 (rectal), pulse 92, respiration 20, leucocyte count 10,300; Widal partial. During his first ten days in the hospital his temperature ranged from 99 to 103. On the tenth day he had a chill lasting fifteen minutes, followed by a sudden rise of temperature to 105.6, dropping to 102.6 in an hour after being sponged, pulse ranging all the time from 70 to 90.

Six days after admission to hospital patient had an attack of severe epigastric pain with a slight icteric hue to skin. Small round tumor about the size of an egg was felt in the region of the gall bladder. Rectus muscle tense on right side. No radiation of pain to shoulders, but passes to back and lower thoracic region.

On the twelfth day he had another chill, followed by temperature of 105.6; leucocyte count 19,000, Widal partial. Urinary examination showed albumin, bile, hyaline, granular and epithelial casts.

*Operation.*—On the following morning, twenty-three days after first symptoms, he was transferred to the surgical department and immediately operated on. Operation under ether anesthesia. Bevan incision revealed a moderately distended gall bladder. No peritonitis. Palpation of common duct in the usual manner revealed a hard cylindrical tube one and three-quarter inches in diameter, which gave the impression of grasping the bodies of the vertebræ, so large and so hard was it. On opening the common duct after the usual packing off, by an inch incision, there escaped innumerable gallstones (246 were counted) of pea size, floating not in bile, but in pus of the same stinking character as characterizes an appendiceal abscess. As fast as the stones could be ladled out with a large gallstone spoon, more would appear, until, considering the desperate condition of the patient, it was deemed advisable to remove only those obstructing the duodenal end of the common duct. Two fingers could be passed along the duct. Large drainage tube inserted in the duct after the gall bladder had been emptied of a semi-translucent mucopurulent fluid and drainage provided. Closure of abdomen in usual manner with gauze supplemental drainage.

We have, then, in this case these remarkable facts: First, the total absence and denial of any former serious illness or infective fever. Second, with innumerable stones in ducts, but none in gall bladder, the patient had never a colic until his final illness. Third, the fluid first escaping from the incision in the common duct instead of bile was stinking colon bacillus pus. Fourth, the absence of stones in the gall bladder, coupled with the denial of ever having had a pain or an ache prior to his last illness, is sufficient evidence that these stones had never been in the gall bladder. Fifth, the post-mortem findings demonstrate the existence of innumerable stones in the finer intrahepatic ducts, diminishing in size regularly as the ducts grow smaller.

A partial postmortem examination permitted fourth day after operation revealed:

First. Absence of general peritonitis.

Second. Drainage of gall bladder and common duct in site and efficient.

Third. Dilatation of the common duct excessive, permitting passage of three fingers.

Fourth. Narrowing of cystic duct but not complete occlusion.

Fifth. Many small stones still in common duct.

Sixth. Suppurative cholangitis extending into lesser hepatic ducts.

Seventh. Wherever incision is made into substance of the liver, calculi of varying size are to be seen in ducts.

Eighth. Death from septic cholangitis.

On analysis, gallstones consist of cholesterol alone, bilirubin calcium alone, or varying proportions of both, with cholesterol usually predominating. While bile normally contains minute traces of cholesterol, it never contains, in health, bilirubin calcium. The physiologic chemist, in recent years, has demonstrated that the source of cholesterol is in degenerative process affecting the cell protoplasm, columnar epithelium being that most prone to undergo this metamorphosis, hence the presence of cholesterol in various secretions like those of the bronchi, the nose, in the steatomata of the ear, the bile tracts, or in those neoplasms lined by columnar epithelium.

The biologist has demonstrated experimentally and the pathologist found by his research at necropsies that the influences necessary to induce these degenerative changes are resident in the protoplasmic poisons of somewhat attenuated bacterial organisms. When such irritants act on the epithelia, the latter are found to un-

\* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



dergo degenerative changes, with swelling of the cells, formation of myeloid bodies within the protoplasm, rupture, discharge of contents, and the subsequent appearance of cholesterin in the débris. Thus, in the lower animals, by attenuated cultures of the colon bacillus introduced in the gall bladder, it has been easy to induce such changes in the epithelium as to greatly increase the cholesterin contents of the bile tracts, with resulting cholesterin-stone formation. Active, unattenuated cultures of the colon bacillus or staphylococcus induce inflammatory changes, with pus formation and precipitated bile salts, but no stone formation, no cholesterin.

Bilirubin, the coloring matter of the bile, a sulphur-containing albuminoid derivative, is soluble in the soda salts of the bile. It is a product of the activities of the liver cell in health, not a degeneration product, which, under certain conditions, may be precipitated with a calcium base, making an insoluble body, bilirubin calcium, the other important constituent of the second

mining factors of stone formation, whether they be of cholesterin or bilirubin calcium. Of the former in the gall bladder and common ducts more especially; of the latter in the intrahepatic ducts, *probably*; in the gall bladder and common ducts *possibly*.

We have thus seen the source of the gallstone constituents, but have considered only one of the factors essential to stone formation, which, taken alone, will never produce stone. There must be the other factor of stagnation of the bile stream either in the gall bladder and its mucoporous crypts or the ducts. If this be intermittent in character the growth of the stone will also be intermittent, and a laminated stone result. If continuous, the stone presents a more constant composition. It should be distinctly understood that stagnation alone, however produced, will not produce either variety of stone, but that to it must be added a mild bacterial infection, so mild as not to induce inflammatory reaction in the lining of the gall tracts, but sufficient to induce degenerative changes in the epithelial linings, or a diminished alkalinity of the bile by a fermentative change in its constituents, or both. The stagnation in the stream may be inflammatory, neoplastic, or in various ways mechanical, need not be continuous, must not be absolute. Since the flow in the gall bladder is not as active as in the ducts themselves, this is the site of election of the stone formation in many cases, but not, as well-known authorities yet teach, the only place.

The labors of Herter, Miyake, Welch, Hanot, Mischkowski, Chiaro, Gilbert and Cushing have, by an immense number of experiments, demonstrated the truth of the statements so far made, a review of which at this time is inopportune.

Of immense interest, however, is the nature of infective stone-forming elements and their manner of ingress into the bile tracts. This has been now demonstrated to be possible, either through a direct extension up the tracts from the intestines, or by a direct elimination with the bile, of organisms for the time being infecting the blood of the individual. It has long been known as true that the typhoid and other organisms can be recovered in the urine of the infected patient. It now is known that organisms are similarly eliminated by the liver cells, appearing in the bile, to excite, if very virulent, perhaps an acute cholecystitis or cholangitis; if attenuated by their passage through the blood, to slowly induce those changes in the mucosa favorable to the production of cholesterin, and act mechanically as nuclei for stones after having undergone the "clumping" influences which obtain in typhoid serum and secretions. Especial emphasis is here made to the typhoid organism as a factor in the formation of gallstones, first, because it was the earliest demonstrated organism to act thus; second, because 20 to 30 per cent. of all typhoids are followed by gallstones; and, third, because, while not particularly provocative of suppurative processes, it has shown itself to have a wonderful vitality, living in the human as long as 26 years (Billings). Its continued presence in the gall-bladder crypts slowly provokes those degenerative changes before referred to which result in the production of cholesterin.

When, on the other hand, the bacteria of the intestine gain access to the bile tracts by direct extension up the ducts, as can be so beautifully observed in the extension up Steno's duct in typhoid, they usually excite, as they do in the parotid, acute suppurative or gangrenous processes, and we have the presence of acute typhoid gangrenous cholecystitis produced by the same organism

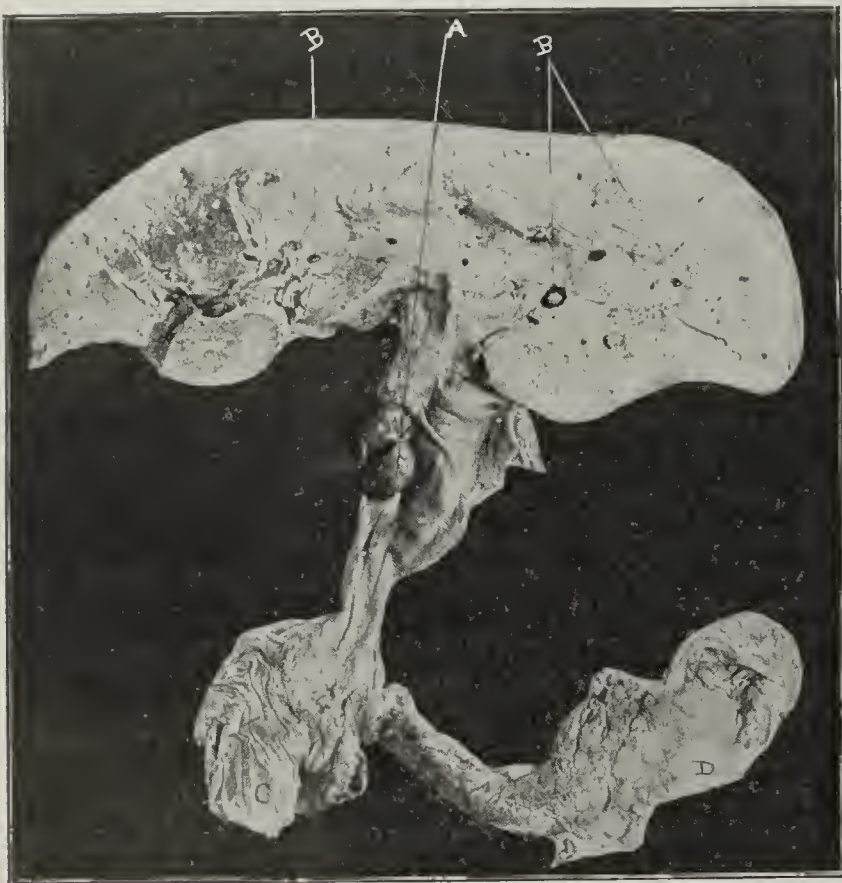


Fig. 1.—Frontal section of left lobe of liver with common duct leading down to duodenum and pancreas. Gall bladder removed. Notice: A, Large stones in common duct. BB, Intrahepatic stones in the different radicals. C, Duodenum. D, Pancreas.

group of gallstones. These conditions, as is the case with cholesterin, are most often those of bacterial fermentative action, though conceivable as occasionally due to a pathologic condition of the hepatic secretions, incident to age, poor metabolism, alkalinity of the bile, and the consequent precipitation of bilirubin calcium. The source of bilirubin, then, being in the hepatic cells themselves, the formation of bilirubin calcium stones is rendered possible in the very smallest bile ducts. This is most frequently the type of those stones found intrahepatically, as of the case submitted. The source of the calcium base with which the bilirubin combines, when precipitated by bacterial or other influences, is as yet a mooted question. Calcium salts exist in the bile normally, but normally do not combine with bilirubin. If, however, bacterial fermentative changes be induced in the bile, with consequent diminished alkalinity, bilirubin calcium is precipitated. Thus, it will be seen bacterial influences are the deter-



which, more attenuated in character, will produce stone.

What has been said of the typhoid organism occasionally obtains with the colon bacillus, and the nuclei of various stones proven to consist of them.

#### CONCLUSIONS.

1. All gallstones do not originate in the gall bladder.
2. The origin of cholesterol stones is probably in the gall bladder, with subsequent growths either in gall bladder or ducts where they may lodge.
3. Bilirubin calcium is the constituent of the smaller intrahepatic duct stones.
4. Calculi in immense numbers may have existed for months in the ducts without producing a symptom.
5. The surgeon need not reproach himself too much if there be recurrence of the symptoms after common duct drainage.

#### DISCUSSION.

DR. C. O. THIENHAUS, Milwaukee, Wis., agreed with Dr. McArthur that gallstones not only form in the gall bladder and in the cystic duct, but in the hepatic and common ducts as well, and that in those cases it is difficult to decide whether to perform a cholecystectomy or a cholecystostomy. Cholecystostomy, he said, is a much more justifiable operation because of the lesser danger connected with it.

DR. M. H. RICHARDSON, Boston, said that one of the most important points in connection with the surgical treatment of gallstones is the impossibility of finding and removing those concealed in the hepatic duct. The surgeon, therefore, should not reproach himself if, after he has removed all that he can find, symptoms pointing to other stones continue. The combinations in biliary diseases are numerous—the complications greatly exceeding those of disease of the appendix. Of gallstone disease we really know but little, and for what knowledge we have we must depend largely on the surgeon's observation of pathologic conditions during life. He has been strongly impressed by the importance of making observations, not only as to the seat of origin of gallstones, but as to symptoms caused by stones the situation and other attributes of which have been thus demonstrated. That gallstones are not always formed in the gall bladder itself two or three of his cases have clearly demonstrated. He illustrated the situation and probable seat of origin of the stones by black-board sketches. In one case the stones were undoubtedly formed in the liver. In one instance, after the removal of a large number of stones from the dilated hepatic and common ducts, 150 were discharged through the tube; in another, after the removal of many stones from a hepatic duct as large as a gall bladder, each primary division of the hepatic duct was drained separately and the amount of bile from each half of the liver determined. In this case, as the diagram shows, the nidus of gallstones was perhaps the gall bladder, and the dilatation of the hepatic duct may have resulted from obstruction of the common duct by multiple stones. The practical point in connection with the seat of origin of gallstones is that the exploratory incision should be large enough to admit the hand. It is only in this way that the biliary tract can be extensively and thoroughly examined.

DR. ROBERT F. WEIR, Hague, N. Y., suggested another way of getting large incisions other than the one Dr. Richardson showed. The long vertical cut is made, but to achieve the ample room desired for free manipulation and vision of the anterior sheath of the section is divided transversely, the muscle pulled strongly to the left—when its posterior sheath is likewise divided transversely—this gives a large increase of operative space, but if more should be demanded the muscles of the abdominal wall to the right of the ventral invasion can be separated as has been shown by Dr. Richardson. The divided layers of the rectal sheath at the close of the operation are sutured, and this, with the replacement of the muscle, re-establishes the integrity of that portion of the abdominal wall. This procedure is similar to Dr. Weir's method in appendicitis incisions.

DR. L. L. MCARTHUR said that a very large drainage tube was introduced into the common duct in the case referred to,

for several days gallstones kept pouring out; in fact, they came so constantly during the operation that the search finally had to stop. Dr. McArthur concluded that no reproach should be made against the surgeon if he has carefully explored the common duct, as the origin of the stones might be far out of reach, even when the surgeon has gone into the liver substance to a great depth. One can not always get all the stones no matter how careful the search.

### Clinical Reports

#### CONGENITAL MALFORMATION OF THE LEFT AURICLE AND OF THE EXTERNAL CUTANEOUS CANAL.\*

EMIL AMBERG, M.D.  
DETROIT.

*Patient.*—Mr. A. S., Russian, aged 32, was seen by me Oct. 13, 1905. He comes from Sakolko, in Grodno, Russia, and has been in the United States about six months. He is the father of three children who, according to his statement, are free from any malformation.

*Description of Malformation.*—The left auricle, as shown by the accompanying illustration, is arrested in its development. The ridge is 4.6 cm. long. The width varies from 11 to 7 mm., the height from 7 to about 5 mm., the lowest portion being



Showing malformation of left auricle.

about the middle of the ridge, which consists mostly of cartilage. Four distinct, blind and narrow canals can be made out by the probe. Two are found in the anterior fold between the cartilage and the skin, the first 11 mm., the second 28 mm. from the top, both pointing upward and backward, the first of them being about 5 and the second about 7 mm. long. A third canal is found in the middle of the ridge about 13 mm. from the top, showing scarcely any depth, and a fourth one in the posterior fold 22.5 mm. from the top presenting practically no depth. Besides these there are slight intimations of two canals in the posterior fold, one 29 and the other 34 mm. from the top, exhibiting only a trace of depth. The osseous canal seems to be filled with fibrous and cartilaginous tissue. The mastoid process is well developed.

*Hearing.*—Politzer's acoumeter is heard about one inch from the left ear by air conduction, and around the canal by bone conduction. Blake's 512 tuning fork is not heard by air conduction, but by bone conduction. The Weber test is localized in the right ear. Hartmann's 4096 tuning fork is neither heard by air nor by bone conduction. The right ear appears to be normal.

\* Demonstrated before the Wayne County (Detroit) Medical Society, 1905.



# CASE OF INFECTION WITH THE RAT-TAILED LARVA OF THE DRONE FLY.

E. L. K. HANBY, M.D.

Surgeon to Sloss Sheffield Steel & Iron Co.; Assistant Surgeon to Louisville and Nashville Railway, Alabama Great Southern Railway, Southern Railway, and the Birmingham Railway Light and Power Co.

BESSEMER, ALA.

Dr. Boston, Philadelphia, found on postmortem in a child which died in convulsions and great agony a parasite, which he sent to Professor Stiles of Washington, D. C., who replied that the specimen was a species of the genus *Helophilus* or *Eristalis*. Dr. Boston gives no history or treatment of his case further than that the child died in great agony and convulsions. With the exception of this case I fail to find that any other author mentions this species of parasite. I feel that this disease is very grave and that perhaps it is often met without being recognized. The case which I wish to report came under my personal observation, and the pain and agony was something terrible. I have never seen any human being suffer more than did this child.

**History.**—On Sept. 12, 1905, I was called to see a little negress 18 months old, at Sloss Mines, Ala. The child was sitting in its mother's lap, crying loudly and pulling out the hair from the front of its head; the eyes were glaring. The child seemed to be terribly frightened; saliva was pouring from its mouth, and it had the appearance of an insane child. The child's mother could do nothing to quiet her. I gave the patient a hypodermic of morphin, 1/16 of a grain, and in ten minutes she was quiet, so I proceeded to examine her further. The mother told me that the child had suffered three weeks previously from teething, so her physician had told her, but he had treated her ever since without any apparent result, and the child had continued to grow worse. She would crawl on her abdomen, and in this position she would stop crying and seem to be easy, and would finally drop off to sleep for a period of half an hour. She would then awake in great pain, and very much frightened and nervous. She cried continually, pulled her hair and scratched her buttocks. These attacks of agony would last from 15 to 30 minutes and then she would be quiet for about one hour, except that she would be very fretful for an hour or two.

The surroundings were very good; the location of the house is 635 feet above sea level. The water is taken from a covered natural spring. The child's diet consisted of fried ham, bacon, eggs, greens, Irish potatoes and cornbread; she also drank a great deal of buttermilk.

**Examination.**—The child was very anemic and emaciated; the eyeballs were sunken far back in the socket. Temperature was 99.8; pulse 88. The tongue was coated, moist and trembling. The lungs were in good condition except for a slight cough; the heart's action was good. The abdomen was very much distended, and was tense like a drum. The child was having and had had for the past two weeks, frequent passages of mucus, with great tenesmus; moving of bowels did not relieve the pain. The child passed about 32 ounces of urine a day, and on examination I found the specific gravity 1.026; reaction, acid; no sugar nor albumin, but an excess of phosphates. There was no pain on urination.

**Treatment.**—I prescribed (and with good results:)

R. Hydrarg. chlor. mitis.....grs. iii      2|  
Santonin .....grs. iss      1|

Mt. et. ft. chart. No. 3. Sig. 1, powder every 2 hours.

This was followed by a tablespoonful of castor oil and two drops of turpentine.

**Result.**—Six hours afterward she passed twenty-four live worms, which lived two and one-half days without food. These worms or parasites were grayish in color, one and one-half inches long, from head to tip of tail, and half an inch in diameter. They had two horns, one on each side of the head, sucker-shaped mouths, and were very vicious; they would snap at a straw or at anything held close to the head. The tail of each was one-half inch in length and had a stinger

or horn on the end of it. The tail was held straight up when crawling, and the worms could crawl very fast. These worms looked very much like new-born mice, with the exception of the legs, which were very much like those of a thousand-leg worm. After the passage of the worms, the child rested well that night; the next morning her mother showed me the worms. I was utterly astounded and told her that I knew no human being could pass mice, which they resembled very much, so she brought in enough eye witnesses to convince me that she spoke the truth. I gave the child the following:

R. Hydrarg. chlor. mitis .....grs. iii      2|  
Salol  
Santonin, āā .....grs. iss      3|

M. et. ft. chart No. 3. Sig., 1 powder every hour.

This was followed by one tablespoonful of castor oil. In four hours the child passed four more worms; they were dead. Since that time (Sept. 13, 1905) she has passed no more worms to date (Oct. 27, 1905). And at present is in good health and is gaining in weight rapidly. She sleeps well at night, and is entirely well, in my opinion. As an after treatment, I gave her calomel in broken doses, 1/6 grain once a day for seven days, and followed this with a tonic of iron, strychnin, quinin and cod-liver oil. She is taking this tonic now.

[The parasite in question is the "rat-tailed" larva of the drone fly (*Eristalis tenax*), or of some closely allied form. The drone fly is common about flowers. The larva lives in foul water, feeding on decaying vegetable matter. The tail is a telescopic tube which can be lengthened or shortened as necessity dictates; at its end there is a rosette of hairs which may spread out on the water and keep the larva from sinking; through this tube the larva obtains air when the body is submerged. Some allied larvæ live in rotten wood. This organism is not normally a parasite, but it might be swallowed accidentally. It was described as a parasite of man by Brera in 1809, under the name *Cercosoma* (misquoted by some authors as *Conosoma*). If the larvæ were actually passed from the child in this case, as claimed by the mother, the infection was doubtless purely accidental and probably took place through the drinking of some stagnant water.—Editor.]

## OBSTRUCTION OF BOWELS FROM GALLSTONE.

R. H. POWELL, M.D.

Superintendent of the Grafton City Hospital.

GRAFTON, W. VA.

Obstruction of the bowels from gallstone is of infrequent occurrence, being variously estimated from 8 to 15 per cent. of all intestinal obstructions. I may be pardoned, therefore, for reporting a case occurring in the practice of Dr. Ithamar Davisson, of Fremington, a village ten miles from this city, and in which I was called in consultation the night previous to the day of operation.

**History.**—A woman, aged 56, multipara, rather corpulent, had had stercoraceous vomiting for two days; there had been no movement of the bowels for five days, with severe pain in the epigastrie region. Patient gave a history of having had attacks of gallstone colic about eight years previously, but had had no recurrence until the beginning of present illness. When I saw the woman she had a temperature of 100.4 degrees; the pulse rate was 120. Early the next day she was brought to the Grafton City Hospital, where she was immediately prepared for operation.

**Operation.**—A median incision six inches long was made. The abdominal wall was very thick. The intestines were highly injected and very much distended. I drew out through the incision a few coils of intestine, and then passed my hand down to the right inguinal region, where a hard mass was felt. On withdrawing the mass I found that it was within the lumen of the bowel, about ten inches above the ileocecal valve. Immediately above this point the bowel was distended and highly injected. Near the cecum the intestine was normal in appearance. One assistant was instructed to grasp the bowel on either side of the obstruction. After thoroughly



walling off the abdominal cavity by packing with gauze wet in hot normal salt solution, a longitudinal incision was made directly over the obstruction, which proved to be a gallstone. After thorough cleansing, the opening in the intestine was closed by a continuous Lembert suture, reinforced by a second row. The bowel was cleansed, the omentum drawn down, and the abdomen closed with silkworm gut and chromicized catgut.

*Remarks.*—The patient made a rapid and complete recovery. The gallstone was egg-shaped and measured one and one-half inches in the longitudinal and one inch in the short diameters.

## COMPOUND FRACTURE OF THE VAULT WITH LOSS OF BRAIN SUBSTANCE.

A REPORT OF TWO CASES WITH RECOVERY.

MAURICE KAHN, M.D.

Surgeon to St. Vincent's Hospital.  
LEADVILLE, COLO.

I feel that no apology is necessary in reporting the following cases, as they are of sufficient rarity to merit attention. Cranial injuries, moreover, occupy a place of the first surgical importance, notwithstanding that only 2 or 3 per cent. of all fractures are found to be of the skull; for the reason that the skull contains so vital an organ, and that there is a mortality of from 20 to 25 per cent. in all vault fractures with or without depression.

It behooves us, then, to give our most serious thought to such cases, the treatment of which appears to be not so well comprehended as the treatment of similar injuries to bones in other situations. Why this should be is not easily explained; certainly the brain, so intolerant of violent usage, the one organ above all others that can not be maltreated with impunity, that promptly resents insult, not alone deserves, but demands proper treatment in the event of its injury. If it were not for brain implication in so many of the cranial fractures, these fractures would have no claim to a more prominent position than similar damage to the long bones. As is well known, the serious aspect assumed by these cases results, not from the extent of the fracture itself, but from the probability of brain involvement, which is the more conspicuous by reason of the higher degree of fragmentation of the inner plate than of the outer. This is particularly evident in gunshot wounds, the exploration of which often discloses an unexpected splintered or depressed inner table. The relative infrequency of fracture at a distance in these cases is probably explainable on the ground that the force of the vulnerating object is expended at the point of impact.

In deciding whether or not to explore it is wise to bear in mind the danger of pus formation outside the dura, the easy infectibility of the diploë, and the chance of the inner table being comminuted or depressed, even though there be but slight evidence of injury to the external table. Hence, before making any but the most superficial examination, it is well promptly to shave the head and to scrub the scalp and one's hands as though going into the cranial cavity; then one is prepared, if it should be found necessary, to proceed with whatever measures may be deemed essential without danger of infection, and thus also to avoid dangerous delay fraught, as it often is, with such possibilities for harm.

*CASE 1.*—I saw this patient, a strong, well-developed man of 40, at midnight on May 18, 1899, about thirty minutes after the accident, which resulted from a quarrel, during which the patient was struck on the head with a woodman's ax. A wound had been inflicted  $3\frac{3}{8}$  inch long,  $1\frac{1}{2}$  inches above the nasion; the anterior angle five-eighths of an inch to the left of the median line; the posterior angle was three-quarters of an inch to the left of the median line.

*Treatment.*—The head was shaved, scrubbed with chlorinated soda solution, ethereal soap and bichlorid of mercury. On exploration there was found the cleanest-cut wound I have ever seen in bone; it had the appearance of a clean-cut incision in any of the soft parts, or as though made by a saw. Within the wound were a few tiny particles of brain tissue. A resolute effort was made to ascertain if splintering, comminution or depression of the inner plate had occurred, including careful probing with a trephine probe, but no evidence of such a condition could be detected. This is the more remarkable, as one familiar with skull fractures, with a knowledge of the inflicting weapon and the probable force used in delivering the blow, would naturally expect to find that considerable more damage had been done the inner plate than had been done the outer. That splintering did not occur is seemingly convincing testimony to the keen edge of the penetrating blade. The wound was sewed up tight, resulting in primary union. While we have no means of ascertaining whether or not harmful adhesions have formed, nevertheless there is at this time (six years following injury), no symptomatic evidence favoring such a theory.

*CASE 2.*—This patient, a robust man of 28, was seen about two hours after the accident, and presented a small, round wound a half-inch above the right superciliary ridge  $1\frac{1}{2}$  inches from the median line. There was a second wound about three inches posterior to the first and a trifle mesially. These injuries were said to be self-inflicted from a 38-caliber gun. The wounds were characteristic of bullet wounds; that of entry, the anterior one, being round and small compared with that of exit, the posterior one, which was larger and lacerated. The area surrounding the anterior wound was powder stained, showing the close proximity of the revolver when discharged.

*Treatment.*—After cleansing the scalp, during which process considerable brain tissue escaped, the two openings were connected by a straight incision which was prolonged backward to permit thorough exploration. Considerable comminution and depression was then noted. The opening in the skull was enlarged with DeVilbiss' forceps to permit the elevation and extraction of fragments of bone imbedded in the brain. During this procedure a portion of the bullet was also removed, and more brain tissue unavoidably lost. Profuse diploic oozing from the posterior angle was a disagreeable feature attending the operation. This area was packed, just sufficient room being left in suturing to permit protrusion of the gauze. The wound healed by first intention, except the packed area, which, however, closed without difficulty. At this time (nine months following injury), no untoward symptom appears.

It is to be borne in mind in giving prognosis, however, that epilepsy has been known to develop even many years after skull fracture; and also, that traumatic epilepsy most often follows wounds of the frontal and parietal regions.

To the tyro, the presence of a wound of exit might be taken as positive evidence that the entire bullet had passed out, and be misleading to the extent of his concluding that it probably inflicted slight injury to the skull and its contents. The proximity of the two wounds might also lend color to the belief that the bullet had entered at a slight angle, been deflected by the bone, which it possibly had not injured to any great extent. An immediate exploration will always safeguard against error, and should invariably be performed in doubtful cases of head injury. The experienced surgeon might expect to find irreparable damage to the brain by reason of the revolver having been held at such close range at the time of its discharge. As a rule, gunshot wounds of the skull (except those resulting from small caliber weapons) are hopeless because the explosive effect on bone and fluid—or semifluid-containing cavities, frequently insures extensive fissuring and comminution of the skull and great or excessive contusion of its contents.



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## SOME OBJECTIONS TO THE PASTEURIZATION OF MILK.

The question as to whether milk is better food for children in a raw or Pasteurized state is easily answered in a few large cities where supervision of dairies is properly carried out and the standard of dairy cleanliness high. Under such circumstances, there is no question that the raw material is the best in every way. Anyone who will take the trouble to follow the newspaper reports of our large cities will find that in most of them there appear from week to week accounts of the fining of milkmen or dairy companies for putting on the market milk which shows evidence of chemical or bacterial abnormalities or which contains some kind of preservative. A visit to the dairy farms in the neighborhood will usually make it apparent why such evidences of uncleanness are so commonly found. The average dairyman knows little, and apparently cares less, about the steps necessary to insure clean milk, and the average dairy employe does not appreciate them at all. Practical dairymen invariably claim that the price paid for milk in the large cities is so small, and the expenses of transportation and handling milk so great, that they can not afford to be as clean as is necessary to secure uncontaminated milk. The conduct of a clean modern dairy requires a large outlay for buildings and apparatus, and a much larger force of helpers than is to be found in the average dairy of the present. In order to procure clean milk in our cities, therefore, we must either raise the price of milk or resort to some artificial method of rendering it innocuous. Unfortunately, any increase in the price of milk would fall most heavily on the more prolific poorer classes, and for this reason is objectionable, though it might be possible to educate the general public up to the desirability of this step. Meanwhile, the question of Pasteurization is of importance.

The advocates of Pasteurization claim that the effect of the process is to destroy the ordinary lactic acid bacilli which cause souring of the milk, to kill disease germs, to prolong the keeping power, and at the same time to produce no marked change in the taste or digestive quality. There is still some discussion, we believe, as to the power of ordinary Pasteurization to destroy tubercle bacilli, an important question if Behring's views as to milk transmission are substantiated. There is still a question as to whether Pasteurization does not destroy or inhibit certain natural ferments in milk which assist in its digestion. Many competent observers, perhaps

it would be fair to say most of them, believe that Pasteurization does have this effect.

One of the commonest tests applied by health boards to determine the fitness of milk for consumption is the acidity test. The estimation of the number of bacteria is a tedious process requiring special apparatus, and, in a rough way, there is a parallelism between the amount of acid and the number of lactic-acid bacteria. For this reason, the acidity test, which is simple, is in constant use, and a milk not showing definite signs of souring to the unaided senses, is often condemned on account of high acidity. Bergey<sup>1</sup> has recently shown that reliance on the acidity test will lead to grave error if applied to Pasteurized milk. After Pasteurization the bacteria which survive are the spore formers, and most of these belong to the *Bacillus subtilis* group. These organisms can increase to enormous numbers without raising the acidity of the milk very markedly. For instance, in one of Bergey's tests a sample of Pasteurized milk contained over 148,000,000 bacteria, and had not one-half the acidity necessary for its condemnation. It is true that these particular bacilli produce in time coagulation of the milk, but the changes indicative of spoiling which are appreciable by smell and taste, are not apparent, so that before coagulation a milk with a very high bacterial count would be passed if the acidity test alone was used. It is likewise true that the group of bacteria classed under the general head of *Bacillus subtilis* are not generally regarded as pathogenic, but there are instances, especially in eye diseases, in which they have been known to take on pathogenicity. In any event, they produce changes in the milk which render it less digestible, and like other non-pathogenic bacteria their products introduced into the gastrointestinal tract may be fully capable of setting up severe irritation. Dr. Bergey's work is an argument against the use of Pasteurized milk, and one which should be considered.

## CANCER COMMUNICABILITY.

One of the interesting phases of the discussions on cancer at the recent annual meeting<sup>2</sup> of the New York State Medical Association was the fact that the majority of the surgeons who took part in the discussion on the etiology and prophylaxis of cancer, insisted on the possibility of the disease being communicated from one person to another. It has long been a perplexing matter to explain why certain houses have seemed to be much more liable to have cancer patients than others, in spite of the fact that the successive families that moved into them bore no relationship to each other. It has been pointed out, too, that cancer seemed to spread along water courses and, having found lodgment in a certain part of a country, to rage there with more virulence than in other parts, though no climatic or dietetic conditions

1. Proc. of the Path. So. of Phila., 1905, vol. viii, p. 102.  
2. Medical News, Nov. 4 and 11, 1905.



could be suggested to explain this apparent increase of virulence.

There is no doubt at all in the minds of any surgeon of extensive experience that cancer can be and often is autoinfectious, that is, that it may be communicated from one portion of a cut surface of a patient to another portion of the incision. It has often been noted, moreover, that cancer of the lip has been transferred from one lip to the other, and even more wide distributions have apparently been observed, apart from metastases.

Of course, the question of cancer communicability is extremely important. There are many possibilities of error in the consideration of the subject. Cancer is so common as to make the disturbing factor of coincidences almost impossible of elimination. According to the last census, nearly one in thirty of all those who die in the United States die from cancer. Under these circumstances it is easy to understand that not infrequently a person who has been in close association with a cancer patient will afterward die with the same disease, yet without any necessary causal connection. In fact, if this did not occur, in about one in every fifty cases, or a little more, there would be grave doubt thrown on the census statistics. The persons who wait on cancer patients, apart from nurses, are usually of nearly the same age, that is, are brothers, sisters, husbands or wives, and so they have reached the age where there is a special liability to cancer. While there is no reason therefore, for thinking that we have sufficient evidence to disturb those in attendance on cancer cases with the hideous thought that perhaps they are exposing themselves to some slight additional risks of acquiring the disease, there is every reason for further study of this subject.

General practitioners throughout the country can do more to furnish valuable statistics than the operators in large cities. Every case of cancer development, in which there is or has been intimate association with a previous cancer case, should be reported. More than one country physician knows of series of cancer cases that have occurred along a particular water course, or in successive farms along the same road. All of these cases, even though they may seem to be only coincidences, should be reported. From the data thus obtained, perhaps some definite idea of the amount of communicability of cancer that exists may be estimated. That it is not high is sure; if it exists at all, we should know it, and the sooner the better for humanity. Only the general practitioners can solve the problem in the immediate future. It may seem to some of them that the notion of cancer communication is so improbable as not to deserve attention. It must not be forgotten, however, that scarcely twenty-five years ago, in spite of the fact that tuberculous houses had been pointed out, and tuberculous neighborhoods mapped out, there was a general impression that tuberculosis was not communicable, though we now recognize it as a distinctly contagious disease.

#### THE TYPHOID SPINE.

Recent histologic and bacteriologic studies of the bone-marrow, not only in typhoid fever, but also in influenza, smallpox and other infectious diseases, have shown this tissue to be so frequently affected that it is remarkable that clinical symptoms on the part of the bones are not more often noted in such affections. That they have been noted to some extent can not be denied, but that a general recognition of bone lesions as a result of infectious diseases has not yet taken place can be easily proved by a glance through recent medical literature. The lack of recognition of such lesions is probably due in the main to two reasons, one being that the pains which form so prominent a symptom of such cases are referred to the muscles or nerves, the other that these post-infectious bone lesions tend to heal spontaneously and without the formation of pus.

The lesion which at present usually goes by the name of "typhoid spine," as the diffuseness and uncertainty of this appellation would indicate, has been a subject of a good deal of dispute. There are some who hold that the lesion is a neurosis, whilst others believe it to be due to definite organic changes. As is well known, the condition is one whose main symptoms are pain, generally in the lumbar region, and stiffness of the spinal column. The affection may appear during the lag end of a typhoid attack, or may not occur until several months later. The pain is practically always the initial symptom, it is often quite severe, and usually radiates to the hips, thighs, or abdomen from its seat in the lumbar or dorso-lumbar region.

The recent article of Fluss<sup>1</sup> shows that evidences of more than functional disturbance are to be recognized in quite a large percentage of the cases. Nerve root symptoms are far from rare. Radiating pains, muscle spasm not limited to the spinal muscles, and disturbances in the reflexes must all be interpreted as nerve root signs. Other evidences of organic change are not wanting, and among these must be mentioned rise of temperature at the onset of the pain, paresthesiæ, and in not a few cases actual bony deformity.

It is difficult to reconcile these various symptoms with a neurosis. Of course, marked symptoms of organic disease are often absent, but it must be remembered that the spine is not an easy structure to investigate. If lesions attack the anterior aspect of the spinal column it is readily understood that they may be difficult of detection. There is in many ways a marked resemblance between the method and time of onset and the course of cases of so-called typhoid spine and the post-typhoid lesions which attack parts of the skeleton which are superficial and easily investigated. Their time of onset is similar, fever is apt to occur at the onset in each case, spontaneous remissions are common in both instances, and suppuration not infrequently fails

1. *Centralbl. für die Grenzgeb. der Med. and Chir.* 1905, vol. viii, p. 645.



to occur in the definite post-typhoid lesions of the long bones. On the other hand, the mere fact that individuals suffering from these peculiar spinal symptoms are neurasthenic or hysterical does not prove that all their symptoms are due to a neurosis. The evidence so far adduced from the reported cases of typhoid spine is, we think, strongly in favor of the view that this condition is due to organic changes. Just what these changes are we can assume, but can not prove. In the light of our knowledge of post-typhoid bone lesions elsewhere it seems fair to conclude that in some instances we are dealing with a perispondylitis, and in others with actual disease of the vertebræ. It is certainly safe and conservative to regard all such cases for the present as organic in origin, and to outline the treatment with this point in view.

#### MENTAL DISEASES ASSOCIATED WITH ARTERIO-SCLEROSIS.

The hyperplastic degenerative process designated arteriosclerosis may be looked on as the anatomic expression of old age, mature or premature. Secondary to it the nutrition of the tissues generally suffers with atrophy of parenchymatous structures and increased production of interstitial tissue. These alterations naturally are attended with varied functional disturbances, taking for example, in the sphere of the nervous system, the form of impaired mental, motor and sensory activity. Changes of a related character may be due, likewise, to atrophy of nerve cells, perhaps from toxic influences, although here, too, the vessels are not likely altogether to escape. A good deal of attention has been given to this subject in recent years, and an interesting exposition of the relations between sclerosis of the cerebral vessels and various forms of mental disease is given by Dr. Albert M. Barrett,<sup>1</sup> supplemented by a detailed account of illustrative cases, with description of the lesions.

The lesions are usually focal, although they may be diffuse, and they give rise to a more or less distinctive symptom-complex of varying character. Miliary aneurism, with or without rupture, thrombosis and embolism, conditions often associated with arteriosclerosis, for the purposes of the present discussion, are left out of consideration.

The disease of the vessels may give rise to cerebral atrophy, to subcortical encephalitis, to perivascular gliosis or to degeneration of cortical vessels with destruction of nerve-tissue. The clinical manifestations referable especially to the brain include diminished mental endurance, impaired mental power, enfeebled memory, headache, vertigo, aphasia, syncope, apoplectic or epileptiform attacks, paresis and dementia.

The disorder is to be differentiated especially from parietal dementia and from simple senile dementia. The presence of vascular disease, a history of similar disease, perhaps associated with mental disturbance, in the

ancestry, and freedom from syphilitic infection are in favor of the arteriosclerotic affection. In the latter, symptoms referable to vascular change, such as attacks of vertigo or "shocks," usually appear earlier than mental phenomena, while delusions are more common and more pronounced in parietal dementia. The pupillary reactions and the kneejerks are less commonly enfeebled in arteriosclerotic than in parietal dementia. The lesions and, therefore, the symptoms, of parietal dementia are diffuse, while those of arteriosclerotic dementia are usually focal.

The differentiation of senile dementia is exceedingly difficult, as this condition is almost invariably, though not necessarily, associated with the lesions of arteriosclerosis. The symptoms comprise gradually increasing change of character, with forgetfulness, inclination to fabricate, loss of judgment and disorientation.

#### OREGON AND ORGANIZATION.

Not one physician who is interested in the general welfare of his profession can afford to miss reading the report on professional conditions in Oregon which is presented in this issue<sup>1</sup> by the chairman of the Committee on Organization. It is pertinent to call attention to one of the great benefits of Dr. McCormack's visitations to the various states, and that is the comparative estimate of medical affairs which results from the personal investigation of them all by one experienced eye. In no other way is it possible so readily to obtain a true picture of the situation. Then each state presents certain commendable features that all the rest should know about in order to imitate if possible. Also in nearly every state ill conditions have arisen which others will wish to avoid by knowing the antecedent causes. So in the present report on Oregon we find record of one county society that is a model for all, but a general state of professional disintegration whose etiology others will study in order to avoid. Because of internal factional disputes within the profession of the chief city there is total paralysis of effort to perform public duty and to improve medical conditions. The evil results of dissension among otherwise capable and honorable men are vividly portrayed. The medical practice act is ineffective and unenforced, and in consequence of the low qualification standard the profession is being recruited from those who fail to pass the examinations of other states. Good men, disliking personal strife, stay out of the organization and thus greatly weaken it. As a whole, there is no real organization, the average of the profession is low, and the medical schools are weak. Quacks flourish, and here and there is evidence of commissions and of contract and lodge practice. The picture could not well be more unattractive, but no doubt exposure of the evil state of affairs will stimulate the capable men to enter the organization and to control it for the good of the public and of the profession, putting

de or absorbing those who have heretofore spent their time in internal dissension. The regeneration should be made easy by reason of the fact that in the state

1. Amer. Jour. of Insanity, vol. lxxii, No. 1, p. 37.

1. See page 1818.



there is one model county society whose example and success are bound to win adherents for real organization. There is not a state in the Union where the lessons of Oregon can not be studied with profit. Everywhere the lessons of this diagnosis of professional conditions should be fixed firmly in our minds, the good to be imitated and the evil to be avoided:

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#### PURE FOOD BILL.

One of the most important bills before the United States Congress this year, from the standpoint of public health, is the Pure Food Bill. This bill has already been introduced, according to press reports, but whether it is the same measure as was before Congress last year we do not know. It is encouraging to know that President Roosevelt has recommended such legislation in his message to Congress, which is an advantage. He says:

I recommend that a law be enacted to regulate interstate commerce in misbranded and adulterated foods, drinks, and drugs. Such law would protect legitimate manufacture and commerce and would tend to secure the health and welfare of the consuming public. Traffic in food stuffs which have been debased or adulterated so as to injure health or to deceive purchasers should be forbidden.

It is to be hoped that every physician will realize the importance of the measure and will do all he can to overcome the opposition that will come from the organized interests that will be affected. At the present time we would suggest that it might be a good plan for each one to write to his congressman and senator and ask for a copy of the bill. It will at least make them realize that there is such a bill and that some of their constituents are interested in it. There will be no open opposition to the measure; it is the other kind that may be expected.

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#### WHAT IS "THE PACE THAT KILLS"?

This question has been correctly answered a good many times, so that its revival would seem superfluous were it not for the fact that the terms of the problem are continually forgotten. Recent statistics in our two largest and most "strenuous" cities have appeared to show that the mortality from diseases of the nervous system is not increasing. Still, it is much the fashion to charge premature and unanticipated deaths to "the strenuous life" and to "the hurried life." Newspapers, and even some medical men, read into these unfortunate mischances a meaning that rather appeals to our national pride. We are gravely told that the hurry and strain of American commercial life are reaping a harvest of premature decay and death. Of course, if this deduction is warranted by the facts, the "captains of industry," great and small, must be the chief sufferers. But, as a matter of common observation, the real leaders in the great business transactions of our period, as a rule, work no longer than from 10 a. m. to 3 or 4 p. m. on five days of the week. These men also take more outdoor exercise and recreation than ever before was the case. Among them, too, long vacations are the rule. Premising that there is lack of reliable statistics on the subject, it may well be doubted if the fashionable and rather flattering conclusions are in any respect correct.

It is not business that kills, but intemperate living of every kind. It is the excessive play of the emotions and the unrestrained gratification of the appetites, not the hard work and the rush, that chiefly contribute to the premature fatalities. The true answer, then, is but a modernized variant of the ancient "wine, women and song." The times have changed, ways of life are different, but now, as heretofore, hard work is beneficial to health, and, as always, there is the penalty for excess in the pleasures of life. The trained physician who witnesses these untimely deaths is not deceived. The myocarditis, the arteriosclerosis, the nephritis, the pneumonia tell to the practiced eye the same tale that is so obvious when we are confronted with an ataxia, a multiple neuritis, a general paresis. Such being the case, it is disingenuous, to say the least, to delude the public into a belief that mere hurry and activity produce such results. Duty and responsibility demand that we at all times keep the old truths well to the front. The true moral must ever be drawn from the execution of these penalties, that the world may benefit by their deterrent effect.

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#### TEA DRINKING.

Considerable has been said of late in some English publications, and extensively quoted in this country, about the evil effects of tea drinking in causing physical degeneracy. We have always with us some dietetic reformers who put the ban on tea as well as on the more harmful stimulants. *THE JOURNAL* has already expressed itself on this subject, but in view of the above facts a word more may not be amiss. There is a possibility that the decoction of tea leaves improperly made may be injurious to certain organizations, but that a mild tea infusion of sufficient strength to give all its needed exhilarating effects is harmful we can not believe, and certainly not if it is used in due moderation. Excessive tea drinking, like excessive bread eating, is not to be commended; excess in anything is necessarily injurious. There may also be certain conditions of the system, generally morbid ones, in which the taking in of any considerable amount of the chemical substances contained in tea is harmful, but such are not the conditions of the average individual. As counter to this we may mention the sanitary advantages of the germicidal effect of boiling the drink, which wards off more sickness than it could by any possibility produce. It is this which makes habitable the germ-saturated soil of China, and the degenerating effects on the very virile but exclusively tea-drinking population are not very manifest. There are few, if any, more innocent and attractive flavorings possible for hot drinks than that of the tea leaf. Reformers also should bear in mind the fact that in condemning such innocent drinks as tea they are furnishing, in a way, ammunition for the advocates of less innocent ones, who are always ready to utilize any side arguments that are afforded them. Tea, like many other useful things, may not be a valuable element in an infant's diet, and is liable, like every other good thing, to be abused, but it has few objectionable qualities and may be counted as one of the things adding to the material happiness of life.



## Medical News

### ALABAMA.

**Damage by Fire.**—The offices of Drs. Thomas F. Robinson, Lucian A. Spencer and Hanby, Bessemer, were badly damaged by fire November 17.

**Emergency Hospital Opened.**—The Montgomery Emergency Hospital, which is said to be one of the finest and best equipped institutions in the South, has been opened to receive six negroes suffering from smallpox.

**Personal.**—Dr. T. Miles Leatherwood and family have returned to Tuscaloosa from an extended stay in Denver.—Dr. and Mrs. Rhett Good, Mobile, have returned from Detroit.—Dr. Gaston J. Griel has been elected city physician of Montgomery.—Dr. William G. Harrison and daughter, Talladega, have returned from Europe.

### ARKANSAS.

**Hospital Threatened by Fire.**—The State Lunatic Asylum, Little Rock, was in danger November 25 from fire which broke out in the laundry of the institution.

**Fifth District Meeting.**—The Fifth Councilor District Medical Society met in Camden November 9, and after a literary program was entertained by the physicians of the city at a banquet.

**Hot Springs Doctors Convicted.**—A jury in the Federal Court November 1 decided that Dr. S. C. Van Leer, Hot Springs, had been guilty of violating the regulations governing the Hot Springs Reservation by prescribing hot-water baths without having registered. Sentence was deferred.—Drs. James S., Fred and George Fulton, Hot Springs, were arraigned November 8 on the charge of violating the act of Congress governing the prescription of hot-water baths by non-registered physicians. After hearing the evidence Dr. James S. Fulton was fined and his two sons \$5 each.

**Suit and Injunction.**—By order of the Mena Board of Health the public schools of the city were ordered closed until November 20 on account of diphtheria, and on November 16 the board issued an order that all public meetings such as schools, churches and operas should be prohibited for the time being. The pastor of the Lutheran private school, despite this order, opened his school, and was arrested and fined for disobeying the order of the board, whereupon the pastor brought an injunction suit against the board, which was decided by restraining the board from interfering with the school in any way.

**Government Should Control Springs.**—Dr. Martin Eisele superintendent of the Hot Springs Reservation, in his annual report, states:

The present system of operating the baths through the medium of private lessees is in conflict with public opinion and incompatible with local conditions, and that the government should, as soon as practicable, consistent with existing conditions, assume absolute and complete control of this reservation and operate the bathing interests under government supervision and control thereby eliminating the spirit of commercialism which is manifested under present conditions; and, through scientific equipment, perfection of system, order, discipline and intelligent direction, extend the benefits to be derived from the healing waters, with rates adjusted to cover prudent operating expenses and necessary improvements.

He also makes the following recommendations:

I have the honor respectfully to recommend that a white man and white woman of special educational skill in the administration of the baths, be employed to operate the male and female departments of the various bathhouses as special bath directors, who shall supervise and direct the proper execution of bathing directions when furnished by physicians to their patients, or when the applicant is without medical direction.

Under present conditions, there is no one to whom the patient can appeal concerning the baths, except the bath attendant. Especially is this true in the female department, as a manager can not invade the privacy of this department, and if he did he has no special qualifications to properly direct the various forms of the baths required under competent medical direction. In view of the importance and growing demand for more intelligent administration of the baths, I respectfully urge that this recommendation be given careful consideration.

### CALIFORNIA.

**Diphtheria.**—The Gardner school, San José, has been closed for fumigation on account of the prevalence of diphtheria.

**Personal.**—Dr. John Crawford, Arroyo Grande, has been appointed pension examiner, vice Dr. George B. Nichols, San Luis Obispo, deceased.—Dr. Frederick W. Hatch, Sacramento, has been reappointed superintendent of state hospitals.—Dr. D. C. Strong, Redlands, has been appointed superintendent of the San Bernardino County Hospital, succeeding Dr. Theodore D. Kellogg, Chino, removed.—Dr. John S. Hogshead, Laytonville, has been appointed medical superintendent of the Mendocino

county farm.—Dr. William C. Hopper, San Francisco, has returned after two years in Nome, Alaska.—Dr. A. N. Loper, Fresno, has been elected chairman of the local board of health to succeed Dr. George L. Long, resigned.—Dr. Isaac A. McCarty, Corona, has resigned as physician of Riverside County, to take effect Jan. 1, 1906.—Dr. Norman Bridge, Los Angeles, has assumed medical direction of the Esperanza Sanatorium, Altadena.

### COLORADO.

**Create Medical Library.**—The Las Animas County Medical Society has decided to found a medical library in Trinidad for the use of the physicians in southern Colorado.

**October Deaths.**—The total number of deaths in the state during October was 782, equivalent to an annual death rate of 15.69 per 1,000. Typhoid fever caused 48 deaths; diphtheria, 7, and scarlet fever, 5.

**Presentation.**—On the sixtieth birthday of Dr. S. Edwin Solly, Colorado Springs, his professional associates presented him with a silver loving cup handsomely engraved and inscribed to "The Youngest of Us All."

**Dissolution of Hospital Staff.**—The general staff of physicians at St. Francis Hospital, Colorado Springs, has been dissolved in pursuance of a change of policy in the conduct of the institution whereby all physicians in the city will have the same standing at the hospital.

**Communicable Diseases.**—During October 369 cases of typhoid fever, 94 of scarlet fever, 63 of diphtheria and 9 of smallpox were reported. Compared with September, this shows a decrease of 5 cases of smallpox and an increase of 40 of diphtheria, 65 of scarlet fever and 35 of typhoid fever.

**Personal.**—Dr. Ortus B. Adams has been appointed mine surgeon for the Colorado Fuel & Iron Company at Tercio.—Dr. S. B. Schloz, Bessemer, has resigned from the dispensary staff of the Colorado Fuel & Iron Company and will locate in Colorado Springs.—Dr. Matt R. Root, Denver, surgeon general of Colorado, has gone to New York.—Dr. John Elsner, Denver, has returned from a vacation trip in the East.—Dr. and Mrs. A. Mansfield Holmes, Denver, have returned from a trip to Ohio.

### CONNECTICUT.

**Communicable Diseases.**—During October 157 cases of measles were reported in 13 towns; 114 cases of scarlet fever in 32 towns; 5 cases of cerebrospinal fever in 4 towns; 120 cases of diphtheria in 29 towns; 8 cases of whooping cough in 5 towns; 175 cases of typhoid fever in 46 towns, and 35 cases of consumption in 16 towns.

**October Deaths.**—During the month of October 1,166 deaths were reported to the State Board of Health. This was 30 less than for the previous month, 1 less than for October, 1904, and 28 more than the average for October in the five years preceding. This mortality is equivalent to an annual death rate of 14.1 per 1,000. Diseases of the nervous system caused 154 deaths; heart disease, 128; consumption, 101; accidents and violence, 83; diarrheal disease, 82, and pneumonia, 74.

**Personal.**—Dr. Charles H. Glover, Norwalk, has been appointed a member of the medical staff of the Connecticut Hospital for the Insane, Hartford.—Prof. H. W. Conn of Wesleyan University, Middletown, has been appointed state bacteriologist.—Dr. Charles A. Lindsley, New Haven, has resigned as secretary of the State Board of Health, to take effect after the removal of the office of the board to Hartford.—Dr. Joseph A. Coogan has been reappointed health officer of Windsor Locks.—Dr. Herman P. Hessler, New Haven, sailed for Europe on the *Blucher* November 7.

### DISTRICT OF COLUMBIA.

**Distinguished Surgeons Visit Washington.**—Dr. Adolf Henle, professor of surgery in the University of Breslau, Germany, and his assistant, Dr. Otto Fittig, after a visit in Washington, sailed for Germany November 21 on the *Kronprinz Wilhelm*.

**Personal.**—Dr. George Tully Vaughan, assistant surgeon general United States Public Health and Marine-Hospital Service, Washington, has resigned in order to devote his entire time to the practice of surgery.—Dr. Louis Mackall, Georgetown, slipped and fell November 15, fracturing one of the bones of the foot.—Dr. James J. Kilroy, Washington, has resigned his position on the staff of the gun factory in the Navy Yard to devote his time to the practice of medicine.

**Deaths of the Year.**—The District Health Officer in his annual report gives the total number of deaths in the District for the year as 6,221, of whom 3,580 were white and 2,641 negroes.



The mortality was equivalent to an annual rate of 19.61 per 1,000 for the entire population, or of 16.03 for white and 27.92 for negroes. The chief cause of death was consumption, which claimed 832 victims, or 13.37 per cent. of all deaths. Diarrhea of young children caused 323 deaths; heart diseases, 562; paralysis, 62, and pneumonia, 556.

#### FLORIDA.

**Loss by Fire.**—The building in Mayo owned by Dr. Robert L. Goodbred was destroyed by fire September 18 at a loss of \$1,500, fully covered by insurance.

**Personal.**—Dr. John B. Maloney, Key West, has been appointed first lieutenant and assistant surgeon, Florida State Troops, and assigned to duty with the Second Infantry.—Dr. J. Whiting Hargis, Pensacola, who has been seriously ill with septicemia, has recovered.

#### GEORGIA.

**New Sanatorium.**—The Cordele Sanatorium will be opened about January 1 by Drs. Thomas J. McArthur and Walter E. Edwards, Cordele.

**New Hospital.**—The trustees of the Presbyterian Hospital, Atlanta, have recommended that the hospital association build a steel fireproof hospital to cost \$50,000.

**Personal.**—Dr. Fred Low, Augusta, was presented with a handsome pair of cuff buttons by the executive force of the City Hospital on the occasion of his departure for New Mexico.—Dr. Theodore E. Oertel, Augusta, was elected permanent chairman, and Dr. M. A. Clark, permanent secretary, of the tuberculosis committee appointed by the Georgia Medical Association.—Dr. DeSaussure Ford, Augusta, resigned from the chairmanship of the governing board of the City Hospital, Augusta, November 1, and Dr. W. Harry Goodrich was elected his successor.—Dr. Noel M. Moore has been appointed a member of the board vice Dr. William H. Doughty, term expired.

#### ILLINOIS.

**Epidemic Diseases.**—Diphtheria is reported to be epidemic in Walker Township, Hancock County, where three schools have been closed.—An epidemic of smallpox is reported from Jerseyville, where 12 cases have been discovered among the employes of a shoe factory. A strict quarantine has been established and the State Board of Health is in control of the situation.

**To Investigate Water Supply.**—At a conference November 21, attended by the secretary of the State Board of Health, Edward Bardow, director of the state water supply, and J. A. Harmon, sanitary engineer, plans were adopted for the systematic investigation of the water supply of the state. This investigation will include the sewage purification system in operation in 20 cities of the state, and reports from other states and from foreign countries.

**Personal.**—Dr. Samuel A. Graham has been reappointed chief of the staff of physicians at the Illinois Eastern Hospital for the Insane, Kankakee.—Dr. James L. Lowrie, Lincoln, narrowly escaped death in a collision between his buggy and some freight cars which were making a flying switch. His buggy was struck by the cars, and the horse, buggy and man were dragged or pushed along the track for 60 feet in front of the cars. Fortunately Dr. Lowrie escaped with only a few scratches and contusions.

#### Chicago.

**Personal.**—Dr. Daniel H. Williams delivered a series of lectures at Meharry Medical College, Nashville, beginning November 6.

**The Smells of Chicago.**—The Health Department, after an investigation of the various foul smells which infest the city, has found seven centers of pollution: The stock yards, stables, sewage, tanneries, malt-drying plants, unclean freight yards, and rendering plants.

**November Mortality.**—During November 2,065 deaths occurred, equivalent to an annual mortality of 12.56 per 1,000. Pneumonia caused 301 deaths; consumption, 249; nephritis, 187; violence, including suicide, 147; acute intestinal diseases, 112, and cancer, 106.

**Deaths of the Week.**—There were reported to the Department of Health for the week ended December 2, 483 deaths, equivalent to an annual mortality of 12.65 per 1,000. The deaths were 12 more than for the previous week and 33 more than for the corresponding week of 1904. Consumption caused 67 deaths; pneumonia, 62; heart diseases and nephritis, each, 40; intestinal diseases, 31; violence, including suicide, 25; cancer, 23, and nervous diseases, 22.

**Additional Facts.**—Dr. Henry J. Burwash requests the publication of additional facts regarding the suit against him, notice of which was made in the last issue of THE JOURNAL. He states that he was not sued for performing an unnecessary operation, but for making a partial autopsy without authority of the mother of the deceased; that permission to make the autopsy was given by an elder brother of the deceased, but the court held that the mother was the only person to grant the privilege; and that in the postmortem examination the body was not mutilated, but an incision an inch and one-half to two inches longer than the original incision was made; that only a digital examination was made through this opening, and that no organs were removed.

#### INDIAN TERRITORY.

**Convicted of Manslaughter.**—Dr. J. W. Davenport, Oakman, who shot and killed William Gaines, a mail carrier, in a neighborhood quarrel, has been convicted of manslaughter.

**Western District Physicians Meet.**—At the meeting of the Western District Medical Association at Muskogee November 14 Dr. Floyd E. Waterfield, Holdenville, was elected president; Dr. J. Hutchings White, Muskogee, secretary; Dr. Jesse L. Blakemore, Muskogee, treasurer. Sapulpa was selected as the next place of meeting.

#### INDIANA.

**Medical Equipment Transferred.**—The medical equipment of the Fort Wayne Medical College has been shipped to Indianapolis to the Medical Department of Purdue University.

**Removed Diphtheria Sign.**—Dr. Clara Harbamal, Corydon, who tore down a diphtheria sign, placed on a house in that town by the local authorities, will be prosecuted for violating the health laws of the state.

**Personal.**—Dr. Morton L. Bridge, Van Buren, has been recommended for appointment as a member of the Grant County pension board, to succeed the late Dr. Eli M. Whitson, Jonesboro.—Dr. Fred R. Clapp, Ligonier, coroner of Noble County, has resigned.—Dr. Brose S. Horne, health officer of Marion, who has moved to Indian Territory, has resigned.—Dr. Albert H. Combs has been appointed secretary of the Marion Board of Health.—Drs. W. H. and Jay Nusbaum have left Auburn and will locate in Las Vegas, N. M.—Dr. Corydon R. Richmond, the oldest resident of Kokomo and the first mayor of that town, celebrated his ninety-seventh birthday anniversary November 22.

**Epidemic Diseases.**—During the past week a large number of cases of diphtheria have developed in Corydon and the public schools of the town have been ordered closed.—Fort Wayne reports 36 cases of smallpox, and as the isolation hospital has been burned, many houses are quarantined. Dr. Albert H. Macbeth, the city health commissioner, has turned his barn into a temporary isolation hospital.—An epidemic of intestinal indigestion resembling la grippe is reported from Richmond, with 200 to 300 cases.—Scarlet fever is said to be raging at Hillsboro. About a dozen cases are under treatment and 2 deaths have occurred from the disease.—It is estimated that there are 75 cases of tonsillitis in Shelbyville.—The Junction schoolhouse near Flatrock, Washington Township, Shelby County, has been closed on account of diphtheria.

#### IOWA.

**Dipsomaniac Hospital to Open.**—The new Iowa Hospital for Inebriates, at Knoxville, will open about December 15. About 83 patients will be placed under treatment at that time.

**Epidemic Disease.**—Smallpox is reported from Fayette County, 2 cases being under treatment in West Union and 3 cases at Eldorado.—Scarlet fever is prevalent in Sioux City, and at present more than 60 cases have been reported to the health department.

**Southeastern Physicians Meet.**—At the thirty-fifth annual meeting of the Southeastern Iowa Medical Society, held in Burlington, November 23, the following officers were elected: President, Dr. Frank M. Fuller, Keokuk; vice-presidents, Drs. J. H. Chittum, Wapello, and James S. Gaumer, Danville; secretary and treasurer, Dr. Charles P. Frantz, Burlington, and censors, Drs. John F. Herrick, Ottumwa; George P. Neal, Fort Madison, and William S. McClellan, Morning Sun. The society decided to meet next year in Burlington.

#### KENTUCKY.

**Physician Wins Suit.**—In the suit of T. N. Franklin against Dr. Robert N. Whitehead, Fulton, for \$15,000 for alleged malpractice, the federal court at Paducah decided in favor of the defendant November 22.



**Epidemic Disease.**—The majority of the country schools in McLean County have been closed on account of the prevalence of diphtheria and scarlet fever.—Smallpox has broken out in Pineville. Five cases have been reported and the public schools have been closed.

**Personal.**—Dr. D. D. Eads, Paris, has moved to Chicago.—Dr. Herbert H. Hunt, Mayfield, was kicked by a horse November 17, fracturing his leg.—Dr. Abiah M. Cartledge, Louisville, who has been seriously ill with pneumonia, is now said to be recovering.—Dr. William A. Rice, Fallsburg, has gone to Redlands, Cal.

#### LOUISIANA.

**New State Hospital to be Opened.**—The new Louisiana Hospital for the Insane, Pineville, now nearing completion, will be formally opened December 20, when 500 inmates of the Insane Hospital of the State of Louisiana, Jackson, will be transferred to the new institution. Dr. George A. B. Hays, formerly superintendent of the institution at Jackson, will be superintendent of the new asylum.

**Personal.**—Dr. Hermann B. Gessner, surgeon in charge of the Seventh Ward Marine Hospital headquarters, New Orleans, was presented by the emergency committee of the Seventh Ward with a silver loving-cup November 6.—Dr. Thomas Y. Aby, assistant quarantine officer at Quarantine, at the mouth of the Mississippi, has resigned, owing to ill-health.—Dr. Arthur W. De Roaldes, New Orleans, has returned after a five months' visit to France.—Dr. Rudolph Matas, New Orleans, has returned after a visit to the North.

**Tulane College Opens.**—The Medical Department of Tulane University of Louisiana, New Orleans, opened November 6 with a lecture by Dr. Abraham L. Metz. The following changes in the faculty are announced: Dr. Paul E. Archinard, demonstrator of microscopy, has been made assistant professor of diseases of the nervous system; Dr. Oliver L. Pothier, for eleven years senior assistant demonstrator in the microscopical laboratory, has been made demonstrator, with Drs. Joseph D. Weis, Isaac I. Lemann and Maurice J. B. Couret as assistants; Dr. Joseph Hume has been chosen lecturer and clinical instructor on venereal and genitourinary diseases; and Dr. Samuel M. D. Clark has been elected lecturer and clinical instructor on gynecology and obstetrics.

#### MAINE.

**Personal.**—Dr. Charles E. D. Lord, Biddeford, has moved to San Francisco.—Dr. Samuel B. Hunter and family, Machias, have gone to Seattle for the winter.

**Diphtheria.**—The prevalence of diphtheria is causing uneasiness in the town of Mexico, where the schools have been ordered closed on account of the disease.

**Hospital News.**—Biddeford will probably secure a hospital through provisions in the will of the late Moses E. Webber. It is expected that \$75,000 will be available for this purpose.

**College Opens.**—The eighty-sixth annual course of lectures at the Medical School of Maine, at Bowdoin College, Brunswick, began October 23.—Drs. Frederick H. Gerrish and Alfred King have been transferred to the Portland branch of the school and their places have been taken by Drs. Walter E. Tobie and Wallace W. Dyson, Portland, and Dr. Hiram L. Horsman, Augusta.

**Penobscot Physicians Meet.**—The Penobscot Medical Association held its annual meeting and banquet at Bangor, November 21. Dr. Seth C. Gordon, Portland, was the guest of honor and delivered an address on "The Relation of the Physician to the State." The following officers were elected: Dr. Everett T. Nealey, Bangor, president; Drs. Arthur J. Bradbury, Old Town, and J. Albert Lethieq, Brewer, vice-presidents; Dr. Bertram L. Bryant, Bangor, secretary and treasurer; and Drs. Daniel McCann, Atwell W. Swett and John B. Thompson, all of Bangor, standing committee.

#### MARYLAND.

**Personal.**—Dr. Thomas W. Koon is critically ill with blood poisoning at Cumberland.

**Tuberculosis Fund Grows.**—Contributions to the funds being raised by the Maryland Tuberculosis Association now amount to \$792.50.

**Builds Cottage.**—Jacob Epstein, Baltimore, has had erected at the Hospital for Consumptives, near Towson, a new building which, in his honor, will bear the name "Epstein Cottage." It cost \$1,000 and was planned after the style of building used for the treatment of consumptives in the Adirondacks and elsewhere.

**Residence Burned.**—The suburban home of Dr. William Gray, Chevy Chase, was burned to the ground November 21, with a loss of \$10,000, partially covered by insurance.

#### Baltimore.

**Smallpox.**—Several cases of smallpox have occurred recently in South Baltimore.

**Personal.**—Dr. Randolph Winslow has been elected president of the North Carolina Society.—Dr. E. Linden Mellus has taken a villa near Naples, where he will spend the winter.

**The Nostrum Question.**—Mr. Samuel Hopkins Adams, who has recently rendered the public such a service by his exposure of patent medicine frauds through a series of articles in *Collier's Weekly*, addressed the Baltimore City Medical Society December 5 on "Medical Support of Nostrums."

**Osler to Return.**—Dr. William Osler will leave England about December 16 and will be in Baltimore January 5, where he will remain through the month. His visit probably has connection with the system of medicine which he is about to publish, in which he will have the assistance of Dr. Thomas McCrae.

**Book Auction.**—On November 28 the sale of autograph books took place at the Arundel Club by the Quarter Club for the benefit of the Mountain Sanitarium for Consumptives at Mount Airy, Md. Among books sold were those by Drs. S. Weir Mitchell and William Osler. The wit of Mr. Bonaparte and Mr. France, the auctioneers, drew a large crowd and a large sum was realized.

#### MASSACHUSETTS.

**Fire Damage.**—The offices of Drs. John C. Irish and Robert E. Bell, Lowell, were damaged by fire and water November 3.

**Diphtheria.**—The Brockton Hospital has been closed and placed under quarantine on account of an outbreak of diphtheria.

**Leper Hospital.**—The five lepers in the state have been transferred to Pekikese Island. The State Board of Charities has imported from India a supply of leproan which will be used for treatment of these lepers. Dr. Louis Edmunds, Harwich, associate medical examiner of Barnstable County, has resigned to become superintendent of the leper colony.

**Bequests.**—The will of the late Edward Walker leaves in trust an estate of nearly \$1,000,000, one-third of the income from which is devised to the Springfield Hospital.—By the will of Mrs. Caroline H. Webber \$1,000 is bequeathed to the Dickinson Hospital, Northampton.—The late Robert Caruthers, Lawrence, has left legacies of \$500 each to the Lawrence General Hospital, the Lowell General Hospital and the Blackburn Infirmary, Lancashire, Eng.

**Suitcase Suspect Acquitted.**—A verdict of not guilty was returned December 2 by the jury in the case of Dr. Percy D. McLeod, Boston, charged with being an accessory after the fact to the illegal operation which resulted in the death of Susanna A. Geary, the victim of the "suitcase tragedy," and with concealing the crime. William E. Hunt and Louis W. Crawford, who pleaded guilty to being accessories after the fact in this case, were sentenced to terms of not less than six nor more than seven years in the state penitentiary.

#### MICHIGAN.

**Detroit Personal.**—Dr. Isaac L. Polozker, physician of Wayne County, has resigned and will take a long postgraduate course.—Dr. Herman Kiefer celebrated his eightieth birthday November 19.

**Harison Re-elected.**—Dr. Beverly D. Harison, Sault Ste. Marie, was reappointed a member of the Michigan State Board of Registration and Medicine for the term 1905 to 1909, and in October last was re-elected secretary of the board.

**Physician Acquitted.**—Dr. J. J. Sweetland, Mottville, Berrien County, who was indicted more than a year ago by the federal government, charged with destroying a rural mailbox, was tried November 21, found not guilty and discharged.

**Ill and Injured.**—Dr. James Eakins, Alpena, was taken suddenly ill November 26, and is regarded as being in a serious condition.—Dr. Charles W. Isaminger is critically ill with cerebral hemorrhage at his home in Alpena.—Dr. Charles H. Lewis, Jackson, sustained severe bruises about the head and body in a runaway accident November 21.—Dr. James W. Freeman, Saginaw, is critically ill.

**Epidemic Diseases.**—The Fifth Ward school, Ann Arbor, was closed by the health officers November 15 on account of the prevalence of scarlet fever.—The Board of Health has decided to close the schools of Gladstone on account of an epidemic of



diphtheria. There are said to be more than 50 cases at present in the city.—In Detroit last week 16 cases of diphtheria and 11 cases of scarlet fever were reported.

**Ann Arbor Hospital News.**—The university regents have decided to build an addition to the University Hospital at an expense not to exceed \$14,000, to constitute a ward for diseases of the eye, ear, nose and throat and to be in charge of Drs. Parker and Canfield.—The university regents have refused to allow a detention hospital for contagious diseases to be erected on the same grounds as the University Hospital.

#### MINNESOTA.

**Personal.**—Dr. Ole G. Hagen, Butterfield, has been appointed a physician on the staff of the Mount Lake Hospital.—Dr. John C. Boehm, St. Cloud, has been appointed chairman of the medical advisory board to the university board of regents.

**Physicians Express Gratitude.**—The Hennepin County Medical Society has addressed a letter to Mr. Al. J. Smith, prosecuting attorney of Hennepin County, expressing the appreciation of the members of the earnest work of the official in prosecuting those engaged in illegal and criminal medical practices.

**Hospital Notes.**—The first sod on the site of the State Tuberculosis Sanatorium at Walker was turned November 21 by the chairman of the state board of control.—The Maternity Hospital, Minneapolis, was damaged by fire to the extent of \$300 November 1.—The bazaar held at the West Hotel, Minneapolis, cleared nearly \$2,000 for the Northwestern Hospital.

#### NEW YORK.

**School Quarantine Lifted.**—The six schools in Woodhaven and Union Course, which have been closed on account of diphtheria, have been reopened.

**Rabies Prevalent.**—Within the past ten days three persons have been sent from Buffalo to the Pasteur Institute, New York City, to be treated for bites from rabid dogs. Since February 15 more than a score of persons have had to go to New York from Buffalo for treatment.

**Down on Hazing.**—Dr. Roswell Park has written a strong letter of protest to each of the secretaries of the secret fraternities of the Medical Department of the University of Buffalo, concerning class rushes, class conflicts and hazing, in which this mark of rowdyism is absolutely condemned, and urging the societies to co-operate with the college authorities to abolish these evils.

#### New York City.

**Contributions to Hospitals.**—Contributions to the Woman's Fund of the General Collection for the Associated Hospitals have been officially reported and amount to over \$2,000.

**Large Hospital Fair.**—The receipts from the Jewish Hospital fair in Brooklyn, which was opened by Governor Higgins in the Twenty-seventh Regiment Armory November 27, were over \$40,000 at the end of the second day, and it is confidently expected that from \$75,000 to \$100,000 will be realized by the close of the fair.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended November 25, 406 cases of tuberculosis, with 162 deaths; 326 cases of measles, with 11 deaths; 310 cases of diphtheria, with 31 deaths; 155 cases of scarlet fever, with 11 deaths; 65 cases of typhoid fever, with 9 deaths; 17 cases of cerebrospinal meningitis, with 7 deaths, and 121 cases of varicella.

**Water Plans Opposed.**—At the hearing on the plans for extending the water supply of New York City by drawing on the Catskill watershed unexpected opposition developed. There were fifty or sixty protests from various towns and villages along the course of this watershed filed, and more are promised. It seems likely that the board will condemn the plan or refer it back to the city commission for amendment.

**Pneumonia and Measles.**—The Health Department announces that this is the "measles year" and that this disease is usually accompanied by a decided increase in pneumonia; hence they are redoubling their efforts to combat these affections by urging a fight against dust and by greater activity in the anti-spitting crusade. The public has been warned against cold, alcohol and fatigue as the three direct invitations to pneumonia.

#### NORTH CAROLINA.

**New Sanatorium.**—The Tuberculosis Sanatorium established by the Royal League at Black Mountain has been completed and is open for patients.

**Personal.**—Dr. Marshall H. Fletcher, Asheville, has returned after a trip to New York.—Drs. Carl V. Reynolds and Jere Cook, Asheville, sailed for Europe November 15.

**Additions to Sanatorium.**—A new wing has been added to the Broad Oaks Sanatorium at Morganton, which will be devoted to private pay patients. Dr. Hugh Thompson, Reidsville, has been appointed assistant resident physician to the sanatorium.

**Correction.**—In a recent issue of THE JOURNAL it was stated that Dr. M. Avery, Salisbury, had been recently convicted of defrauding the government of large sums and had been sentenced to a term in the federal penitentiary. We are informed by our North Carolina correspondent that there is no such person in Salisbury as Dr. M. Avery, but that some weeks ago a distiller named D. M. Arey was convicted and sentenced as noted.

**Need More Room for Insane.**—It has been suggested by the lay press that the insane hospitals of the state are receiving and treating as patients in their wards persons other than indigents. Under a strict construction of the statutes only indigents are legally admissible to the state hospitals for the insane, but practically the letter of the law has been so ignored that 97 per cent. of the inmates of state institutions are treated at the public expense, while an average of more than 69 per cent. of the inmates are cured. Yet there has been a constant and steady accumulation for many years of incurables in each of the hospitals until, with the increase of insanity, the accommodation provided in state institutions has become insufficient to accommodate the insane of the state. Dr. P. L. Murphy, superintendent of the Western Hospital for the Insane, Morganton, has repeatedly called the attention of the legislature to this imperative need, and now, at last, additions to the State Hospital at Raleigh are being made, and an investigation is to be instituted by the governor to ascertain the financial status of the inmates cared for at the public expense, with a view of possibly securing more space for indigent patients.

#### OHIO.

**New Cincinnati Hospital.**—The new city hospital ordinance approving the plans and specifications for 18 of the 35 proposed buildings, at an estimated cost of \$1,750,000, and a bond issue to start work at once on the administration building and one ward building, has been passed unanimously by the city council.

**Public Lecture on Consumption.**—Under the auspices of the Academy of Medicine of Toledo and Lucas County, Dr. S. A. Knopf, New York City, will deliver a lecture at Memorial Hall, Toledo, December 14, at 8 p. m., to which the public is invited. Dr. Knopf's subject will be "The Tuberculosis Problem; How It May be Solved."

**Personal.**—Dr. W. E. DeCourcy, Cincinnati, who is recovering from a long and serious illness, will spend the winter in the South.—Dr. L. M. McFadden, Staunton, has been elected to the legislature from Fayette County.—Dr. Thomas B. Marquis, Lisbon, is seriously ill with typhoid fever.—Dr. Osear Berghausen, Cincinnati, has gone to Berlin.—Dr. Alexander J. Erwin and family, Mansfield, have gone to their winter home in Los Angeles.—Dr. William D. Hamilton, Columbus, who was recently operated on for appendicitis, is improving and will soon return home.—Dr. Joseph E. Boylan and daughter, Cincinnati, sailed for Europe December 5.

#### PENNSYLVANIA.

**Hospital Dedicated.**—The new Lancaster General Hospital, erected at a cost of \$75,000, was dedicated November 30.

**New Hospital for Braddock.**—Braddock is to have a general hospital. The old Mills homestead has been purchased at a cost of \$30,000, and alterations are now under way that will cost about \$15,000 more. It is expected that the institution will be ready to receive patients early in the spring. The Braddock Medical Society is a prime mover in the work and is fully represented on the board of directors of the hospital.

#### Philadelphia.

**Medical Society Elects Officers.**—At the regular meeting of the University of Pennsylvania Medical Society November 17 the following officers were elected for the ensuing year: President, Dr. David Riesman; vice-presidents, Drs. J. Dutton Steele and J. B. Carnett, and secretary, Dr. John M. Cruice.

**Personal.**—On December 5 a farewell reception was tendered Dr. Josiah C. McCracken, who will leave for China during this month to establish a medical school which shall represent the University of Pennsylvania in the city of Canton. An address



was made by Prof. Harlan Page Beach of Yale University.—Dr. Robert H. Chase was selected chairman, and Dr. William H. Good, clerk, of the newly organized Northeast Branch of the County Medical Society.

**Health Report.**—The total number of deaths from all causes reported for the week was 463, as compared with 472 for last week and 426 for the corresponding week of last year. The principal causes of death were: Heart disease, 58; acute respiratory disease, 68; enteritis, 9; appendicitis, 3; Bright's disease, 36; typhoid fever, 12; diphtheria, 18; tuberculosis, 41; cancer, 18; apoplexy, 25; premature birth, 12; suicide, 7; accidents, 14, and marasmus, 8. There were 253 cases of contagious disease, with 31 deaths, as compared with 269 cases and 27 deaths for the previous week. There were 85 new cases of diphtheria, with 19 deaths. This disease has caused the officials of the health department some concern.

#### TEXAS.

**Personal.**—Dr. and Mrs. John Grammer, Fort Worth, returned November 20 from a summer in Europe.

**Great Gifts to Sanatorium.**—On November 17 \$90,000 was pledged in thirty-five minutes for the building of the Baptist Memorial Sanatorium, Dallas.

**Eighth District Medical Association.**—The association for this district held its fourth semi-annual meeting at Bay City November 14 and 15. Dr. James E. Simons, Bay City, was elected president. The next meeting will be held in Cuero, April 4 and 5, 1906.

#### GENERAL.

**Philippine Journal of Science and Other New Papers.**—The Bureau of Government Laboratories at Manila will issue a journal in place of the bulletins which have been the method of presenting results of research and experience in the Philippines. It is to be called the *Philippine Journal of Science*; each issue to consist of 112 pages and free use is to be made of illustrations. The scope of the journal will be general, but the medical part will occupy more space than any other department. This proposal indicates that an interesting and valuable journal will be created.—The *Northwestern Lancet* has now become the *Journal of the Minnesota State Medical Association and the Northwestern Lancet* and will be published under the direction of the council of the association. The publication committee consists of Drs. W. S. Fullerton, Thomas McDavitt and F. A. Knights, and the editor is Dr. W. A. Jones. The *Northwestern Lancet* has always published excellent original matter and has maintained a commendable editorial stand. The Minnesota profession deserves praise for completing this arrangement and, with the aid of a united profession, a journal should result more excellent even than has been the past character of the *Northwestern Lancet*.—The *Journal of the New Mexico Medical Association* is presenting a bright appearance. Dr. G. W. Harrison, the editor, and Drs. G. S. McLandress and J. H. Wroth, assistants, are issuing a newsy little monthly.—The *Journal of Physical Therapy* is a new magazine, edited by Dr. G. M. Blech, Chicago, and published by Frank S. Betz, Hammond, Ind. As its name indicates, it will be devoted to radiotherapy and the various mechanical agencies.—The *Central States Medical Monitor* is the result of the consolidation of the *Medical and Surgical Monitor* and the *Central States Medical Magazine*. Dr. Samuel E. Earp, Indianapolis, will be the editor and his salutatory promises an independent, impartial publication for the general practitioner.

**Yellow Fever in Cuba.**—Passed Assistant Surgeon von Ezdorf reported from Havana, November 20, that all cases at Havana which have been diagnosed as yellow fever are passed on by a board of diagnosis. When a suspicious case is reported the patient is taken to the hospital and the residence fumigated for the purpose of killing mosquitoes. The board of diagnosis is notified and after making careful study of the case, confirms or negatives the diagnosis of yellow fever. All the cases have been traced to what is known as the infected district, which is located in the central portion of the city. Several new cases have been reported and Dr. von Ezdorf states that the situation in Havana is becoming serious. Acting Assistant Surgeon Nunez reports that in view of the prevalence of yellow fever in Havana an active campaign is being organized in Matanzas, by direction of the chief health officer of Cuba, to prevent its possible importation and propagation in that city. Two of the city physicians have been detailed to inspect and to keep a record of all the non-immune passengers arriving from Havana by train, noting their addresses, and reporting to the local health officer their condition, which is ascertained by daily visits for five consecutive days after arrival in the city. The local health officer has recommended

organizing a special commission for contagious diseases out of the most prominent practitioners in town, to act in an advisory capacity in the determination of doubtful diagnoses. He also points out the necessity of increasing the mosquito brigade and the force devoted to general sanitation, in order to insure a better service, and hence the probability of its success in averting the propagation of yellow fever in the case of reaching that locality. Precautions will also be observed by the quarantine authorities with all vessels arriving from Havana, particularly those in the coastwise trade, hitherto free from quarantine restrictions, to meet any emergencies that may arise. Non-immune passengers arriving at Santiago by train from Havana are examined by the medical inspectors before they are allowed to leave the cars. The same precautions are observed at Camaguey.

#### CANADA.

**Typhoid Fever in Winnipeg.**—The number of typhoid cases in Winnipeg during November was much less than for the same month last year.

**Smallpox in Ontario.**—Smallpox has appeared at Belleville, Ont., and at another point in Ontario, 15 miles from Sudbury. Toronto has now 15 cases. The disease has also appeared in Queens County, New Brunswick.

**Fall Medical Examinations of the Ontario Medical Council.**—These examinations were held in Toronto during the week ending December 2. There were 33 candidates in the primary and 45 in the intermediate and final examinations.

**Personal.**—Dr. William J. Bannister, late of Cork, Ireland, has commenced practice in Winnipeg.—Dr. Harper Wilson, who has been surgeon for the Crow's Nest Pass Coal Company, of Fernie, B. C., has decided to locate in Winnipeg.

**Toronto's Vital Statistics for November.**—During the month of November just past there were 411 births in Toronto, 328 marriages and 293 deaths. In October the births were 737, but that month the city clerk sent out special notices reminding parents of registration. Apparently there are a great many physicians and parents in Toronto who do not believe in registering births. Of the total number of deaths in the city during November, 58 were due to pneumonia and tuberculosis. Seventy children under one year of age died during November, and fifty persons over 70.

#### FOREIGN.

**Fewer Medical Students in Austria.**—In 1895 the degree of doctor of medicine was conferred on 1,011 medical students in the universities of Austria and Hungary. In 1904 only 561 similar degrees were conferred.

**Chair of Applied Therapeutics at Paris.**—The *Presse Médicale* for November 18 states that the medical faculty of the Paris University has reported favorably on the creation of a professorship of applied therapeutics. The funds for the endowment of the chair were presented by the duc de Loubat.

**Plague in Japan.**—The American consul at Kobe reports that plague is present in Kobe and in Osaka. A dispatch from Seattle states that the officers of the steamship *Dakota* report that this disease is raging in Yokohama and that probably no more vessels will be given clean bills of health at present.

**Austrian Society for Combating Quackery.**—A meeting was called at Vienna to found a new society with the title *Gesellschaft zur Bekämpfung des Kurpfuscherthums*. Members of various medical societies attended, as also representatives of the health office, city council and police. Dr. Grün outlined the present status of irregular practitioners' quack practices in Austria, and Dr. Charas described the aims of the new organization. Professor Kassowitz was elected president and Professor Ausserer and Dr. Charas vice-presidents.

**Medical Certificate for Chauffeurs in France.**—The last *Semaine Médicale* states that the minister of the interior in France appointed a committee representing different government departments to suggest measures to regulate the automobile evil. The committee met in October and its report has been handed in to the authorities who have the matter now under advisement. The report states that the accidents from automobiles are due mainly to the heedlessness or the insufficiency of the chauffeurs. At present there is no age limit, any one can run an automobile, a child of 12, an epileptic or degenerate of any kind. The committee urged the adoption of an age limit, graduating it to the power of the machine. For an automobile of less than 35 horse power, a chauffeur 18 years old might well suffice, but for more powerful machines the lowest age limit should be 21, and the chauffeur must have learned to manage the machine by practicing with less powerful ones at first. The report also urges the adoption of the re-



quirement of a medical certificate to the effect that the candidate for driving an automobile must be sound in mind and body.

**In Russia.**—The *St. Petersburg med. Wochft.* for November 11 appears somewhat curtailed, "owing to the general strike among the printers." A brief notice states that physicians at many points are joining in the present agitation for freedom. A general meeting of physicians connected with the hospitals of Moscow was held late in October and the following resolution was adopted: "Although the physicians regard the strike as an effectual and the least bloody measure in the struggle for freedom and justice, yet they do not join in the strike, but remain at their posts, prepared to cope with emergencies if there is bloodshed. In order, however, to show that they indorse the general strike, they set aside 20 per cent. of their salaries for a strike fund, under condition that some representatives of the hospital physicians be appointed on the general central strike committee. The administrative authorities of the city and hospitals are hereby warned that any attempt to enforce repressive measures on the physicians of the hospitals will be met with withdrawal of the physicians from their posts, disclaiming all responsibility for the consequences that may ensue."

**Cholera in Europe.**—The German health authorities are anticipating that there will be another outbreak of cholera in Germany in the spring when the rivermen come through from Russia. A number of new regulations have been announced, among them that lime for disinfection will be supplied from the supervision stations to rivermen and others on the navigable streams, the expense to be borne by the general government. Persons traveling and working along navigable rivers in the cholera district are liable to contract cholera if they drink the water of streams, and, therefore, official arrangements must be made to supply them with good drinking water. The workmen along the river must be inspected daily to see that they have a suitable supply of pure drinking water with them. Supplies of drinking water for vessels navigating these streams must be attended to by the local sanitary authorities of the communities along the rivers, who are the ones most interested in the river traffic and consequently should bear the expense. Special measures are advised for disinfection of the rafts of logs coming through from Russia, as also of those suspicious of cholera. All the articles on the rafts of no value are to be burnt, and the others disinfected. For this purpose a mixture of equal parts of crude carbolic acid and a cheap oil, linseed or petroleum, is recommended. The mixture is limpid and has a tendency to spread out on the surface of the water, so that it is particularly adapted for disinfecting the stagnant water in the cracks between the logs and also the floor of the raft and suspicious points along the river bank. It is not recommended for disinfection of dry hay or straw, but serves admirably for damp articles.

**Student's Number of French Exchange.**—The *Progrès Médical* for November 11 is an exceptionally large number, and more than a hundred pages are devoted to data in regard to universities, medical colleges, medical societies, prizes offered and other information of interest to medical students and physicians. The institutions listed include those of all the French-speaking countries, Belgium, Canada and Switzerland, as well as France and the French colonies. It is a valuable reference work for a physician or student intending to visit any of these countries. The journal is published rue des Carmes 14, Paris, Bournville, the eminent neurologist, being the editor-in-chief, as also of the *Archives de Neurologie*. We learn from this educational number that instruction in oto-rhino-laryngology is not included in the official medical course in France, except at the medical school at Bordeaux, where there is an assistant professor of this specialty, and fourth-year students are required to attend a course of lectures on this subject. Elsewhere instruction in oto-rhino-laryngology is left to private initiative, a few eminent specialists holding private courses and clinics. The country doctor, during his five years' study of medicine, never had occasion to look at a tympanum, a larynx or inferior turbinate, and never used an otoscope, and yet he is consulted for oto-rhino-laryngologic affections perhaps as frequently as any other, and has to treat them as best he can. The signed editorial on the subject urges compulsory instruction in this specialty, remarking that all that need be done is to copy Germany, who, "notwithstanding her ardor for war, does not forget the peaceful conquests of science."

**Behring on His Tuberculosis Remedy.**—The last *Allg. med. Ct.-Ztg.* cites the *Paris Temps* to the effect that Dr. Bernheim, of Paris, applied at once to von Behring, asking him for some of his new remedy to try it in the Tuberculosis Polyclinic, which has just been founded by the Paris Antituberculosis League. Behring wrote in reply: "My new remedy (*Heilmittel*)

can not be sent away without the danger of losing some of its specific properties. I obtain the TX from the animal body in a form which can be likened most appropriately to that of an explosive substance. As soon as the remedy leaves its place of production, that is, the living body, it is exposed to changes which have a great resemblance to coagulation of the blood as soon as the blood flows out of the blood vessels. It is precisely on this account that the control of the curative value of my remedy is possible only at the place of origin and production and only by impartial investigators who have thoroughly learned under my direction the great difficulty and tediousness of the process required for the production of TX. Such precautions are by no means unusual in the testing of new remedies. I remind you only of Pasteur's protective inoculations against hydrophobia, which can not be handed over freely to every clinician, to say nothing of every general practitioner. Besides this, the application of TX is much more difficult and delicate than that of the Pasteur vaccine against hydrophobia. I have more important reasons for refraining from publishing at present the mode of production of the TX. I reserve the description of the process for a later occasion, but I may inform you now that I am at present discussing with Metchnikoff the feasibility of producing my TX in the Paris Pasteur Institute, whence its application to the sick can be supervised. Not until the first series of experiments and several months of observation have demonstrated this TX to be usable shall I think of establishing other centers for treatment by my method. All this readily explains why I announced that I should not publish information in regard to my new tuberculosis remedy until after an entire year." (Behring's original communication was given on page 1339.)

**Hirschberg's Impressions of America.**—Prof. J. Hirschberg has been contributing a series of articles to the *Medizinische Klinik* under the heading, "My Third Trip to America," describing his visit to Portland as the guest of the American Medical Association at its last annual meeting. He remarks in regard to American science, especially ophthalmology, that it has gained by immigration as well as by natural growth, citing the names of several German ophthalmologists now citizens of the United States, while paying a high tribute to the general standing of the specialty and giving a historical sketch of its development in this country. He tells his countrymen that any one stepping into the bubbling spring of American hospitality must have a powerful constitution, an indestructible stomach and a certain equipoise, for he can count on immense distances and unusual demands on his endurance. He was on the special train on July 4, but had sufficient experience of the celebration as the train passed through cities to enable him to appreciate the articles in *THE JOURNAL* of the American Medical Association on the subject. He cites parts of them entire, remarking that they will certainly arouse in his readers the same amazement and horror as in him when he first read them. Another thing which much impressed him was the small number of children in the true American families which he met. He remarks in regard to the American institutions of divorce, lynch and graft that they are part of the children's diseases through which this great and young country is passing. He visited certain important imported scientific libraries, which, he remarks, have been lost to Germany, as the government has no money for such purposes. The Educational Number of *THE JOURNAL* is frequently quoted in his articles, with the comment that Germany has nothing of the kind, although the leading British and French journals publish an annual students' number. He mentions *THE JOURNAL* frequently, describing its phenomenal growth and saying that it deserves the attention of the German reader, which, he adds, "it has already found, as our important medical journals review and abstract its contents regularly." He regards the American Medical Association, "in the manner of its organization and workings, as of the greatest importance for the entire people, as well as for the medical profession, in the United States." The Berlin Dozenten-Verein for Vacation Courses has had 16,293 physicians attend its lectures between 1880 and 1894, among them thousands of Americans. He has had hundreds attend his own courses, and his general impression is that in talent they average about the same as the German students, and their industry is satisfactory, but their preliminary training is not quite equal to that of the Germans. In reply to a question as to what he thought of the "exchange of university professors," he remarks that "to date there has been no exchange of peers." In conclusion, he expresses surprise at the long-suffering patience of the American public in allowing the railroads to impose their preposterous lengths of ticket on the travelers. On his return trip he finally laid his ticket aside for a souvenir and paid his fare from city to city rather than handle what he calls "the rattlesnake of the American railroads."



## Pharmacology

### BIOPLASM.

In our issue for November 18 we graphically showed in these columns that "Bioplasm" and "Sal Lithin," exploited by the Bioplasm Company, of New York, are being advertised directly to the public in a manner that is not usually adopted by an honorable firm, and which in itself shows fraud or at least an attempt to deceive. Our exposé of this Machiavelian method of appealing to the public should be enough to deter any thinking physician from prescribing this nostrum. Since it is advertised in medical journals which make a pretense at decency, one of which is a weekly, we presume it is necessary to give more attention to this product and to show the character of the claims made for it by its exploiters.

#### ITS COMPOSITION.

The circulars sent out by these people bear evidence of having been written by persons who are either densely ignorant of the subject on which they write or decidedly unscrupulous. A glance at the following quotations taken from these circulars shows very clearly of what a mass of absurdity and contradiction they are composed:

"After a careful extraction under aseptic methods the enzymes are treated by a process which unites them, creating a new product or ferment which resembles closely the bioplasm of Dr. Lionel S. Beals. . . . There is in bioplasm the several enzymes<sup>1</sup> (ferments) of digestion which include nuclein, lecithin, trypsin, etc."

In another circular we are told:

"Bioplasm is produced from the digestive and ductless glandular organs of young herbivorous animals, but it essentially differs from the glandular extracts and nuclein preparations. . . . The defibrinated products after cultivation are desiccated and finally triturated with chemically pure sugar of milk. The exceptional therapeutic virtue of bioplasm is chiefly attributed to the compound element acquired by the process of cultivation described. It positively contains nothing besides the organic products stated, the vegetable ferments being no longer used."

Of course, intelligent physicians know that there is no process by which digestive enzymes may be united, creating a new product of a ferment nature. In the circular we also find this positive statement:

"Bioplasm contains absolutely nothing besides the organic products stated, and its marvelous curative properties reside in the basic ferment resulting from action of the 'mother substance' of the several digestive ferments upon each other."

We learn from another circular:

"Bioplasm . . . non-toxic preparation of animal and vegetable enzymes so compounded as to preserve their original cell vitality."

Note we have just quoted that the vegetable ferments are no longer used, and that only the organs of young herbivorous animals are utilized. The enumeration of nuclein and lecithin as digestive enzymes is sufficient to show that the writer of the circular knows little of the subject on which he has written.

#### ITS THERAPEUTIC CLAIMS.

The therapeutic claims made for this cure-all are as grotesque and as absurd as are those which are made regarding its composition. It would be wearisome to enumerate all the diseases which it is claimed to cure, but a few taken at random will not be out of place:

"Equally efficient in morbid obesity and emaciation."

"A fatal epidemic of diphtheritic toxemia in West Virginia was checked only when Bioplasm was used."

Here is what appears on the label as it is sold in the drug stores:

"Indications: All neuroses or other disorders in which assimilation and metabolism are faulty. Most prompt and powerful restorer of leucocytes and phagocytes, immunizing by strengthening bactericidal properties of blood. Unique as neuro-nutrient and blood builder, invaluable in Tuberculosis, Typhoid, Scarlet and Malarial Fevers; in Diphtheria, Pneumonia, La Grippe, Dysentery, etc.; prompt specific in all forms of indigestion, unequaled in Locomotor Ataxia, in Pelvic diseases of women and convalescence."

It may be interesting for physicians who are prescribing bioplasm to have quoted for their edification some of the testimonials from the laity:

#### BROMIDROSIS (OFFENSIVE PERSPIRATION).

"I found relief in a short time after beginning Bioplasm, more noticeable to others than myself. I think it is due to say that, while I was taking it, I used no other remedies."

#### "IMPOTENCE."

"I became incompetent at the age of 45, as a result of a long nervous strain from overwork and unusual responsibility. For four years I have tried many doctors and many remedies, including the rest cure, with some improvement in my general health, but none in my functions. I was gradually drifting towards melancholia,

when a physician advised me to try Bioplasm. I did so faithfully, and inside of a week noticed a change in my feelings. My depression disappeared and my ambition returned, and gradually all my powers and functions were restored to me. I used nothing but Bioplasm, except an occasional aperient. In my whole vigorous life I was never better in every way than I am now—and I consider myself a perfect man, thanks to Bioplasm. This should be made known to the million sufferers, such as I, and you may use this as you see fit."

#### "INFANTILE INDIGESTION.

"We had no more trouble with baby after using that sweet powder (Bioplasm), which she took greedily, and the only medicine you have prescribed which we have not had a struggle with her to take. The relief from suspense is great, I assure you."

#### A WONDERFUL CURE.

Among the diseases in which Bioplasm seems to get in its work most effectively is tuberculosis, and if one-tenth of what the literature claims for it were true, consumption would soon be a thing of the past. Here is one instance worth recording: A certain physician reported one of the most rapid cures ever effected. His patient had night sweats that were very bad, had been to Colorado, "has taken all patent medicines on the market," his previous physician gave him up and said he could not live through the winter; nine physicians had treated him and given him up, assuring him that his days on earth were few.

This is enough to show that the poor patient was in the very last stage, and yet a miracle was performed, for after giving the Bioplasm for a week the testimonial says:

"The change in my patient during the seven days of treatment is most remarkable. The night sweats have ceased. The appetite has improved, and the condition of the lungs has improved to such an extent as to make me sanguine where I have been utterly hopeless. . . . Doctor, I feel like a new man. My strength is rapidly returning, and all I want now is a little more time and Bioplasm, and Bio will put me on a sound basis for the enjoyment of life, and a happy old age—a living chagrin to the many physicians who have been pointing me to the grave."

But there is another side to this bright picture. Before us is correspondence to the effect that the patient died soon after this testimonial was written. The doctor who reported the remarkable cure had been in practice but a little while. He evidently imposed on himself, and in a recent letter he expresses regret that he wrote as he did. It is for this reason that we omit his name. In a letter recently received he says:

"Yes, I have used Bioplasm a number of times since with absolutely no results. . . . I was very enthusiastic at that time and it is certain that I would not attach such value to the treatment as at the time mentioned. When I wrote to the Bioplasm people, it was simply with the hope that their product might be of value to those afflicted with tuberculosis."

#### LOCOMOTOR ATAXICS CURED.

The following letter, from one whom we will call X, as we do not care, under the circumstances, to publish his name, is one of the bits of literature that is doing good work for Bioplasm:

June 8, 1905.

Bioplasm Company, 100 William Street, New York City:

Gentlemen:—Your inquiry about Mr. R—, the tabetic patient from Mexico, who has been taking Bioplasm for some seven or eight months, I want to answer briefly, so as to cover the ground.

Mr. R— is about 45 years old, rather frail all his life. . . . Something less than a year ago he began to experience trouble with his legs and general health, . . . and on consultation with doctors was promptly pronounced a tabetic, having almost all the classical symptoms. His people here came to me, asking what to do. I could only advise Bioplasm. This was begun as soon as he could get a supply from you, in the meantime being treated with strychnin, massage, and so forth, . . . No improvement. Soon after beginning Bio, felt better. Five or six months ago he came here. When he arrived he could not get on a street car. To see him walk was agony. Soon he was taken to the cars with an attendant. Shortly after he was going around alone. Took long walks. Got better every day. He called on me yesterday, and upon inquiry, said: "The padded sensation of soles still present to some degree, and knee-jerk absent. Aside from these, I consider myself a well man." He looks well, feels well, walks well, and as far as can be told, IS well.

Could all ataxics see this case as I have seen it, they would send in such a blast for Bio that you would flee from it. Doubtless, "things seen are mightier than things heard" (of), and there are so many "cures" reported, that, like miracles, dwindle at short range, that one more or less will not count for much—in print. But I have seen this, and I believe.

Since coming here, Mr. R— has taken Bio constantly, and also has had massage twice a week. No other treatment, except that he has been going through some of the kicking for "re-education."

Yours very truly,

M.D.

A physician in Kansas wrote to the Bioplasm people, asking them to give him the names of some reputable and well-known physicians who had used Bioplasm with the success that was claimed for it. In reply the Bioplasm people said:

"We take pleasure in referring you to Dr. X, whose letter we enclose herewith (see above), and who is well known and highly esteemed in —."

We had already written for information in regard to Dr.

1. We quote spelling and grammar exactly in all these extracts.



X and received a reply to the effect that no such physician was practicing in ———. On receiving the communication from our Kansas correspondent we again tried to get information in regard to Dr. X, which resulted in the following letter just received from our investigator:

In regard to Dr. X, of whom you wrote me a few days since: He graduated from ——— years ago; he suffers from locomotor ataxia, and can only get around in a wheel chair; he is a deaf mute, and has been in that condition for ten years; he has not practiced any for twelve years; he has no license in this state or county. He uses Bioplasm himself, and thinks he derives benefit from it. He says that he only recommends it from his personal experience. Dr. C. is his attending physician and has charge of him in a general way. Dr. C. says that he is a perfectly innocent, well-meaning, broken down man.

We have followed up several other testimonials and it would make interesting reading if we had space to devote to a record of the results of the investigation.

One physician from Pennsylvania writes:

"I am glad that Bioplasm is finally being exposed. About two years ago, the Bioplasm people imposed on we younger physicians by giving us testimonials and ending with selling us five bottles of their dollar size for \$2.50. I dispensed an entire bottle with no effect whatever in any of its so-called usages. The other four I have still as a reminder of my folly. A few days ago a 'locomotor ataxic' told me of his wonderful new cure or 'sure cure' and behold it was Bioplasm which he got direct from the firm with their wonderful 'epitome.' He had just run out of his '175 tablets for \$1.50,' and wanted to get some more."

When some great disaster overtakes a community and the dead and dying lie scattered about, fiendish ghouls steal forth to despoil the dead and the helpless. By common consent such loathsome creatures are usually ordered shot when found at such work; but with what words can we characterize those still more loathsome creatures who scent quarry in that vast army of the sick and miserable, who, loath to acknowledge the presence or approach of the king of terrors, turn to those who speak them fair with bright promises of succor while they rob them of a few dollars and, far worse, oftentimes of the one chance of help which medical science affords? And what shall be said of physicians who, consciously or unconsciously, aid in such a despicable business?

### THE SUBTLE POISONS.

BY SAMUEL HOPKINS ADAMS.

Under the above title Mr. Adams, in *Collier's Weekly*, December 2, exposes some of the nostrums that contain acetanilid, morphin, cocain, etc., but the acetanilid group receives the greatest attention. At the head of the article are given the names of twenty-two persons who have died from acetanilid poisoning, as reported by the newspapers. The article, as were the others, is illustrated. We quote the following interesting portions:

"Ignorance and credulous hope make the market for most proprietary remedies. Intelligent people are not given largely to the use of the glaringly advertised cure-alls, such as Liquozone or Peruna. Nostrums there are, however, which reach the thinking classes as well as the readily gulled. Depending, as they do, for their success upon the lure of some subtle drug concealed under a trademark name, or some opiate not readily obtainable under its own label, these are the most dangerous of all quack medicines, not only in their immediate effect, but because they create enslaving appetites, sometimes obscure and difficult of treatment, most often tragically obvious. Of these concealed drugs the headache powders are the most widely used, and of the headache powders Orangeine is the most conspicuous.

#### Orangeine.

"Orangeine prints its formula. It is, therefore, its proprietors claim, not a secret remedy. But to all intents and purposes it is secret, because to the uninformed public the vitally important word 'acetanilid' in the formula means little or nothing. Worse than its secrecy is its policy of careful and dangerous deception. Orangeine, like practically all the headache powders, is simply a mixture of acetanilid with less potent drugs. Of course, there is no orange in it, except the orange hue of the boxes and wrappers which is its advertising symbol. But this is an unimportant deception. The wickedness of the fraud lies in this: That whereas the nostrum, by virtue of its acetanilid content, thins the blood, depresses the heart, and finally undermines the whole system, it claims to *strengthen the heart and to produce better blood*. Thus far in the patent medicine field I have not encountered so direct and specific an inversion of the true facts.

"Last July an 18-year-old Philadelphia girl got a box of Orangeine powders at a drug store, having been told that they would cure headache. There was nothing on the label or in

the printed matter inclosed with the preparation warning her of the dangerous character of the nostrum. Following the printed advice, she took two powders. In three hours she was dead. Coroner Dugan's verdict follows:

"Mary A. Bispels came to her death from kidney and heart disease, aggravated by poisoning by acetanilid taken in Orangeine headache powders."

#### Prescribing Without Authority.

"Yet this poison is being recommended every day by people who know nothing of it and nothing of the susceptibility of the friends to whom they advocate it. For example, here is a testimonial from the Orangeine booklet:

"Miss A. A. Phillips, 66 Powers street, Brooklyn, writes: 'I always keep Orangeine in my desk at school, and through its frequent applications to the sick I am called both 'doctor and magician.'"

"If the school herein referred to is a public school, the matter is one for the Board of Education; if a private school, for the Health Department or the County Medical Society. That a school teacher should be allowed to continue giving, however well-meaning her foolhardiness may be, a harmful and possibly fatal dose to the children intrusted to her care, seems rather a significant commentary on the quality of watchfulness in certain institutions.

"Obscurity as to the real nature of the drug, fostered by careful deception, is the safeguard of the acetanilid vender. Were its perilous quality known, the headache powder would hardly be so widely used. And were the even more important fact that the use of these powders becomes a habit, akin to the opium or cocain habits, understood by the public, the repeated sales which are the basis of Orangeine's prosperity would undoubtedly be greatly cut down. Orangeine fulfills the prime requisite of a patent medicine in being a good 'repeater.' Did it not foster its own demand in the form of a persistent craving, it would hardly be profitable. Its advertising invites to the formation of an addiction to the drug. 'Get the habit,' it might logically advertise, in imitation of a certain prominent exploitation along legitimate lines. Not only is its value as a cure for nervousness and headaches insisted on, but its prospective dupes are advised to take this powerful drug as a *bracer*.

"Where I have found a renegade physician making his millions out of Peruna, or a professional promoter trading in the charlatanry of Liquozone, it has seemed superfluous to comment on the personality of the men. They are what their business connotes. With Orangeine the case is somewhat different. Its proprietors are men of standing in other and reputable spheres of activity. Charles L. Bartlett, its president, is a graduate of Yale University and a man of some prominence in its alumni affairs. Orangeine is a side issue with him. Professionally he is the Western representative of Ivory Soap, one of the heaviest of legitimate advertisers, and he doubtless learned from this the value of skillful exploitation. Next to Mr. Bartlett, the largest owner of stock (unless he has recently sold out) is William Gillette, the actor, whose enthusiastic indorsement of the powders is known in a personal sense to the profession which he follows, and in print to hundreds of thousands of theater-goers who have read it in their programs. Whatever these gentlemen may think of their product (and I understand that, incredible as it may seem, both of them are constant users of it), the methods by which it is sold, and the essential and mendacious concealment of its real nature, illustrate the level to which otherwise upright and decent men are brought by a business which can not profitably include either uprightness or decency in its methods.

"Orangeine is less dangerous, except in extent of use, than many other acetanilid mixtures which are much the same thing under a different name. A friend of mine with a weak heart took the printed dose of Laxative Bromo Quinin and lay at the point of death for a week.

#### Dangers of Antikamnia.

"In the 'ethical' field the harm done by this class of proprietaries is perhaps as great as in the open field, for many of those which are supposed to be sold only in prescriptions are as freely distributed to the laity as Peruna. And their advertising is hardly different.

"Antikamnia, claiming to be an 'ethical' remedy, and advertising through the medical press by methods that would, with little alteration, fit any patent pain-killer on the market, is no less dangerous or fraudulent than the Orangeine class which it almost exactly parallels in composition. It was at first exploited as a 'new synthetical coal-tar derivative,' which it isn't and never was. It is simply half or more acetanilid (some analyses show as high as 68 per cent.) with other unimportant ingredients in varying proportions. In a



booklet entitled 'Light on Pain,' and distributed on doorsteps, I find under an alphabetical list of diseases this invitation to form the Antikamnia habit:

"'Nervousness (overwork and excesses)—Dose: One Antikamnia tablet every two or three hours.

"'Shoppers' or Sightseers' Headache—Dose: Two Antikamnia tablets every three hours.

"'Worry (nervousness: "the blues")—Dose: One or two Antikamnia and Codein tablets every three hours.'

"Codein is obtained from opium. The codein habit is well known to all institutions which treat drug addictions, and is recognized as being no less difficult to cure than the morphin habit.

"A typical instance of what Antikamnia will do for its users is that of a Pennsylvania merchant, 50 years old, who had declined, without apparent cause, from 140 to 116 pounds, and was finally brought to Philadelphia in a state of stupor. His pulse was barely perceptible, his skin dusky and his blood of a deep chocolate color. On reviving he was questioned as to whether he had been taking headache powders. He had, for several years. What kind? Antikamnia; sometimes in the plain tablets, at other times Antikamnia with codein. How many? About twelve a day. He was greatly surprised to learn that this habit was responsible for his condition.

"'My doctor gave it to me for insomnia,' he said, and it appeared that the patient had never even been warned of the dangerous character of the drug.

"Were it obtainable I would print here the full name and address of that attending physician, as one unfit, either through ignorance or carelessness, to practice his profession. And there would be other physicians all over the country who would, under that description, suffer the same indictment within their own minds for starting innocent patients on a destructive and sometimes fatal course. For it is the careless or conscienceless physician who gets the customer for the 'ethical' headache remedies, and the customer, once secured, pays a profit, very literally, with his own blood. Once having taken Antikamnia, the layman, unless informed as to its true nature, will often return to the drug store and purchase it, with the impression that it is a specific drug, like quinin or potassium chlorate, instead of a disguised poison, exploited and sold under patent rights by a private concern. The United States postoffice, in its broad tolerance, permits the Antikamnia company to send through the mails little sample boxes containing tablets enough to kill an ordinary man, and these samples are sent not only to physicians, as is the rule with ethical remedies, but to lawyers, business men, 'brain workers' and other prospective purchasing classes. The box bears the lying statements: 'No drug habit—no heart effect.'

"Just as this is going to press the following significant case comes in from Iowa:

"'FARMINGTON, IOWA, October 6.—(Special to the *Constitution-Democrat*.) Mrs. Hattie Kick, one of the best and most prominent ladies of Farmington, died rather suddenly Wednesday morning at 10 o'clock from an overdose of Antikamnia, which she took for a severe headache from which she was suffering. Mrs. Kick was subject to severe headaches and was a frequent user of Antikamnia, her favorite remedy for this ailment.'

"There is but one safeguard in the use of these remedies: to regard them as one would regard opium and to employ them only with the consent of a physician who understands their true nature. Acetanilid has its uses, but not as a generic pain-killer. Pain is a symptom; you can drug it away temporarily, but it will return, clamoring for more payment until the final price is hopeless enslavement. Were the skull and bones on every box of this class of poison the danger would be greatly minimized.

"With opium and cocain the case is different. The very words are danger signals. Legal restrictions safeguard the public, to a greater or less degree, from their indiscriminate use. Normal people do not knowingly take opium, or its derivatives, except with the sanction of a physician, and there is even spreading abroad a belief (surely an expression of the primal law of self-preservation) that the licensed practitioner leans too readily toward the convenient narcotics.

"But this perilous stuff is the ideal basis for a patent medicine, because its results are immediate (though never permanent), and it is its own best advertisement in that one dose imperatively calls for another. Therefore it behooves the manufacturer of opiates to disguise the use of the drug. This he does in various forms, and he has found his greatest success in the 'cough and consumption cures' and the soothing syrup class. The former of these will be considered in another article. As to the 'soothing syrups,' designed for the drugging of helpless infants, even the trade does not know how many have risen, made their base profit and subsided. A few survive,

probably less harmful than the abandoned ones, on the average, so that by taking the conspicuous survivors as a type I am at least doing no injustice to the class. . . .

"Making cocain fiends is another profitable enterprise. Catarrh powders are the medium. A decent druggist will not sell cocain as such, steadily, to any customer, except upon prescription, but most druggists find salve for their consciences in the fact that the subtle and terrible drug is in the form of somebody's sure cure. There is need to say nothing of the effects of cocain, other than that it is destructive to mind and body alike, and appalling in its breaking down of all moral restraint. Yet in New York City it is distributed in 'samples' at ferries and railway stations. You may see the empty boxes and the instructive labels littering the gutters of Broadway any Saturday night, when the drug store trade is brisk.

"Birney's Catarrh Powder, Dr. Cloe's Catarrh Cure, Dr. Gray's Catarrh Powder and Crown Catarrh Powder are the ones most in demand. All of them are cocain; the other ingredients are unimportant—perhaps even superfluous.

"Whether or not the bottles are labeled with the amount of cocain makes little difference. The habitués know. In one respect, however, the labels help them by giving information as to which nostrum is the most heavily drugged.

"'People come in here,' a New York City druggist tells me, 'ask what catarrh powders we've got, read the labels and pick out the one that's got the most cocain. When I see a customer comparing labels I know she's a fiend.'

"Naturally these owners and exploiters of these mixtures claim that the small amount of cocain contained is harmless. For instance, the 'Crown Cure,' admitting 2½ per cent., says:

"'Of course, this is a very small and harmless amount. Cocain is now considered to be the most valuable addition to modern medicine. . . . It is the most perfect relief known.'

"Birney's Catarrh Cure runs as high as 4 per cent., and can produce testimonials vouching for its harmlessness."

## Association News

### NEW MEMBERS.

List of new members of the American Medical Association for the month of November, 1905:

#### ALABAMA.

Hale, R. E., Bellamy.  
Sims, A. G., Renfroe.

#### ARIZONA.

Dameron, L. D., Phoenix.  
Fales, W. H., Clifton.

#### ARKANSAS.

Daniel, S. G., Marshall.  
Davis, J. H., Falcon.  
Jackson, N. H., Pontoon.  
Winegar, E. F., Hot Springs.

#### CALIFORNIA.

Artiques, J. E., San Francisco.  
Fairchild, F. R., San Francisco.  
Gross, L., San Francisco.  
Weddle, C., Dinuba.  
White, J. L., Sacramento.  
Yerxa, C. W., Los Angeles.

#### COLORADO.

Moore, W. M., La Junta.  
Pearls, J. E., Pueblo.  
St. Clair, R., Cripple Creek.

#### CONNECTICUT.

Barrows, B. S., Hartford.  
Buel, J. L., Litchfield.  
Bunce, P. D., Hartford.  
Gompertz, L. M., New Haven.  
Graves, C. B., New London.  
Huntington, S. H., Norwalk.  
Jones, L. P., Greenwich.  
Judson, W., New Haven.  
Klein, A. W., Greenwich.  
Levery, C. J., Bridgeport.  
Murphy, M. D., Middletown.  
Nettleton, I. L., Bridgeport.  
Pomeroy, N. A., Waterbury.  
Robbins, G. O., Waterbury.  
Ryan, P. J., Hartford.  
Sherer, H. C., South Norwalk.  
Tenney, A. J., Branford.  
Winchell, A. E., New Haven.

#### DISTRICT OF COLUMBIA.

Keyser, C. S., Washington.  
Ransdell, R. C., Washington.

#### FLORIDA.

Finlay, D. H., Pine Barren.  
Fitts, T. B., West Tampa.  
Freeman, J. V., Jacksonville.  
Hutchings, G., Eustis.  
Lowry, R. A., Brooksville.  
Thomason, F. G., Kissimmee.

#### GEORGIA.

Phillips, F. H., Harlem.

#### IDAHO.

Plumer, J. J., Hailey.  
Sears, C. E., Wallace.

#### ILLINOIS.

Arnold, W. J., Chicago.  
Avery, W. M., Compton.  
Brinckerhoff, C. E., Chicago.  
Blackstone, G. R., Table Grove.  
Bell, W. H., Decatur.  
Cates, E. M., Wayne City.  
Clark, E. E., Danville.  
DeBoer, H., Chicago.  
Dinsmore, V., Jacksonville.  
Duncan, W. P., Jacksonville.  
Feltmann, A. W., Chicago.  
Francis, C. H., Chicago.  
Flint, O. J., Princeton.  
Fry, C. B., Mattoon.  
Garraghan, E. F., Chicago.  
Glenn, J. A., Ashland.  
Glenn, F. L., Chicago.  
Hemmel, S. A., Chicago.  
Hillard, D. A., Jeffersonville.  
Jones, T. A., Ridgway.  
Kern, N. H., Thawville.  
Kirk, J. W., Oblong.  
Lyles, A. R., Virginia.  
Martin, L., Chicago.  
Morrill, C. M., Havana.  
Perkins, T. L., Springfield.  
Sale, L. O., Fisher.  
Sims, S. N., Danville.  
Tucker, H. S., Chicago.  
Thornton, W. T., Chicago.  
Way, J. P., Chicago.  
Wild, T., Chicago.

#### INDIANA.

Clapper, M. M., Hartford City.  
Cummins, S. M., Elkhart.  
Greene, J. B., Mishawaka.  
Hunt, L. F., Anderson.  
Johnson, L., Bourbon.  
Kistner, J. W., Elkhart.  
Letherman, A. P., Valparaiso.  
Rennoe, C. A., South Bend.  
Robinson, C. C., Indiana Harbor.

#### IOWA.

Coleman, F. J., Evely.  
Sargeant, F. L., Marlon.  
Wiley, E. D., Des Moines.



## KANSAS.

Chaffee, S. N., Talmage.  
Deweese, W. B., Salina.  
Engberg, A., McPherson.  
Klingberg, W. A., Elmo.  
Maggard, D. I., Wichita.  
Richardson, E. F., Onaga.  
Reser, S. P., Hartford.  
Stewart, R., Powhattan.  
Toneannon, T. F., Emporia.  
Tower, J. B., Topeka.  
Way, F. E., Concordia.

## KENTUCKY.

Estill, R. J., Lexington.  
Jones, G. R., Franklin.  
Reynolds, O. H., Frankfort.

## MARYLAND.

Bressler, F. C., Baltimore.  
Haddox, H. B., Gaithersburg.  
Hodgdon, A. L., Pearson.  
Johnson, J. T., Cumberland.  
Lewis, H. D., Baltimore.  
Requardt, W. W., Baltimore.

## MASSACHUSETTS.

Bates, E. A., Springfield.  
Blake, C. J., Boston.  
Bragg, F. A., Foxboro.  
Canedy, F. J., Shelburne Falls.  
Clark, G. O., Boston.  
Dacey, C. J., Brockton.  
Duryee, A. P., Brockton.  
Fox, W. Y., Taunton.  
Folson, C. F., Boston.  
Flynn, J. L., Cambridge.  
Goodall, H. W., Boston.  
Goldthwaite, S. V., Boston.  
Green, C. M., Boston.  
Hawes, J. B. 2d, Boston.  
Hooker, S. V., Boston.  
Hill, T. C., Boston.  
Jones, W. W., Housatonic.  
Jack, F. L., Boston.  
Kniekerbocker, P. G., Brookline.  
Kilroy, P. D., Springfield.  
Kennard, H. D., Peabody.  
Miller, C. H., Boston.  
Mandell, A. H., New Bedford.  
Miles, G. A., Somerville.  
McCarthy, C. D., Malden.  
Moline, C., Sunderland.  
Potter, A. C., Boston.  
Powers, G. H., Jr., Boston.  
Peebles, T. C., Falmouth.  
Putnam, C. P., Boston.  
Rowe, G. J. M., Boston.  
Shattuck, G. B., Boston.  
Sears, H. E., Beverly.  
Stevens, H. B., West Roxbury.  
Stickney, E. P., Arlington.  
Thompson, G. E., Boston.  
Treanor, J. P., Boston.  
Twitchell, G. P., Greenfield.  
Webster, G. A., Boston.  
Wood, H. W., Fairhaven.  
Wolcott, G., Boston.  
Whitney, C. M., Boston.

## MICHIGAN.

Arscott, W. W., Rogers City.  
Chapman, V. A., Muskegon.  
Northrup, W., Grand Rapids.  
Potter, G. E., Detroit.  
Safford, H. E., Detroit.  
Smith, C. F., Whitehall.  
Worden, A. L., Detroit.

## MINNESOTA.

Golseth, G., Henning.  
Jones, S. S., Frazee.  
Roberts, L. M., Little Falls.  
Vigen, J. G., Fergus Falls.

## MISSISSIPPI.

Landreth, J. J., Air Mount.

## MISSOURI.

Addington, W. H., Splekard.  
Brookes, H. S., St. Louis.  
Benway, W. H., Deepwater.  
Carson, W., Shelbyville.  
Cook, F. L., Blue Springs.  
Cox, L., Springfield.  
Eastman, F. C., Winston.  
Falk, J. C., St. Louis.  
Fisher, A. T., Maryville.  
Herchenroeder, L. C., St. Louis.  
Higdon, E. E., Allenville.  
Holtgrewe, F. W., St. Louis.  
Hoge, M. W., St. Louis.  
La Rue, H., Dexter.  
Lemon, F. F., Lincoln.  
Moore, B. W., St. Louis.  
Muetze, H., St. Louis.  
Pickerill, C. W., Kansas City.  
Robertson, J. A., Kansas City.  
Russell, J. J., Deepwater.  
Summa, H. H., St. Louis.  
Taylor, A. M., Elsberry.  
Terrill, J. O., Vandalia.  
Vonderau, O. L., St. Louis.  
Wolfner, H. L., St. Louis.

## MONTANA.

Horst, C. H., Warm Springs.  
Saunders, E. H., Chestnut.  
Seanland, J. M., Butte.  
Southmayd, L., Great Falls.

## NEBRASKA.

Deffenbaugh, M. H., Norman.  
Jones, S. J., Minden.  
Metzinger, J. J., Fremont.  
McLeod, J. M., Lincoln.  
Piatt, O. D., Cook.  
Sutton, I. C., Bancroft.  
Williams, J. P., Lincoln.

## NEW HAMPSHIRE.

Downing, A. T., Littleton.  
Holbrook, H. C., Penacook.  
Kenniston, W. B., Exeter.  
Lathrop, M. C., Dover.  
Pitman, A. J., Candia.  
Worthen, E. M., Ashland.

## NEW JERSEY.

Borgmeyer, J. G. L., Bayonne.  
Fisher, C. R. P., Bound Brook.  
Gray, T. N., East Orange.  
Madden, T. W., Collingswood.  
Neer, R., Paterson.  
Townsend, M. E., Atlantic City.  
Vinton, M. M., East Orange.

## NEW YORK.

Fletcher, E. A., Buffalo.  
Grausman, P. M., New York.  
Hurd, L. M., New York.  
Le Breton, P., Buffalo.  
Narey, W. J., New York.

## NORTH DAKOTA.

Love, R. H., Thompson.  
Van de Erve, W., Pingree.  
Walker, J. J., Cavalier.

## OHIO.

Anderson, H. B., Newark.  
Bauman, G. I., Cleveland.  
Bode, M. J., Cincinnati.  
Bryson, W. S., Mingo Junction.  
Chenoweth, O. E., Lima.  
Donley, J., Columbus.  
Heath, J. M. S., Bellaire.  
Hannum, E. A., Cleveland.  
Hiddleson, C. S., Akron.  
Marshall, F. M., Coshocton.  
McCurdy, L. C., Coshocton.  
Medlin, W. A., Cleveland.  
Marsh, H. H., Halltown.  
Moore, J. W., Carlisle.  
Richards, T. J. W., New Philadelphia.  
Shrieves, E., Wilmington.  
Stedem, J. P. H., Newark.  
Walker, C. S., Cleveland.  
Ward, C. E., Cleveland.

## OKLAHOMA.

Brown, H. C., Okarche.  
Dodson, S. D., Maud.  
Dodson, T. J., Mangum.  
Ebright, E. D., Carmen.  
Kuntz, L., Canute.  
Larson, T. H., Cushing.  
Miller, J. P., Cheyenne.  
Omer, W. J., Thomas.  
Sanders, P. L., Carnegie.  
Woodard, W. G., Snyder.

## OREGON.

Lamberson, J. A., Lebanon.  
Seely, A. C., Roseburg.

## PENNSYLVANIA.

Allen, F. B., North Wales.  
Atkins, J. G., Red Lion.  
Bowyer, M. A., Philadelphia.  
Blackburn, I. E., Greensburg.  
Brock, R. E., Waynesburg.  
Brown, J. J., Bloomsburg.  
Barton, E., Scranton.  
Bowman, J. H., Berwick.  
Brunner, F. R., Eshbach.  
Cohen, M. Solis., Philadelphia.  
Colborn, A. J., Connellsville.  
Crawford, J. S., Ingram.  
Despart, D. L., Philadelphia.  
Gamble, R. B., Meadville.  
Gorham, F. C., Condersport.  
Hill, A. H., Ramey.  
Ickes, G. A., Altoona.  
Johnson, T. B., Jr., Towanda.  
Kurtz, W. J., Howard.  
Krajewski, F. J., Nanticoke.  
Mariatt, M. O., Sewickley.  
Martin, J. M., Grove City.  
Montgomery, C. M., Philadelphia.  
Peterson, A. A., Elizabeth.  
Schoff, C. H., Media.  
Sinkler, F. W., Philadelphia.  
Stevens, J. C., Harrisburg.  
Sharpe, A. H., Philadelphia.  
Smith, L. B. R., Jeanette.  
Thomas, G. D., Chicora.  
Van Doren, W., Arehbold.  
Weidemann, F. H., Morrisdale.  
Mines.

Wagenseller, B. F., Scilinsgrove.  
Woodside, H. A., Lumber City.

## PHILIPPINE ISLANDS.

Patterson, E. W., Mandanao.

## RHODE ISLAND.

Calef, F. T., E. Providence.  
Knapp, H. J., Newport.  
Larrabee, F. W., Block Island.  
Phillips, F. G., Providence.  
Rose, A. D., Providence.  
Sherman, W. A., Newport.

## SOUTH CAROLINA.

Neuffer, G. A., Abbeville.  
Wyman, H. H., Aiken.

## SOUTH DAKOTA.

Groesbeck, S. V., Spearfish.  
Silberstein, J., Crow Creek.

## TENNESSEE.

Addisson, J. E., Medina.  
Bridger, J. D., Memphis.  
Davis, C. H., Knoxville.  
Faneher, H. L., Orme.  
Gaines, J. A., Nashville.  
Hill, W. W., Cardiff.  
Kittrell, W. H., Mt. Pleasant.  
Snodgrass, J. H., Sparta.  
Timmons, E. A., Columbia.  
Young, B. F., Knoxville.

## TEXAS.

Barnes, L. M., Thorndale.  
Denson, J. L., Cameron.  
Forrest, B. F., Eagle Lake.

Gorden, R. A., Lorcna.  
Mathis, E. G., Manor.  
Ramsel, P. A., Thorndale.  
Southern, G. W., Lincoln.  
Thayer, A. E., Galveston.  
Walker, R. N., Celina.

## VERMONT.

Ball, C. F., Rutland.  
Brewster, J. D., Windsor.  
Carver, H. S., Marshfield.  
Green, L. M., Bethel.  
Ladd, H. A., Essex.  
Lape, R., Fairhaven.  
McGuire, M. F., Montpelier.

## VIRGINIA.

Alsop, J. F., Prospect.  
Dunn, W. L., Glade Spring.  
Edmonson, H. B., Bristol.  
Jarratt, T. F., Phoebus.  
Jones, C. C., Arbor Hill.  
Levy, E. C., Richmond.  
Morgan, L. D., Longdale.  
Rucker, H. C., Horton Summit.

## WASHINGTON.

Horsfall, F. L., Seattle.

## WEST VIRGINIA.

Armbrrecht, E. L., Wheeling.  
Graves, G. B., Coalwood.

## WISCONSIN.

Blumenthal, R. W., Oconomowoc.  
Johnson, H. B., Tomah.  
Lid, T. A., Marinette.  
Robinson, H. A., Kenosha.

*Marriages*

S. A. SAVITZ, M.D., to Miss Sallie Ost, both of Philadelphia, recently.

SCOTT T. PETRIE, M.D., to Mrs. Mathilda Good, both of Chicago, September.

C. EDMUND LERCH, M.D., Bernville, Pa., to Miss Jennie Wagner of Robeson, Pa.

RICHARD W. DAKE, M.D., to Miss Julia Dudley, both of Nashville, Tenn., November 21.

FOSTER SUDLER, M.D., to Miss Elsie L. George, both of Sudlerville, Md., November 29.

CLAUDE B. CROSS, M.D., to Miss Bessie A. Taylor, both of Mineral, Kan., November 22.

FRANCIS J. WILSON, M.D., to Miss Anna May Regan, both of Milwaukee, Wis., November 22.

SOL WEIR NEWMAYER, M.D., to Miss Rietta Ulman Hirsh, both of Philadelphia, November 30.

ORVILLE EVERETTE BEEBE, M.D., to Miss Mary Edna Wright of Bellingham, Wash., November 29.

CHARLES E. GLYNN, M.D., Davenport, Iowa, to Miss Blanche Langan of Clinton, Iowa, November 22.

ANTHONY J. SCHMIT, M.D., Beloit, Wis., to Miss Elsie M. Winkley of Clinton, Wis., November 22.

LEWIS F. ZACHARY, M.D., Byrdstown, Tenn., to Miss Laura Kimes of Monterey, Tenn., November 21.

THOMAS MEARES GREEN, M.D., to Miss Emma Perrin West, both of Wilmington, N. C., November 16.

JOHN C. BEAUCHAMP, M.D., Williamson, Ga., to Mrs. Virginia Kenney of Concord, Ga., November 29.

HIRAM L. THROGMORTON, M.D., Pocahontas, Ark., to Miss Vida Butler of Grapevine, Ark., November 18.

RALEIGH A. BUCKMASTER, M.D., Brandon, Iowa, to Miss Grace A. Jeffers of Cedar Falls, Iowa, November 30.

HARRY GIBBONS UTLEY, M.D., Apex, N. C., to Miss Florence Jennings Percival, at Baltimore, November 25.

PHILEMON SMITH LANSDALE, M.D., Damascus, Md., to Miss Annie Pyle, at Charlottesville, Va., November 29.

WALLER JAMESON, M.D., Roanoke, Va., to Miss Frances Virginia Chalmers, at Lynchburg, Va., November 29.

EDWARD THOMAS ANDERSON, M.D., Platte, S. D., to Miss Julia Edith Orvis of Dubuque, Iowa, November 28.

GEORGE BOARDMAN EDWARDS, M.D., Darlington, S. C., to Miss Marie A. McCullough, at Nashville, Tenn., November 29.

CHRISTIAN AUGUSTUS DANNAKER, M.D., Kansas City, Mo., to Miss Mary Beckett Moss of Pawnee City, Neb., November 30.

SAMUEL J. GARDNER, M.D., San Francisco, Cal., to Miss Elizabeth Smith of Sterling, Scotland, at San Francisco, December 6.



## Deaths

**Edward A. Cobleigh, M.D.** Atlanta (Ga.) Medical College, 1872; A.M., LL.D.; one of the founders and dean of the Chattanooga Medical College (Medical Department of Grant University), Chattanooga; professor of the principles and practice of medicine, dermatology and clinical medicine, and lecturer on physical diagnosis at the same institution since 1889; chief of staff at Erlanger Hospital, Chattanooga; member of the Chattanooga and Hamilton County Medical Society, Tennessee State Medical Association, Tri-state Medical Society of Alabama, Georgia and Tennessee, American Public Health Association and American Medical Association; for nine years physician of McMinn County, Tenn.; for one year secretary of the Chattanooga Board of Health, and for four years member of the local board of pension examiners, died at Erlanger Hospital, Chattanooga, November 29, after a short illness, from a complication of diseases. He had practiced in Chattanooga since 1887, and made a success by indefatigable study, untiring activity and a natural adaptability for his vocation. Resolutions of respect were adopted by the faculty of the Chattanooga Medical College, the student classes of the college and the Chattanooga and Hamilton County Medical Society.

**Ambrose Loomis Ranney, M.D.** New York University, New York City, 1870; a member of the New York County Medical Society, Neurological Society of New York, and once president of the New York Academy of Medicine; formerly adjunct professor of anatomy, New York University, New York City, and professor of nervous and mental diseases in the University of Vermont Medical Department, Burlington; author of "Essentials of Anatomy," "Applied Anatomy of the Nervous System," "Treatise on Surgical Diagnosis," "Practical Medical Anatomy," and many smaller contributions to the medical literature, died suddenly in New York City, December 1, from heart disease, aged 57.

**John B. Sterley, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1857; a member of the American Medical Association; surgeon of the One Hundred and Sixty-seventh Pennsylvania Volunteer Infantry, and later district examining surgeon, during the Civil War; a member of the state, county and local medical societies; one of the best-known physicians of Reading, Pa., died at his home in that city, from septicemia due to a carbuncle, after an illness of six months, November 24, aged 69.

**William H. Bartran, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1865; a veteran of the Civil War; formerly mayor and superintendent of schools of Fort Howard, Wis.; member of the legislature in 1873 and 1874; physician of Brown County and Green Bay for twelve years; a charter member of Brown County Medical Society, died at his home in Green Bay, November 22, from paralysis, after a long illness, aged 67.

**J. Ernest Meiere, M.D.** New York University, New York City, 1869; contract surgeon United States Army at the outbreak of the Civil War, but thereafter a surgeon in the Confederate service; appointed consul to Amoy, China, in 1886; city physician of Leadville, Colo., in 1879 and 1880; some-time president of the Lake County (Colo.) and Cripple Creek Medical societies, died at his home in Cripple Creek, December 1, from pneumonia, aged 75.

**James N. Reece, M.D.** Rush Medical College, Chicago, 1888; in 1898 representative from St. Joseph County in the legislature; local surgeon of the Wabash Railroad; for many years president of the board of education of North Liberty, Ind., died at his home in that place, November 18, after a prolonged illness, from tuberculosis of the bones, aged 49.

**Benjamin Myers, M.D.** Jefferson Medical College, Philadelphia, 1869; representative in the Ohio legislature from Ashland County from 1874 to 1877; twice probate judge of Ashland County; once mayor of Ashland; a veteran of the Civil War, died from pneumonia at his home in Ashland, November 21, after an illness of a few days, aged 67.

**James A. Smeallie, M.D.** Albany (N. Y.) Medical College, 1879; formerly of Duluth, Minn.; a member of the Minnesota State Medical Society, Inter-urban Academy of Medicine and St. Louis County Medical Society, died at his home in Cass Lake, Minn., November 25, from tuberculosis, after a long illness.

**Joseph Warren Hayward, M.D.** Medical School of Maine at Bowdoin College, Brunswick, 1864; surgeon in the federal service during the Civil War, and later surgeon of the Third Infantry, M. V. M., died at his home in Taunton, Mass., November 21, after a lingering illness, aged 64.

**Frank Weeks Blair, M.D.** Medical School of Maine at Bowdoin College, Brunswick, 1899, of Farmingham N. H.; physician of Strafford County, died at the Cottage Hospital, Portsmouth, N. H., from carcinoma of the stomach, after a long illness, aged 31.

**John Samuel Angle, M.D.** Jefferson Medical College, Philadelphia, 1862; a surgeon during the Civil War, and for many years local surgeon of the Pennsylvania System, died at his home in Strafford, Pa., November 15, after a prolonged illness, aged 64.

**Edmund Bennett, M.D.** Jefferson Medical College, Philadelphia, 1855; a member of the Ocean County board of freeholders since 1878, and for many years a director of the board, died at his home in Barnegat, N. J., November 23, from heart disease.

**Charles H. Jacobs, M.D.** Medical Department of Adelbert College of Western Reserve University, Cleveland, 1883, of Youngsville, Pa., died November 24 at the Emergency Hospital, Warren, Pa., a day after an operation for appendicitis, aged 49.

**Joseph B. Davis, M.D.** Missouri Medical College, St. Louis, 1883; of Marshall, Mo.; a member of the Saline County Medical Society, died from nephritis at Excelsior Springs, Mo., November 24, after a long illness, aged 62.

**Martha A. Anderson, M.D.** College of Physicians and Surgeons, Boston, 1887; formerly a missionary in India, and then a practitioner of Boston and Philadelphia, died at her home in Shelburne, Mass., November 23, aged 62.

**Frank H. Hopkins, M.D.** Harvard University Medical School, Boston, 1903, of South Boston, Mass., died at Antrim, N. H., November 17, after a long illness, from typhoid fever complicated with pneumonia.

**B. H. Lemon, M.D.** College of Physicians and Surgeons of Ontario, Toronto, 1885; coroner for the counties of Lincoln and Welland, Ont., was found dead in bed at his home in Thorold, November 28.

**Thomas B. Robison, M.D.** Medical College of Ohio, Cincinnati, 1891, formerly of Rossville, Ind., died from tuberculosis at Denver, Colo., November 19, after an illness of several years, aged 38.

**Salmon B. Sayre, M.D.** University of Wooster Medical Department, Cleveland, 1890, died suddenly in his office at Oelwein, Iowa, November 27, from heart disease, aged 36.

**Calvin J. Sharp, M.D.** San Francisco, 1889, of Roekford, Iowa, died in the Cherokee State Hospital from cerebral hemorrhage, November 14, after an illness of two months, aged 46.

**Asabel G. Hopkins, M.D.** Cincinnati, 1877, a veteran of the Civil War, died at his home in Muskegon, Mich., November 22, after a lingering illness, from senile debility, aged 86.

**Thomas H. Butler, M.D.** Hospital College of Medicine, Louisville, 1898, of Monticello, Miss., was shot and instantly killed in his office by Mrs. James F. Birdsong, November 25.

**Alphonse Gladu, M.D.** University of the Victoria College, Coburg, Ont., 1867, died suddenly at his home in Lafayette, La., November 20, from cerebral hemorrhage, aged 60.

**George O. Caldwell, M.D.** New York University, New York City, 1886, of Scranton, Pa., died suddenly in the railway station at Manchester, N. H., November 18, aged 45.

**Charles H. Barbour, M.D.** University of Vermont Medical Department, Burlington, 1874, died at his home in North Clarendon, Rutland County, Vt., November 21, aged 56.

**Kate L. S. Sterling, M.D.** Women's Medical College, Philadelphia, 1886, a member of the New York County Medical Society, died at New York Hospital, December 1.

**William S. Cardwell, M.D.** University of Nashville (Tenn.) Medical Department, 1859, died at his home in Prospect, Tenn., November 26, after an illness of two weeks.

**William M. Gwynn, M.D.** Pennsylvania, 1868, died at his home in Auburn, N. Y., November 21, from pneumonia, after an illness of four days, aged 71.

**John William Green, M.D.** Rush Medical College, Chicago, 1889, died at his home in Lacey, Iowa, November 21, from uremia, after a short illness.

**Milton Welsh Warfield, M.D.** Jefferson Medical College, Philadelphia, 1850, died at his home near Lisbon, Howard County, Md., November 26, aged 78.

**Albert Philips Hallowell, M.D.** Pennsylvania, 1900, died suddenly at his home in Ashbourne, Pa., from heart disease, November 26, aged 28.

**Thomas B. Tandy, M.D.** Louisville (Ky.) Medical College, 1876, died at his home in Winfield, Kan., November 24, from nephritis.



J. T. Bennett, M.D. 1855, died at his home in Brookville, Pa., November 15, from dropsy, after an illness of two years, aged 83.

Emma DeL. Burd, M.D. New Jersey, 1889, died at her home in Yonkers, N. Y., November 22, after a short illness, aged 61.

Bennett Downes, M.D. Jefferson Medical College, Philadelphia, 1873, died at his home in Frederica, Del., November 25.

Levi Wood, M.D. Albany (N. Y.) Medical College, 1865, died at his home in Ephratah, N. Y., November 28, aged 62.

George H. Gilson, M.D. St. Louis Medical College, 1876, died at his home in Raymond, Ill., November 17, aged 58.

## Queries and Minor Notes

### HAS TETANUS FOLLOWED QUININ OR MORPHIN HYPODERMICS?

DR. E. F. McCAMPBELL, Madison, Wis., desires to know if any practitioner knows of a case of tetanus resulting from the hypodermic injection of either quinin or morphin under supposedly aseptic precautions.

### CONFIDENTIAL CORRESPONDENCE.

A correspondent has sent us the letter which we reproduce below, which was received at the institution with which he is connected—a reputable sanitarium. It illustrates the methods used by certain unscrupulous individuals and firms handling patent medicines and who advertise that “all correspondence is strictly confidential”:

“Dear Sir: I have about 1,500 names of users of morphin, cocain, opium, etc., and they are all names taken from letters of inquiries and are all *bona fide* and of recent compilation.

If you can use these names at one cent a name, I would be glad to take the matter up with you.

Thanking you in advance for an answer, I am, \_\_\_\_\_.”

### CONTRACT PRACTICE.

DALLAS, TEXAS, Nov. 17, 1905.

To the Editor:—Kindly inform me through THE JOURNAL: 1. If it is unethical to belong to a medical club which does the medical practice of its members for stipulated monthly or weekly fees. 2. Whether it is unethical to make visits to members of the club for less than the regular fees, if the physician making the visits does not belong to the club and if the visits are made to poor people who are unable to pay regular fees.

A. D. FERGUSON, M.D.

ANSWER.—The general principles underlying club practice have frequently been discussed in THE JOURNAL. As a general proposition the profession views club practice as inimical to its best interests, and ultimately unsatisfactory to the public. In particular instances like the one submitted above it is entirely within the province of the local society to decide whether the special proposition is or is not compatible with ethical standards, and subservient to the interest of layman and physician. If possible the full facts should be presented to the society, for its action thereon in any event will determine whether a member may serve the club and also remain in good standing.

The second query involves several different points so that no one answer can be given. Fees should not be cut, except for the poor. For an outside physician to attempt to underbid the club fees in order to get some of the work is unwise, though, perhaps, not flagrantly unethical. That is not the way to meet the evils of club practice. This second problem also should be thoroughly thrashed out in the society. Get every educated reputable physician into the society and agree on fundamental points and then exterminate the quacks.

### FOURTH DISEASE.

MINDEN, NEB., Nov. 21, 1905.

To the Editor:—I would like to know through THE JOURNAL the latest ideas concerning “Filatow-Dukesche Krankheit,” or fourth disease in regard to its relation to scarlet fever, also where I can obtain the latest and most authoritative works on the subject.

J. R. MCKIRAHAN.

ANSWER.—“Fourth disease” is the name given by Clement Dukes to a series of cases described by him in the *Lancet*, 1900, vol. ii, 1889, cases which resembled in their clinical manifestations either rubella or scarlet fever. A similar set of cases was described by Filatow in 1885, hence the name sometimes applied to this clinical picture, “Filatow-Dukesche Krankheit.” The weight of opinion, however, seems to be that the clinical picture described by these writers does not constitute a disease *sui generis*, but that the cases described are either rubella or mild scarlet fever. The verdict seems to be “not proven.” A recent discussion of the subject appeared in *La Semaine Médicale*, March 29, 1905, by Cheinisse, in which the literature is also reviewed. The following authors also have written on the subject: Griffith: *Phila. Med. Journal*, 1902, vol. ix, p. 659. Ker: *Practitioner*, 1902, vol. lxviii, p. 139. Dillingham: *American*

*Medicine*, 1903, vol. vi, p. 263. von Bokay: *Deutsch. med. Wochft.*, Oct. 20, 1904. Shaw: *American Jour. Med. Sciences*, January, 1905. Filatow's book on pediatrics is published by the Cleveland Press, 346 Ogden Ave., Chicago. The weight of medical opinion, as stated above seems to be against Dukes' view. Until we know more about the bacteriology of scarlet fever and rubella, however, it is difficult to see how the question can be definitely settled. Meanwhile it would seem safer to regard those cases of the so-called “Fourth Disease” which resemble scarlet fever, as actual cases of the latter and treat them as such, especially as far as isolation is concerned. If they really are cases of scarlet fever, what is a mild infection in one child may give rise to an exceedingly severe infection in another child.

### SCOPOLAMIN-MORPHIN ANESTHESIA.

JUDA, WIS., Dec. 4, 1905.

To the Editor:—Can you inform me by whom scopolamin is manufactured and where it can be obtained? I fail to find it in any of the drug stores here.

H. B. GIFFORD, M.D.

ANSWER.—Scopolamin is not a new drug, it has been used to a certain extent for several years. It was first isolated as an alkaloid of scopolia, hence the name. According to the eighth decennial revision of the United States Pharmacopeia, scopolamin hydrobromid is the hydrobromid of an alkaloid obtained from plants of the *Solanaceæ*, and is chemically identical with hyoscin hydrobromid. It occurs in crystals. It is a sedative, and as a mydriatic its action is somewhat similar to that of atropin, but without the disagreeable symptom of dryness of the throat. The similarity of action between this drug and hyoscin is evidently overlooked by many physicians or is unknown to them, and this, in conjunction with the fact that many individuals show a marked idiosyncrasy for hyoscin should be borne in mind when using drugs of this class. Scopolamin hydrobromate is made by Merck, and differs little, if any, from the hydrobromid. It also occurs in hygroscopic crystals. The manufacturers claim that it may be used externally in ophthalmology and internally (by hypodermic injection) in insane patients. It is used for local anesthesia in conjunction with morphin. While reports of successful operations find their way into the newspapers and into medical literature, unsuccessful operations apparently are not noticed. Recently, however, numerous fatalities have been reported. De Maurans has reviewed the literature on this subject, and in a recent article in *Semaine Médicale* he discusses the advisability of using this form of anesthesia. In most of the cases reported there was interference with respiration, as evidenced by dyspnea and cyanosis, and the Cheyne-Stokes type of respiration. In one case cited, about half an hour after the second injection of the scopolamin-morphin solution when the patient was lying on the operating table he was observed to be breathing with difficulty, and about three minutes later there was dyspnea and cyanosis. Artificial respiration was performed, but the patient died about five hours after the injection, with symptoms of asphyxia. Dr. J. C. Sexton, in the *Lancet Clinic* for November 18, also reports a death from this form of anesthesia.

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of Medical officers, U. S. Army, week ending December 2:

Wadhams, S. H., asst.-surgeon, leave of absence extended 30 days.

Bratton, Thomas S., asst.-surg., relieved from duty as attending surgeon and examiner of recruits, Chicago, and ordered to Philippine Islands, for duty, on January 5.

Wadhams, S. H., asst.-surg., relieved from further duty at Alcatraz Island, Cal., and will proceed from Torrington, Conn., where on leave of absence, to Fort Slocum, N. Y., for duty.

Connor, C. H., asst.-surg., ordered to proceed from Fort Stevens, Ore., to San Francisco, for duty as witness before a general court martial.

Ford, Clyde S., asst.-surgeon, ordered to proceed from Fort Barancas, Fla., to Cleveland, Ohio, on official business pertaining to the inspection of a motor ambulance designed for the Medical Department of the Army.

Davidson, Willson T., asst.-surg., advanced to the rank of captain, November 26.

Reagles, James, contract surgeon, returned to duty at Fort Keogh, Mont., from leave of absence.

Parkman, Wallace, contract surgeon, left Fort Assinniboine, Mont., with troops for San Francisco.

White, J. Samuel, contract surgeon, granted an extension of one month to his leave of absence.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending December 2:

Stuart, A., P. A. surgeon, detached from the *Pensacola* and ordered to command the Naval Hospital, Sitka, Alaska.

Bachmann, R. A., P. A. surgeon, commissioned P. A. surgeon from March 20, 1905.

Traynor, J. P., Strine, H. F., P. A. surgeons, commissioned P. A. surgeons from May 8, 1905.



Neilson, J. L., P. A. surgeon, commissioned P. A. surgeon from October 4, 1905.

Ransdall, R. C., asst.-surgeon, appointed asst.-surgeon from November 24, 1905.

Beyer, H. G., medical inspector, ordered to the *Wisconsin*.

Neilson, J. L., asst.-surgeon, detached from the naval hospital, New York, N. Y., and ordered to the naval hospital, Newport, R. I.

Shaw, H., asst.-surgeon, detached from the naval hospital, Boston, Mass., and ordered to the *Southery* and to additional duty at the navy yard, Portsmouth, N. H.

Vickery, E. A., asst.-surgeon, ordered to the *Illinois*, December 4.

Dorsey, B. H., asst.-surgeon, detached from the *Illinois*, December 4, and ordered home to wait orders.

Belknap, J. L., asst.-surgeon, detached from the naval hospital, Newport, R. I., and ordered to the *Brooklyn*.

Wheeler, L. H., asst.-surgeon, detached from the naval hospital, Newport, R. I., and ordered to the Asiatic station, sailing from Seattle, Washington, December 16.

Stepp, J., P. A. surgeon, detached from the *Southery*, and ordered to the *Don Juan de Austria*.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 29:

Magruder, G. M., surgeon, relieved from duty at San Francisco.

Magruder, G. M., surgeon, granted leave of absence for four months from October 26.

Guiteras, G. M., surgeon, to proceed to Memphis, Tenn., for special temporary duty.

Wertebaker, C. P., surgeon, relieved from special temporary duty at Atlanta, Ga., and directed to proceed to St. John, N. B., for immigration duty, relieving P. A. Surgeon J. W. Kerr.

Rosenau, M. J., P. A. surgeon, leave of absence granted for fourteen days from November 22, amended to read November 23.

Nydegger, J. A., P. A. surgeon, granted leave of absence for one month and five days from November 27.

Gardner, C. H., P. A. surgeon, granted extension of leave of absence for one month, from December 1.

Lavinder, C. H., P. A. surgeon, leave of absence granted for one month from November 6, amended to read twenty-one days from November 6.

Fricks, L. D., P. A. surgeon, granted leave of absence for one month from December 10.

Wille, C. W., P. A. surgeon, granted leave of absence for two months, from December 10.

Rucker, W. C., assistant surgeon, leave of absence granted for seven days from November 7, amended to read twenty-one days from November 11.

Ward, W. K., assistant surgeon, granted leave of absence for four days under paragraph 191 of the regulations from November 23.

Foster, A. D., asst.-surgeon, relieved from special temporary duty at Trieste and directed to rejoin station at Naples.

Robertson, H. McG., asst.-surgeon, relieved from temporary duty at the Bureau, Washington, D. C., and directed to proceed to Philadelphia, reporting to the medical officer in command for duty.

Collins, G. L., asst.-surgeon, granted leave of absence for two days under paragraph 191 of the regulations from November 23.

Ebert, N. G., asst.-surgeon, granted leave of absence for two months from November 24.

Wightman, W. M., asst.-surgeon, granted three days' leave of absence under paragraph 191 of the regulations from November 13.

Steger, E. M., asst.-surgeon, relieved from duty at Philadelphia, and directed to report to the commanding officer of the Revenue Cutter *Algonquin* for duty on said vessel in Porto Rican waters.

Kastle, J. H., chief division hygienic laboratory, granted leave of absence for eight days from November 27.

Goldsborough, B. W., acting asst.-surgeon, granted leave of absence for three days from November 29.

Hallet, E. B., acting asst.-surgeon, granted leave of absence for three days from November 29.

Hicks, B. I., acting asst.-surgeon, granted leave of absence for four days from November 28.

Hume, Lea, acting asst.-surgeon, granted leave of absence for thirty days from November 26.

McConnell, A. P., acting assistant surgeon, granted leave of absence for three days from November 29.

Tarbell, B. C., acting asst.-surgeon, granted leave of absence for ten days from November 21.

Walkley, W. S., acting asst.-surgeon, granted leave of absence for three days from November 30.

Richardson, S. W., pharmacist, granted leave of absence for twenty-three days from November 23.

Stier, C., pharmacist, granted leave of absence for seven days from November 22, under paragraph 210 of the regulations.

### BOARDS CONVENED.

Board to meet at the Bureau, Washington, D. C., December 4, for the physical examination of certain officers of the R. C. S. detail for the Board: P. A. Surgeon T. B. McClintic, chairman; Asst.-Surgeon J. W. Trask, recorder.

Board to meet at the Appraisers Building, San Francisco, December 4, for the physical examination of certain officers of the Revenue-Cutter Service. Detail for the Board: P. A. Surgeon H. S. Cumming, chairman; P. A. Surgeon J. M. Holt, Recorder.

Board to meet at Boston, December 4, for the physical examination of certain officers of the Revenue-Cutter Service. Detail for the Board: Surgeon R. M. Woodward, chairman; Asst.-Surgeon W. C. Rucker, Recorder.

Board to meet at the Marine-Hospital, Mobile, Ala., December 4, for the physical examination of an officer of the Revenue-Cutter Service. Detail for the Board: P. A. Surgeon E. Francis, chairman; Acting-Asst.-Surgeon A. S. Taylor, recorder.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended November 27:

#### SMALLPOX—UNITED STATES.

California: Los Angeles, Nov. 11-18, 3 cases.

District of Columbia, Washington, Nov. 12-18, 1 case.

Florida, Jacksonville, Nov. 11-18, 3 cases.

Kentucky: Covington, Nov. 18-25, 8 cases.

Maine: Westport, Nov. 21-23, 2 cases.

Michigan: Kalamazoo, Nov. 12-18, 3 cases.

Missouri: St. Louis, Oct. 1-31, 12 deaths.

Ohio: Springfield, Nov. 17-24, 2 cases.

#### SMALLPOX—FOREIGN.

Africa: Cape Town, Oct. 1-7, 4 cases.

Brazil: Rio de Janeiro, Oct. 15-22, 7 cases, 2 deaths.

Canada: Toronto, Nov. 11-18, 4 cases.

Chile: Iquique, Oct. 14-21, 7 cases, 2 deaths.

Ecuador: Guayaquil, Oct. 24-Nov. 7, 9 deaths.

France: Paris, Oct. 29-Nov. 4, 8 cases, 1 death.

Great Britain: Sheffield, Oct. 29-Nov. 4, 1 case.

Italy: Catania, Nov. 2-9, 3 deaths.

India: Calcutta, Oct. 1-14, 2 deaths; Madras, Oct. 14-27, 9 deaths.

Mexico: Mexico, Oct. 22-Nov. 4, 3 cases, 6 deaths.

Spain: Barcelona, Nov. 1-10, 6 deaths.

#### YELLOW FEVER—UNITED STATES.

Louisiana: New Orleans, Nov. 21, 2 cases.

Mississippi: Vicksburg, Nov. 24-29, 3 cases.

#### YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Oct. 15-22, 2 cases, 2 deaths.

Cuba: Habana, Nov. 10-20, 25 cases, 2 deaths; Matanzas, Nov. 25, 1 case.

Ecuador: Guayaquil, Oct. 22-Nov. 7, 7 deaths.

Honduras: Choloma, Nov. 13, 1 death.

Guatemala: Gualan, Aug. 20-Nov. 9, (estimated), 200 deaths;

Zacapa, Aug. 3-Nov. 9 (estimated), 700 deaths.

Mexico: Cordoba, Nov. 5-8, 1 case, 2 deaths; Tezonapa, 1 case,

3 deaths; Tierra Blanca, 2 cases, 1 death; Tuxtepec, Nov. 5-19, 4

cases, 3 deaths; Vera Cruz, 3 cases, 3 deaths.

Nicaragua: Managua, Sept. 29, 3 cases.

Panama: Colon, Nov. 8-15, 1 case, 1 death; Panama, 1 case.

#### CHOLERA—FOREIGN.

India: Bombay, Oct. 17-24, 1 death; Calcutta, Sept. 23-Oct. 21, 178 deaths; Madras, Oct. 14-27, 123 deaths.

Russia: Lodz, Oct. 22-25, 4 cases; Vistula Territory, 6 cases;

Lomja, 1 case; Warsaw, Oct. 17-24, 2 cases, 4 deaths.

Straits Settlements: Singapore, Oct. 1-7, 3 cases.

#### PLAGUE—INSULAR.

Honolulu: Oct. 7-Nov. 4, 8 cases, 8 deaths.

#### PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Oct. 15-22, 9 cases, 1 death.

Egypt: Alexandria, Nov. 8, 1 case.

India: General, Oct. 14-21, 4407 cases, 3336 deaths; Bombay,

Oct. 17-24, 19 deaths; Calcutta, Sept. 30-Oct. 21, 32 deaths;

Karachi, Oct. 15-22, 22 cases, 23 deaths.

Japan: Kobe, Nov. 20, present; Osaka, present.

## Medical Organization

### OREGON PRACTICALLY AN UNORGANIZED STATE.

By J. N. McCormack, M.D.

Chairman of the Committee on Organization of the American Medical Association.

BOWLING GREEN, KY.

Being an amiable optimist by nature, adverse criticism of any one, and more especially of those who have been kind to me, is always a difficult and unpleasant task. Still, I conceive it to be my duty after visiting a state in my official capacity, kindly and subject to correction always, but frankly and without fear or favor, to discuss professional conditions just as my investigations revealed them. In fact, years of experience have convinced me that this is the only course to pursue where reforms are to be hoped for, and that if it is done in the proper spirit, and is supplemented by such practical suggestions as may seem pertinent, and may prove helpful, it will never be misunderstood.

Outside of Astoria and Clatsop County there is little real organization in Oregon. Factionalism in the profession in the city of Portland, led by rival surgeons and other specialists, is almost entirely responsible for this demoralization in the state. In my opinion there is no hope for improvement until this is recognized and this strong and excellent profession can be harmonized and united for its own and the public good, in accordance with the modern spirit of organization.

They have a live local society of the old sort, honeycombed with and dominated by rival factions, most respectful and decent in form and expression, as might be expected from such leaders, but so evenly balanced and alert as to consume nearly all of their public energies, and so evidently personal and selfish as to fail to enlist the support or to command the confidence of the rank and file of the profession of the city or state for either side, and to effectually bar progress for it as a whole. The information came to me from various sources that many of the most active and influential physicians were outside of the society, some because they were kept out by factional jealousies and more because membership did not seem desirable under existing conditions. For instance, when it was suggested in my opening talk that a united profes-



sion ought to enlist the support of the press in the proper education of the public in regard to health and medical affairs and in the warfare against quackery, and that the family physicians of the leading newspaper men be put on a committee to confer with them, it developed that the physician of the most prominent editor of the state had been repeatedly black-balled by the society and hence could not well be asked to serve in this capacity.

These statements will come as a surprise to members of the Association who attended the Portland session and enjoyed the hospitality of the profession of that beautiful city. This surprise was only intensified with me when the opportunity for a more extended and personal acquaintance, and inquiry has confirmed my first impression of the high character and capability of the very men who were contributing most to the discord which is proving so disastrous to the best interests of the profession and people of their city and state.

To appreciate the extent to which these unfortunate professional conditions in Portland affect the state, it should be remembered that it is the only great center of population and commercial metropolis in Oregon, and that this city dominates in legislative and all other affairs to an extent which would be possible in few other states. And the state reflects the conditions found in the city very accurately. They had paper organizations in every county or district visited by me, meeting at long intervals and thought important chiefly as a means of keeping up membership in the state and national organizations. There were a few good men everywhere, but the average grade of the profession was low and the spirit non-progressive. Their law is weak and is so administered as to give quacks and pretenders no trouble. There was evidence on every hand that the schools of Oregon do not have high standards of requirements, and that their state examinations are such as to make this the dumping ground for low-grade men who fail to pass in neighboring or even distant states. The fees are much lower than in any other state visited on this trip, and commercialism—division of fees, lodge and other forms of contract practice, and similar evils—is more pronounced and widespread. I heard many apparently reputable men say over and over again that they would not think of sending a case to any surgeon who would not divide his fees with them. Similar expressions and other evidences of improper or defective methods inseparable from an unorganized profession were heard and found frequently. In the same locality would be found men of high attainments and character, natural leaders, who could easily become the backbone of a county society and make almost anything possible to the profession.

I urged such local organizations in every county where there were as many as three or four live physicians as would make their society a place for joint study, in effect a post-graduate or review school, and a social and business club. After they are thoroughly united and ready for it, I advised that the bar, ministerial, teachers, druggists' and other similar local associations be invited to meet with them for such discussion and joint instruction as will promote a co-operation so essential to the highest development and usefulness of our profession. I advised that legislators and other officials be especially invited to take part in these discussions in order that they may appreciate how largely the profession is influenced by purely altruistic motives in its efforts to secure and to enforce medical and health legislation.

I attended and addressed meetings at Astoria, Portland, The Dalles, Salem, Albany, Eugene, Grant's Pass and Medford, covering all except the eastern end of the state. Dr. Hamilton, the active and courteous secretary of the state association, gave prompt notice of the meetings, and as the medical population is practically confined to the towns, the meetings were fairly well attended.

The Astoria and Clatsop County Society is entitled to special and honorable mention, not only because it is an oasis in Oregon, but because it would be a credit to the profession in the best organized states. It is almost three years old, with every physician in the county, including two former homeopaths, and, I believe, one eclectic, enrolled as members. With the exception of one who lived twelve miles away, on the opposite side of the Columbia River, and was hindered by a fierce storm, every member was in attendance at the meeting held for me. Three circuit judges, the bar association and other laymen were present and took a leading part in both the discussion and the banquet which followed. These laymen had attended former meetings and contributed much to the interest and usefulness of the society, especially in the adjustment of the business affairs of the profession. The leaders of the profession in this county had grasped the co-operative spirit

of this reform movement in a practical way at the outset, and as soon as the state association adopted the new plan, decided to give themselves the benefit of it. After a few conferences they succeeded in substituting harmony and co-operation for the discord and antagonism which had been as pronounced there in the past as it could have been anywhere. After uniting the profession solidly they abolished all lodge and contract practice in one week's time. A little later they revised their schedule of fees and put collections and the other business affairs of the profession on a modern basis, satisfactory alike to themselves and their patrons. They were most responsive to my suggestion for frequent meetings and systematic study, and promised to take prompt steps to this end, and also to enter into co-operative educational work with the other learned professions and the public generally. Altogether this impressed me as one of the most united and promising local societies to be found in any part of the country. If the profession of Portland could be induced to unite in this work, and would expend the energies on it in the future which its leaders have wasted in the past, the foundation for real organization could be laid before the next annual meeting of the state association, and plans made for legislative and other much needed reforms. Many of the smaller counties could undertake the work as successfully as Clatsop County did, without the assistance of Portland, and with the profession there in discord, but I got the impression that a majority of them would not do so.

My personal experience in Oregon was most pleasant. Mrs. McCormack was with me everywhere, and the physicians and their families vied with each other in contributing to our entertainment and comfort. I am tempted to mention individuals in this connection, but the hospitality was so general and generous that this will not be attempted. If a profession with such leaders could only be unified everything would be possible to it, and it is in the hope of arousing them to this duty that I have hesitatingly and reluctantly expressed these criticisms.

#### Iowa.

POCAHONTAS COUNTY MEDICAL SOCIETY.—We have received the program of the annual meeting of this society and find it suggestive of methods that will accomplish much good. Both an afternoon and evening meeting are provided for, with dinner between. The afternoon program is filled with regular medical papers and business. This is the purely professional and scientific part. Then follows dinner; this is the social—a very important—part, for it is this that brings men together, makes them understand and know each other, and thus dissipates jealousies. In the evening is the public meeting, at which the patient and the physician meet on a common level. The program before us states that at this meeting, besides music and recitations, three papers are to be heard: "Preventive Medicine and the Relation the Public Bears to the Profession," by a member; "The Public School as a Factor in the Public Health," by the superintendent of public schools, and "The Doctor—Both Sides of Him," by a member. This will be the second meeting of this society to which the public has been invited, the former experiment having been a success.

This method of educating the public is being adopted by but a few isolated societies; it should be utilized by every county society in the country. The public wants to learn, is ever open to conviction, and a free interchange of views between the layman and the physician will result in good to both. The teacher, the lawyer, the editor will attend such meetings and the public-spirited citizen will always be a willing co-operator. These will leaven public opinion. There should be open, free discussion of business matters in these public meetings, as well as of the ethics of medicine and of health and disease.

We have one criticism to offer on the program of the Pocahontas society; it is that no provision is made for discussion at the public meeting. Less music and fewer recitations and time for discussion will make more interesting gatherings and bring about better results. It is the heart-to-heart talks that are wanted.

#### Kansas.

ALLEN COUNTY MEDICAL SOCIETY DID NOT DISBAND.—The following seems to be a morsel that is pleasing to a certain class of newspapers, for it has appeared in many of them:

#### SHORT-LIVED SOCIETY.

At Iola, Kansas, Thursday, the physicians of the county met and organized a society, fixing rates, all being the same. On Friday,



the prosecuting attorney of the county had warrants issued for the arrest of every physician in the county who joined the society, for the purpose of prosecuting them under the anti-trust law. The physicians were given until next Monday to disband their organization and they gave it out that they would do so.

We sent a clipping to the secretary of the society referred to, who has replied as follows:

"The Allen County Medical Society is now and has been in existence for nearly two years. Our old original society is three years old. We disbanded and reorganized March 28, 1904, in order to affiliate with the State Medical Society. We believe we have one of, if not the best county society in the state, and have our state charter. The meeting referred to was our regular meeting, which is the third Wednesday in each month. At this meeting we revised our fee bill, and our prosecuting county attorney merely stated to us that in his opinion we had violated the anti-trust law by agreeing to the fee bill. No warrants were ever issued, nor will there be any issued, as we will correct the matter at our next meeting. I desire that you publish this letter to show to the world, and especially to the medical profession, that newspapers are many times unreliable, especially along medical lines.

"J. W. BOLTON, Secretary Allen County Medical Society."

## Society Proceedings

### COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.

American Dermatological Association, New York, Dec. 28-30.

Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### AMERICAN TUBERCULOSIS EXHIBITION.

*Held in New York City, Nov. 27 to Dec. 8, 1905, under auspices of the National Association for the Study and Prevention of Tuberculosis and the Committee on the Prevention of Tuberculosis of the Charity Organization Society at the American Museum of Natural History.*

The idea of the exhibition is to show the methods that are being adopted throughout this country and Europe to prevent and to cure consumption. Toronto, Canada, had on exhibition the model of a tuberculosis sanatorium. There were models of sanatoria which are in use in the different states. Chicago sent models of her hospital buildings for this disease. Pennsylvania also had a fine exhibition, the institution at White Haven being specially deserving of mention. New York State had a large model of the sanatorium at Raybrook, which has been in operation two years. New York City showed how it takes care of its tuberculosis patients in tents on Blackwell's Island and in other places. There were several model tents and contrivances by which the sick person can breathe fresh air both day and night. There were also models of improved tenement houses which are a feature of the general plan for the prevention of the spread of tuberculosis. In contrast with these were specimens of the old-time dark bedrooms which are held responsible for a great deal of tuberculosis in the city.

#### Economics of Antituberculosis.

DR. THOMAS DARLINGTON, health commissioner of the city of New York, presided at the opening meeting, November 27.

MORRIS K. JESUP, in the opening address, said that if the people could awaken to the awful condition of the poor who are afflicted with this disease the effort they would make would result in vanquishing this plague.

DR. THOMAS DARLINGTON said that the object of the exhibition was to educate the public in regard to the prevalence of consumption and to teach them the best methods of prevention and cure. He spoke of what it would be worth to the city and to the individual if we could eradicate this disease. He said that the cost of educating a child is about \$50.00 a year in the public schools; yet 24 per cent. of the deaths from tuberculosis occur between the ages of 15 and 25. He asked what is the use of educating children if they are going to die before they are able to use their education. If we are going to take such great pains and expense in their training we are morally bound to look to their physical condition as well. There are 28,000 cases of tuberculosis in Greater New York. The Board

of Health is endeavoring to aid these by sending nurses, by clinics, by visiting physicians and by the distribution of literature. The greatest difficulty they encounter is the failure on the part of physicians to report cases of this disease. He thought, however, that at the present time from 90 to 95 per cent. of the cases are reported. During the past year 19,000 sputum examinations have been made, of which 6,000 proved not to be tuberculosis. Some of the worse cases were curable; 8 per cent. of the bad cases on North Brothers Island recovered and 60 per cent. were improved. He emphasized the necessity of an early recognition of the disease. The lungs of school children were now examined and adenoids removed. Forty-eight per cent. of the school children had something wrong which very often laid the foundation for tuberculosis. He urged more sanitary conditions in factories, shops and houses. After the death or removal of a tuberculous patient the Board of Health disinfects the rooms. He thought expectoration in public places could not be effectually done away with by law, but only by an educated public opinion. He strongly deprecated the use of patent medicine and drugs in combating this disease, as in most instances they are only alcoholic stimulants.

TALCOTT WILLIAMS, of Philadelphia, said that civic responsibility is just as direct and necessary in dealing with this disease as in dealing with political corruption. Our only hope lies in knowledge and in the education of the masses. He said that every case of consumption is a visible proof of social failure; the remedy is an individual sense of responsibility. If there are 5,000 deaths from consumption on the island of Manhattan, practically all of which can be prevented, and from 10,000 to 15,000 cases which could be saved from death, it is because neither the city nor the citizens have discharged their duty.

#### Health for Workers.

DR. THOMAS DARLINGTON presided at the meeting held on November 29. The subject discussed was "Health for Workers."

HERMAN ROBINSON, of the Central Federated Union, said that organized labor was doing all in its power to better social conditions in general, but particularly in connection with tuberculosis. It had made many workshops more healthful and was using every effort in that direction from day to day.

PROF. GRAHAM TAYLOR, of Chicago, spoke of the work in the West and told what had been accomplished there.

J. W. SULLIVAN, editor of the official publication of the garment workers and a member of the Typographical Union, told what had been done to improve sweatshop conditions, and called attention to the interesting collection of photographs illustrating the fearful conditions still existing in East Side sweat shops.

#### Recent and Coming Congresses.

On Friday evening, December 1, with DR. HERMANN M. BIGGS in the chair, DR. LAWRENCE F. FLICK, of Philadelphia, gave a brief history of the various tuberculosis conventions held since 1898 and outlined a plan for a congress to be held in Washington in 1908. He proposes that the expenses of this congress be defrayed by asking for \$100,000, which could be raised by twenty wealthy men subscribing \$5,000 each. It is his intention to endeavor to get this money at once and to permit it to remain undisturbed until 1908, when the accumulated interest will be distributed in prizes. He would give prizes on this occasion for the best exhibits from any country, for the best set of laws and ordinances dealing with conditions affecting tuberculosis, for the best sanatorium, the best pavilion, the best hotel, the best factory or workshop, etc. He proposes that the scientific portion of the congress be continued for one week in Washington, and that the social portion one week preceding and one week following the scientific sessions be held in various cities.

DR. EDWARD L. TRUDEAU, Saranac Lake, spoke of the work of sanatoria and said that he believed that future work in dealing with tuberculosis would be along the lines of specific treatment.

DR. W. A. EVANS, Chicago, member of the Tuberculosis Commission said that Chicago needed more agitation in regard to the means of getting rid of this disease. Chicago had but from \$1,500 to \$2,500 with which to combat this disease; in



fact, only the small fines secured from milk dealers and a few other petty offenders. In every instance we should seek the assistance of societies or other agencies working along kindred lines in our work against tuberculosis. Not more than 2 per cent. of consumptives are able to leave home and we must find a way to cure them at home. We must keep on trying to teach the value of fresh air and fighting the draught fiends. Consumption should not be viewed as an infectious disease alone, but should be regarded as something more if we ever expected to entirely eradicate it. If we were ever to make this scourge disappear we must learn to live more hygienic and more simple lives.

DR. VINCENT Y. BOWDITCH, Boston, said that he wished to sound a conservative note in regard to statements as to the results in the treatment of tuberculous subjects. This is too treacherous a disease to speak too early or with too much certainty of our successes. Too precipitate statements from physicians and overstatements of the press are harmful to the cause.

#### Exile and Drugs in the Treatment of Tuberculosis.

DR. ABRAHAM JACOBI, of New York, related the trials of the poor patient afflicted with tuberculosis and showed how impossible it is for him to go away from home in most instances. Statistics show that there is only one bed in a sanatorium for every 30 persons having tuberculosis; consequently home treatment has to be instituted. Much was said about Nature's remedies, fresh air, good food, etc., but drugs were Nature's remedies, too, and should not be neglected in every case. When in a family we see child after child show signs of tuberculosis it is well to look for syphilis in the mother. We should be careful to keep mucous membranes in a healthy condition and to see that enlarged tonsils are properly cared for. By proper attention to such matters one often obviates the necessity of treating consumption later. We should teach the value of exercise, cold water, a copious supply of oxygen, and that night air is better than no air. In addition to air, food and clothing we should recognize that there are drugs which, if wisely used, will help us in the treatment of this disease. In his hands guaiacol has given some very encouraging results, especially in the treatment of renal tuberculosis.

(To be continued.)

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

#### Treatment of Early Pulmonary Tuberculosis.

Price, in *Edinburgh Med. Jour.*, states that the cough which occurs early in the morning and which is accompanied by expectoration, is of service and should be encouraged. For the cough at night he recommends a cup of hot milk or cocoa, or tea, at bedtime, and occasionally through the night. In some cases he recommends a sufficiently warm alkaline draught similar to the following:

R. Sodii bicarb.....	gr. x	65
Sodii chloridi .....	gr. v	30
Ammon. carb.....	gr. iii	20
Spts. chloroformi.....	m. v	30
Aq. anisi q. s. ad.....	3i	30

M. Sig.: At one dose in a wineglassful of warm water or milk.

In some of these cases of early tuberculosis in which the cough is troublesome a small blister or iodine is recommended, applied to the subclavian region on the affected side. An irritable and ineffectual cough persisting through the day, accompanied by a very scanty expectoration after prolonged efforts, is best managed by instructing the patient to restrain the cough as much as possible and to use an inhalation containing menthol, creosote, oil of eucalyptus or oil of pine. A combination similar to the following is recommended in some cases:

R. Olei euclaypti .....	3iii	12
Olei amagdylae amaræ.....	3i	4
Spts. chloroformi .....	3i	30

M. Sig.: From 10 to 75 drops to be inhaled, half an hour after the first morning cough; again at noon and in the evening. Or the following may be used as a modification of Dr. Coghill's formula:

R. Tinct. iodi ether (Br.)		
Acidi carbol., āā.....	3ii	8
Creosoti .....	3i	4
Spts. vini rect., q. s. ad.....	3i	30

M. As an inhalation. Or:

R. Sol. menthol alc. (20 per cent.).....	3ii	8
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Sig.: Ten minims placed in an inhaler and inhaled for one-half hour. Or:

R. Creosote		
Sol. menthol alc. (20 per cent.)		
Spts. chloroformi, āā.....	3i	4

M. Sig.: Twenty drops to be inhaled from a sponge for one hour.

In case the foregoing combinations do not check the cough sufficiently this author recommends that a 2 per cent. solution of cocaine be sprayed on the back of the throat. In some cases ipecac, potassium iodid or sodium bromid may be of value. Anodynes should be the last resort in these cases.

If the expectoration is peculiarly tenacious ammonium chlorid should form a part of medical treatment.

In the later stages of the disease, when the secretion is excessive, the internal administration of balsams or the inhalation of antiseptics such as creosote or turpentine, is the best treatment. If the patient shows indications of becoming exhausted during the night from the aggravated cough it will probably become necessary to administer some form of opium. There is danger, however, of upsetting the stomach, and this must be avoided if possible. Codein is less liable to disturb the stomach than the other preparations of opium. The following combination is recommended:

R. Codeinæ .....	gr. 1/6	01
Acidi citrici.....	gr. v	30
Spts. chloroformi.....	m. v	30
Mucil. acaciæ .....	3i	4

M. Sig.: To be taken at one dose and repeated as the individual case requires.

If paroxysms of coughing arise which terminate in vomiting of food, the patient should be instructed to lie perfectly quiet after a meal. In some such cases the following is advised by the author:

R. Aluminis .....	gr. v	30
Liq. potassæ .....	m. v	30

M. Ft. cap. No. i. Sig.: To be taken just before nourishment.

If hemoptysis should arise and is sufficient in amount to require treatment, rest in bed is the important measure; this lowers blood pressure, slows the circulation and diminishes the movements of the lung. The patient should lie in the recumbent position with the head and shoulders elevated. And all unnecessary movements and talking should be prohibited. Warmth should be applied to the feet if the patient feels chilly.

All stimulants must be withheld, the food must be cold and limited to a pint and a half of milk a day, two ounces of meat essence, four ounces of bread and one-fourth ounce of butter. An icebag may be of value applied to the chest, but the author states very aptly that its only value, perhaps, is in preventing the patient from sitting up, and similarly, the sucking of ice for the time soothes the cough and causes the patient to believe that something is being done for him.

One of the most important means of checking hemoptysis, according to this writer, is to lower blood pressure by means of catharsis and free purgation. He recommends saline purgatives as the most valuable, such as the following:

R. Sodii sulphatis.....	gr. xx	130
Magnesii sulphatis .....	3i	4

M. Ft. pulvis. Sig.: One such powder every four hours.

In cases in which hemoptysis is profuse a hypodermic injection of morphin may be given and repeated sufficiently often to keep the patient partially under the influence of the drug



for several days. [Morphin, however, should be used only when absolutely necessary, and then with great caution.—Ed.] The only hemostatic from which the author has obtained results is the oil of turpentine given in 10-minim doses. Also ergotin is recommended hypodermically in doses of grains 1 to 3 (.06 to .20) as a hemostatic.

When hemorrhage of the lungs comes on suddenly and in considerable amount, so that the patient's strength is reduced and he becomes nervous, Thompson, in his *Practical Dietetics*, recommends absolute quiet in bed without a pillow, so that the body may be flat and the head and arms should on no account be raised. The patient should not be allowed to feed himself. A nurse should be in charge and small quantities only of food should be given at one time through a glass tube or by a teaspoon, so that the head need not be raised. If nausea occurs every effort must be put forth to control it, otherwise the muscular effort may bring on another hemorrhage. The blood pressure in the lungs must be reduced in order to allow the coagulation of blood to occur over the oozing surface, therefore, large quantities of fluid should not be taken at one time. The patient is usually thirsty from the loss of blood and temporary drying of secretions. The thirst may be relieved by crushed ice and small quantities of cold acidulated drinks, such as very dilute phosphoric acid or sour lemonade, and if the condition of the stomach is in proper condition, plain milk may be given, otherwise pancreatized milk and strong beef broth not exceeding two or three ounces in as many hours. The advantage of administering all fluids cold, according to this author, is overrated. Warm fluids have a somewhat more stimulating effect on the heart and are more rapidly absorbed, but the theory that cold taken in the stomach exhibits any great reflex, constricting action on the blood vessels of the smaller bronchi is not a rational one, according to this author.

In cases in which exceptionally large hemorrhages occur with a consequent loss of blood, it becomes necessary to give larger quantities of fluid, and salt water injections may be resorted to.

If there is no return of hemorrhage after one or two days the diet should be increased and the anemia consequent on the bleeding must be treated by abundant meat diet, avoiding alcoholic stimulants unless danger of heart failure should arise.

In the administration of cod-liver oil in tuberculosis the following combination after Bricemoret is recommended in *Twentieth Century Pract. of Med.*:

R. Olei morrhuae .....	℥xii	360
Syr. tolutani .....	℥vi	180
Tincturæ tolutani.....	gr. xii	75
Olei caryophylli.....	gtt. ii	12

M. Sig.: Shake the mixture well and take one tablespoonful two or three times a day.

Iodoform, which is also recommended by some authorities in all degrees of phthisis, is recommended in the following combination:

R. Iodoformi .....	gr. iss	109
Codeinæ .....	gr. 1/3	102
Ext. cascara.....	gr. ss	103

M. Ft. pil. No. i. Sig.: One such pill three times a day.

If diarrhea is present the following is recommended:

R. Iodoformi .....	gr. xxx	2
Acidi tannici.....	gr. lx	4

M. Ft. chart. No. xl. Sig.: From two to four powders daily.

Cinnamon has many advocates as a remedial agent in tuberculosis and may be combined as follows:

R. Quin. sulph.....	gr. vi	40
Tinct. cinchonæ co.		
Syr. aurantii, āā.....	℥iss	45
Aq. cinnamomi q. s. ad.....	℥viii	240

M. Sig.: One tablespoonful three or four times a day. Or:

R. Essentiæ thymi		
Essentiæ eucalypti		
Essentiæ cinnamomi, āā.....	m. lxxx	5
Olei olivæ (sterilized).....	℥iiss	105
Iodoformi .....	gr. lxxv	5
Bromoformi .....	m. xxx	2

M. Sig.: Forty-five minims to be dropped into the trachea once a day.

### Prescription for Asthma.

A correspondent calls our attention to an error in a prescription in THE JOURNAL, Nov. 25, 1905, page 1688. As corrected the prescription should read as follows:

R. Tincturæ lobelia.....	m. x	6
Heroin hydrochloratis.....	gr. 1/24-1/2	0027-.0054
Ammon. muriatis.....	gr. v	3
Spiritus ætheris comp. q. s. ad.....	℥i	4

## Medicolegal

### Restriction on Use of Wood Alcohol.

Chapter 274 of the Laws of Wisconsin of 1905 provides that no person, firm or corporation shall require or wilfully permit the use of wood alcohol, or shellac or other material dissolved or mixed with wood alcohol, or columbian spirits, within any vat or tank, in such manner as to cause injury to or endanger the life or health of the person so using it, or of any other person.

### Change in Requirements.

Chapter 41 of the Laws of Washington of 1905 amends section 3 of the act regulating the practice of medicine and surgery in that state by providing that each applicant for a license "shall be a graduate of some duly authorized medical college now having, if it still be in existence, at least a four years' graded course." The fee for examination shall be \$25. And there is nothing said about reciprocity.

### Provision for Prevention of Contagious Diseases.

Chapter 333 of the Laws of Wisconsin of 1905 appropriates to the State Board of Health a sum not exceeding \$50,000 for the two years ending Feb. 1, 1907, which shall be for a fund which, by and with the advice and consent of the governor, may be drawn on by the said board and used by it in such manner as may seem to it to be necessary to prevent the introduction or spread of Asiatic cholera or other dangerous contagious diseases in the state.

### Must Report Tuberculosis.

Chapter 55 of the Laws of Utah of 1905 provides that it shall be the duty of every physician in the state, every superintendent of hospital or public institution in the state to immediately report to the State Board of Health every case of tuberculosis which he is called on to treat or which is in such hospital or public institution. Each and every physician or superintendent shall make such reports as may be called for by the rules and regulations made by said board to prevent the spread of such disease. Any person violating any provision of this act shall be guilty of a misdemeanor.

### No Formaldehyd in Milk or Food Products.

Chapter 50 of the Laws of Washington of 1905 provides that any person who shall sell, offer to sell, or have in his possession for the purpose of sale, either as owner, assistant, or in any manner whatsoever, whether for hire or otherwise, any milk or any food products, containing the chemical ingredient commonly known as formaldehyd, or in which any formaldehyd or other poisonous substance has been mixed, for the purpose of preservation or otherwise, shall be guilty of a felony, and on conviction thereof shall be imprisoned in the penitentiary for a period of not less than one year nor more than three years.

### No Advertising to Cure Venereal Diseases.

Chapter 78 of the Laws of Washington of 1905 provides that any person who shall advertise that he will treat or cure venereal diseases or disorders, or any venereal disease or disorder shall be guilty of a misdemeanor, and on conviction thereof shall be imprisoned in the county jail for a period of not less than one month nor more than six months. Any owner or managing officer of any newspaper in whose paper shall be printed or published such advertisement as is described in this act shall be guilty of a misdemeanor, and on conviction thereof shall be imprisoned in the county jail for a period of not less than one month nor more than six months.



### Provides for State Tuberculosis Sanatorium.

Chapter 361 of the Laws of Wisconsin of 1905 provides for what is to be known as the Wisconsin State Tuberculosis Sanatorium for the treatment of pulmonary tuberculosis, especially for cases in the incipient stages of this disease. The general supervision and government of this sanatorium, except the financial supervision, shall be vested in an advisory board, which shall consist of five members appointed by the governor, one of whom shall be a member of the State Board of Health and at least two other members shall be licensed physicians, graduates of a reputable medical college. Applicants for admission to the sanatorium shall be examined at various places throughout the state designated by the advisory board.

### State Hygienic Laboratory Continued.

Chapter 471 of the Laws of Wisconsin of 1905 continues for a period of two years at the state university in conjunction with the existing laboratories in bacteriology, the laboratory which was authorized by the legislature of 1903, known as the Wisconsin State Hygienic Laboratory. The purpose of this laboratory shall be to undertake the examination of water supplies for sanitary purposes, the examination of material from various contagious and infectious diseases with the purpose of aiding in the determination of proper diagnosis of such diseases, to examine into the nature and cause of disease outbreaks throughout the state, to study hygienic and sanitary problems relating to diseases and their dissemination, or any other problems that bear directly or indirectly on the public health.

### Duties of Physicians Relative to Certain Diseases.

Chapter 192 of the Laws of Wisconsin of 1905 provides that in every city of the first, second, third and fourth classes it shall be the duty of every physician to report to the department of health in every such city, in writing, the full name, age and address of every person suffering from any one of the infectious or contagious diseases following, to-wit: Measles, smallpox, diphtheria (membranous croup), scarlet fever (scarlatina), typhoid fever, tuberculosis (of any organ), rubella (rötheln), chickenpox, typhus fever, plague, erysipelas, Asiatic cholera, whooping cough, cerebrospinal meningitis, yellow fever. It shall be the duty of every physician to report forthwith in writing to the said department of health the death of any person who dies from, or while suffering with or from any infectious or contagious disease, and to state in such report the specific name and type of such disease.

It shall be the duty of every physician, etc., in any such city, to report to the department of health thereof, in writing, or to cause such report to be made by some proper and competent person, the name, age, sex, occupation and latest address of every person afflicted with tuberculosis, who is in their care, or who has come under their observation, within one week of such time. It shall be the duty of every person sick with this disease, and of every person in attendance on any one sick with this disease, and of the authorities of public or private institutions or dispensaries, to observe and enforce all the sanitary regulations of such health department for preventing the spread of pulmonary tuberculosis.

In case of the vacation of any apartment or premises by death from tuberculosis, or by the removal therefrom of a person or persons sick with tuberculosis, it shall be the duty of the person or physician in charge, to notify the commissioner of health of such city within twenty-four hours thereafter, and such apartments or premises so vacated shall not again be occupied until duly renovated and disinfected as herein provided. In case any orders or directions of the commissioner of health requiring the disinfection of any articles, premises or apartments shall not be complied with within thirty-six hours after such orders or directions shall be given, then it shall be the duty of the commissioner of health to cause a placard in words and form as follows, to be placed on the door of the infected apartments, or premises, to-wit:

#### NOTICE.

Tuberculosis is a communicable disease. These apartments have been occupied by a consumptive and may be infected. They must not be occupied until the order of the health commissioner directing their renovation and disinfection has been complied with.

This notice must not be removed under a penalty of law, except by the commissioner of health, or an authorized officer.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

November 25.

- 1 \*Yellow Fever in Cuba. J. Guiteras, Havana, Cuba.
- 2 \*Relation of Stomach Disorders to Diabetes Mellitus. J. P. Sawyer, Cleveland, Ohio.
- 3 \*Ambulant Treatment of Internal Hemorrhoids. C. F. Martin, Philadelphia.
- 4 \*Disinfection of Dwelling Houses and Bedding. A. H. Stewart, Philadelphia.
- 5 \*Purpura Hemorrhagica, with the Report of a Case Occurring During Pregnancy. B. Van Sweringen, Ft. Wayne, Ind.
- 6 Pernicious Malaria; Postmortem Disappearance of the Parasite. H. D. Bloombergh and J. M. Coffin, U. S. A.

1. **Yellow Fever in Cuba.**—Guiteras relates the circumstances of the last days of yellow fever in Havana, and uses the facts as arguments in support of the view that the mosquito is the only means of transmission of the disease. As some doubt has been expressed by some as to the demonstrative value of the experimental cases produced by Guiteras at Las Animas Hospital, he shows that there could have been no other source for the infection than the experimental application of the infected mosquito. He relates further how the disease has been introduced several times into Cuba without its ever taking a foothold in that old home of the disease, though the Las Animas Hospital may be looked on as a veritable powder magazine charged with explosives in the shape of accumulated fomites.

2. **Relation of Stomach Disorders to Diabetes Mellitus.**—Sawyer reports 19 cases which show that much may be accomplished for the comfort and relief of many diabetics by direct attention to the condition of the stomach. Of these 19 patients, 14 gave evident histories of previous dyspeptic trouble, 1 of alcoholism without dyspepsia, 3 of slight indigestion, and only 2 reported a complete freedom from dyspeptic disturbance. As to the duration of the glycosuria, 9 of the 19 have been diabetic for years, 7 for months, 1 possibly for a month, while in 2 the period is thought to have been from one to six weeks. From these considerations, as well as from the clinical history, all may be excluded from the range of alimentary glycosuria. Among them were cases of the severest type, as well as of the milder forms. With reference to the condition of the stomach, 16 show abundant catarrhal mucus in the contents of the stomach; 2 do not show this catarrhal process, and from 1, owing to age and disinclination, no test meal was obtained. As to motor function, 10 show a considerable failure, and of the 18 patients the secretion of hydrochloric acid in 8 is increased; 7 show normal proportions, 3 show less than normal or absent. Of the 19 patients all but 2 show definitely active catarrhal processes, and in every case of the 18 there has been marked subjective benefit—gain in strength, weight, freedom from thirst, and polyuria—gained by direct attention to the catarrhal process. The most striking effect has been observed on the polyuria and thirst. In some cases the percentage of sugar has undergone no change, but there has been in these cases a great reduction of the total excretion of sugar *per diem*, owing to the great change in the quantity of urine excreted, and the clinical course of this group of diabetics has been much more favorable under direct treatment of the stomach than without it. Moreover, the cessation of this treatment has been followed by the recurrence of the difficulty with prompt relief on resuming the treatment directed to the catarrhal process. In most of the cases lavage formed an important part of the treatment, antiseptic and alkaline solutions being used.

3. **Ambulant Treatment of Internal Hemorrhoids.**—Martin asserts that the treatment of internal hemorrhoids by hypodermic injection has fallen into disrepute among surgeons because it is the accepted method of the advertising quack. The many complications and accidents must not be ascribed to the method itself, but to the unscientific and insanitary technic employed by this ignorant class of irregular practitioners. It is to be remembered, Martin states, that the injection method is a surgical procedure as truly as the clamp and cautery or the ligature operations, and, therefore, is not a method to be



employed by the general practitioner. The advantages of the injection method are that the patient need not give up his business while under treatment and is not required to take an anesthetic like ether or chloroform. The treatment is usually painless and the complications few if the case is handled properly. The disadvantages are that, in a few instances, the treatment may be a little prolonged, and when the piles are greatly thickened and fibrous they do not completely disappear. For these cases Martin usually employs the ligature, operating under local anesthesia. The complications, such as pain, hemorrhage and strangulation, can be avoided by performing a free divulsion of the sphincter muscles under nitrous oxid anesthesia. This anesthetic is quick, safe and non-irritant, and the patient need not be confined to bed after the operation. About four days after divulsion, or when the primary soreness has subsided, the treatment by injection may be commenced. Martin employs a 50 per cent. solution of phenol, injecting from 7 m. to 10 m. of this solution directly into the center of the pile. The injection is made through a conical speculum, care being taken first to swab off the surface of the pile with an antiseptic solution. The speculum is then withdrawn, allowing the rectal walls to collapse, after which the syringe may be removed. After introducing a suppository containing 3 m. of ichthyol the patient may return to his usual occupation. These suppositories are also used twice daily—one after stool and one at bedtime. Treatments should be given at intervals of from two to seven days and should be continued until all the hemorrhoidal masses have disappeared. Martin says that the method, if properly used, is perfectly safe; when it fails to cure no harm has been done, and one of the other operative methods may be tried.

**4. Disinfection of Dwelling Houses and Bedding.**—Stewart has devised an apparatus for the disinfection of dwelling houses and bedding. The apparatus consists of a tank made of heavy brass, 18 inches high and 8 inches in diameter. An air-pump attached to the side furnishes the air pressure and in this position also prevents the squirting of formalin solution into the face of the operator. There is no rubber hose on the machine and no rubber gaskets; the rubber tube generally used being supplanted by an ordinary gas bracket with two joints, which can be set in any position so that the operator can remain in an erect posture at all times. The stream of formalin is broken up by a whirling device at the extremity of the gas bracket. A continuous fine spray without the mixture of air can be thrown easily at a distance of from ten to twenty feet, allowing the operator to cover the surface of the room before the gas becomes unbearable. When loaded with two gallons of solution the weight of the machine is twenty-five pounds. About 500 square feet of surface can be gone over in three minutes. With a 5 per cent. solution of formaldehyd gas a series of 2,000 tests showed 97 per cent. of surface disinfection. The results were equally gratifying from a series of experiments to test the value of this method in the disinfection of bedding.

**5. Purpura Hemorrhagica During Pregnancy.**—Van Sweringen reports a case of purpura in a young woman of 25, which appeared in the fifth month of her first pregnancy. Hemorrhages occurred from the gums and nose, into the cellular tissue and skin, and appeared in the urine and vaginal discharge. From none of these localities was the bleeding very profuse or serious at any one time. Continuing, however, over a period of two or three weeks, considerable anemia was produced and the prognosis was rendered unfavorable. The hemorrhagic tendency subsided, however, the pregnancy went to term, the delivery was accomplished by forceps and was followed by no unusual hemorrhage, the puerperium being perfectly satisfactory. The treatment adopted consisted of rest in bed, 5-grain doses of calcium chlorid with 1 grain of extract of suprarenal gland every three hours and gelatin *ad libitum*. Several cervical cauterizations in the early months of pregnancy, done to relieve the severe nausea and vomiting, are looked on as possible causes of the condition because of the purulent discharge which followed. Absorption of infectious material from the cauterized areas seems probable, although no leucocytosis was present.

### Medical Record, New York.

November 25.

- 7 Differential Diagnosis of Ectopic Gestation. B. H. Wells, New York.
- 8 \*Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis. J. H. Pryor, Saranac Lake, N. Y.
- 9 \*Submucous Resection Operation for Deviation of the Nasal Septum; with Description of Several New Instruments. L. M. Hurd, New York.
- 10 Conservative Gynecology. C. G. Cumston, Boston, Mass.
- 11 \*Tryon, N. C., as a Climatic Resort. H. J. Garrigues, New York.

**8. Early Diagnosis of Pulmonary Tuberculosis.**—Pryor states that as the result of observation and experience gained while acting as the first medical superintendent of the New York State Hospital for the Treatment of Incipient Tuberculosis, his conviction that pulmonary tuberculosis is rarely recognized at an early and proper time for successful treatment, has been decidedly strengthened. This conclusion is corroborated by the fact that the hospital, which was created under a law providing that only incipient cases could be admitted, has never contained more than one-third of the number of cases that could be accommodated. Inquiries submitted to a number of sanatoria in the United States to learn the percentage of incipient cases received, as thus defined, reveal the fact that the average percentage of all patients under treatment which could be designated as early and favorable varies from 2 to 30. An analysis of all cases treated at the New York State Hospital shows that 60 per cent. were received. In attempting to account for this state of affairs Pryor says that one reason is that the patient does not seek medical advice early enough. This is especially the case among the poor, who also often receive incompetent counsel when they do go to a physician or dispensary. Other reasons are the faulty education in medical schools and the recent tendency to give prominence to laboratory methods at the expense of the skill of the clinician. The classical symptoms almost invariably presented in combination, are loss of appetite, chlorosis or anemia, loss of weight, cough, with or without expectoration, hemorrhage, and fever. It is extremely rare that all of these are associated at an early time. They are apt to be present at a later stage. This is particularly true of patients who have had rest, nourishing diet, and open-air treatment. Many times, under these conditions, few or no symptoms are apparent, and yet the disease may be progressive. The author also discusses at length the physical examination of the chest and points out the necessity for painstaking examination of the patient with clothing removed to the waist.

**9. Submucous Resection for Deviation of Nasal Septum.**—Hurd describes this operation, which he considers preferable to the older methods used for correcting deviations of the septum. The procedure consists in incising the mucous membrane over the deviation in a curve with the concavity backward. The flap of mucous membrane and perichondrium is elevated and the cartilage is scratched through with a curette until the mucous membrane of the other side is reached. This layer is then also separated from the septum and the portion of the latter forming the projection is excised with Ballenger's swivel knife. If bone must be removed the author's special down-cutting forceps is used. The mucous flaps are allowed to fall together and are kept in opposition for a few days by light packing. Hurd pays great attention to securing proper cocaineization of the parts, and states that the operation may take from ten minutes to an hour. Several of the special instruments invented by Hurd are described and illustrated.

**11. New Climatic Resort.**—Garrigues praises Tryon, N. C., very highly as a resort for rheumatic and gouty people, convalescents after serious diseases or operations, anemic persons, those affected with tuberculosis, heart disease, or any ailment of the respiratory tract. Tryon is situated in the western part of North Carolina, at the foot of the steep slope forming the connection between the mountainous region and the lowland, slightly above the thirty-fifth degree of north latitude, at an altitude varying from 1,000 to 1,200 feet above sea level, and about 250 miles from the Atlantic. The weather is mild and dry without extremes of temperature, winter or summer, and the author believes it is the best all-year-round climate in the United States. The annual number of sunny days is very large, drainage is perfect, and mosquitoes are rare. It can be



reached from New York in twenty-five hours, with one change of cars.

### Boston Medical and Surgical Journal.

November 23.

- 12 Use of the Biograph in Medicine. W. G. Chase, Boston.
- 13 \*Simple Method of Measuring and Graphically Plotting Spinal Curvature and Other Asymmetries by Means of a New Direct-Reading Scoliometer. G. W. Fitz, Boston.
- 14 The City Physician, His Duties and Responsibilities. J. H. McCollom, Boston.

13. **New Direct-Reading Scoliometer.**—Fitz sets forth a method which he considers practical, simple, accurate and inexpensive, by which definite measurements can be made. The apparatus employed comprises: 1. A scoliometer consisting of a sheet of transparent celluloid 2/100 inches in thickness and 52 cm. long, by as great a breadth as is desired, a convenient breadth being 16 cm., with rectangular graduations and with two level glasses set at right angles to each other for determining the level of both the horizontal and vertical lines of graduation. The longitudinal graduations are 1 cm. apart and every second one has waterproof black ink run into the line to facilitate the measuring. The cross lines, which are 3 cm. apart, also may be inked, but ordinarily it is not necessary. A small level glass (A), the tube of which is bent to the curve of a circle of 12-inch radius, is fastened on the lower part of the sheet at exact right angles to the longitudinal lines, so that when the bubble is on its index these lines are exactly vertical. Another similar level glass (B) is fastened in like manner on the central part of the sheet and adjusted so that when the bubble is at the index the longitudinal lines are horizontal and the cross lines vertical. 2. A black flesh pencil for making the spinous processes of the vertebra, anterior superior spines, clavicles, scapula and such other points as it is desired to measure for record. 3. Card catalogue cards of such size and graduation as desired, for recording and plotting. The method of application of the scoliometer is as follows: 1. To measure deviation of the spine the patient stands on a chair or platform about sixteen to twenty inches in height; the tips of the spinous processes of the vertebrae, the posterior superior spines, the spines and lower angles of the scapula are spotted with the flesh pencil. The scoliometer is then placed on the back in such a way as to bring the zero point of the longitudinal scale to the tip of the seventh cervical vertebra, and to bring the lower end of the midvertical line to the cleft of the buttocks. The middle line of the scoliometer then corresponds with the line of the spine, provided the latter is normal. If abnormal, the amount of lateral deviation from the median line is measured directly in the following manner: Looking at the back through the scoliometer and keeping the eye well away from the latter (about two feet), with the line of vision approximately perpendicular to the plane of the scoliometer at the point where the measurement is being made, the graduations of the scoliometer projected on the back of the subject are seen, and the amount of the deviation from the median line is shown in centimeters and fractions. The vertical distance is read and recorded downward from the zero point on the seventh cervical spine to the successive distances, and the amount of lateral deviation of the spine from the median line is noted at each of these successive points (or such of them as are necessary to define the curve). 2. To measure the lateral deviation at the spine with reference to a true vertical midline, the scoliometer is placed on the back of the patient with the zero of the seventh cervical process, the bubble of level A being at its index; the lines of the scoliometer are vertical and the measurement can be carried out as above. This is usually a more significant measurement, since it measures lateral posture as well as deformity. 3. The lateral contour of the trunk, if desired, may be measured, recorded and plotted by the scoliometer in like manner, either by having the scoliometer broad enough to include the entire trunk or by shifting the median line of the narrower scoliometer a measured distance to each side of the median position recorded as above and then measuring the deviations of the side contours and plotting them in their proper relation to the median curve. 4. To measure the lateral displacement of the shoulders in relation to the pelvis the zero point of the scoliometer is placed on the tip of the seventh cervical spine; the scoliometer is swung to the vertical position; the latter distance of the lower end of the

median line is read off from the cleft of the buttocks, and recorded as displacement of shoulders to right or left of pelvis. 5. The lateral tilt of the pelvis, due to a short leg, to congenital deformity, or to functional shortening through flattening of the arch of one foot or relaxation of knee when bearing weight, may be measured by spotting the anterior superior iliac spines with the flesh pencil and then applying the scoliometer so that the longitudinal lines are horizontal as determined by level B; if the zero line is then adjusted to one of the anterior superior spines the relation of the other to it is determined and any tilting present is discovered and measured. 6. By holding the scoliometer at the side of the patient it is possible to measure and to record antero-posterior curves with a fair degree of satisfaction in many cases, though the apparatus is not especially adapted to this purpose. 7. With the scoliometer in a horizontal position the difference in levels of shoulders can be instantly measured. The observer should stand in front of the subject. A number of other applications of the scoliometer are feasible as, for example, measuring the lateral or antero-posterior deviation of the head, the level of the eyes, and the horizontal and vertical position of the arms.

### Medical News.

November 25.

- 15 \*Treatment of Bronchitis in Children. J. E. Winters, New York.
- 16 \*Piezometer for the Accurate Determination of Abdominal Rigidity. T. W. Kilmer, New York.
- 17 Perforation of an Ulcer of the Duodenum, with Remarks on the Diagnosis and Treatment of this Affection. C. G. Cumston, Boston, Mass.
- 18 Care of the Aged and the Infirm in the Tropics. M. G. Y. Martinez, Manila, P. I.
- 19 Substitution of Drugs in the Dispensing of the Physician's Prescription. W. J. Cruikshank, Brooklyn, N. Y.
- 20 A Phase of the Yellow Fever. L. O'Connell, Washington, D. C.

15. **Treatment of Bronchitis in Children.**—Winters says that the treatment of bronchitis in children necessitates intimate acquaintance with the structure of the bronchi, and with every alteration in this structure at each step and every hour of the morbid process. The child should be placed in a crib—never on a bed. The crib should be flannel lined and should be in the center of the room—never near a wall, window or door. Sometimes it becomes necessary to place screens about the crib to avoid draught. Light flannel should envelop the child's body, arms and legs. This, says Winters, comprises nine-tenths of the treatment to be adopted in a case of moderate severity. In severe cases the drug recommended by him is aconite, to be given in water only, in small (less than one drop) doses, repeated often. Intestinal elimination, diaphoresis, aconite and sweet spirits of niter are the febrifuge measures employed by Winters. Coal-tar derivatives he considers contraindicated. Cold applied to the cutaneous capillaries he says is unphysiologic, pernicious and conducive to extension. It is wrong to give stimulating expectorants. When the secretion becomes excessive, the child should be kept in the prone position to secure gravitation of the secretions. Emetics may be given. Oxygen inhalations should be continuous—even during sleep. These measures Winters supplements with mustard packs and maximum doses of spirits of camphor and carbonate of ammonia. He has found castor oil, in 10-minim doses a most efficient remedy for the harassing cough in inflammation of the upper respiratory passages. In older children in whom the irritation of coughing superinduces nervous irritability, small doses of codein may be given. [This drug should be used cautiously in children.—Ed.] He discountenances the use of steam inhalations on the ground that they increase the susceptibility to cold, to catarrh of the larynx and bronchi—catarrhal croup.

16. **Determination of Abdominal Rigidity.**—The instrument devised by Kilner apparently is identical with the one invented by H. A. Kelly of Baltimore, and described in the *Johns Hopkins Hospital Bulletin* of September, 1904. Kelly called his instrument a piezometer.

### New York Medical Journal.

November 25.

- 21 \*Significance and Management of Chronic Uterine Hemorrhage. G. E. Shoemaker, Philadelphia.
- 22 Appendicitis in Children. C. C. Barrows, New York.
- 23 Observations on Heart Disease, Especially Among the Negroes. C. R. Grandy, Norfolk, Va.
- 24 \*Scopolamin-Morphin-Chloroform Anesthesia. M. K. Isham, Cincinnati, Ohio.



- 25 \*Scopolamin as an Anesthetic. H. C. Sharp, Jeffersonville, Ind.  
 26 Nephritis and Hematuria. H. A. Fowler, Washington, D. C. (To be concluded).  
 27 Fatal Fat Embolism Following Impacted Fracture of the Cervix Femoris. B. Robinson, Chicago.

21.—See abstract in THE JOURNAL, Nov. 4, 1905, page 1437.

24. **Scopolamin-Morphin Chloroform Anesthesia.**—Isham recommends the injection of scopolamin hydrobromid 1/100 gr. and morphin hydrochlorid 1/6 gr., preliminary to operations requiring a long anesthesia, and also even before short operations when the patients are very nervous, excitable, and either suffering great pain before, or liable to suffer after the operation. The literature is reviewed and additional cases are cited.

25. **Scopolamin as Anesthetic.**—Sharp says that if scopolamin deserves a place among anesthetics it is without doubt in combination with chloroform. The inconstancy of its action renders it impracticable when used alone or with morphin. In fact, continues Sharp, it is doubtful if it would ever produce anesthesia when given alone on account of the extreme restlessness which is present unless morphin is given. While scopolamin may not prove to be the ideal anesthetic, it is without doubt worthy of further investigation, and Sharp believes that with improved technic it will show itself to be an improvement over the present methods. The method of procedure adopted in 3 cases is described in detail.

St. Louis Medical Review.  
 November 25.

- 28 Curiosities of Aneient Japanese Medicine. J. Knott, Dublin, Ireland.

New Orleans Medical and Surgical Journal.  
 November.

- 29 Gonorrhœal Conjunctivitis in the Adult and in the Infant. H. D. Bruns, New Orleans.  
 30 Fracture of the Lower Extremity of the Radius. C. J. Gremillion, Alexandria.  
 31 Plea for the More General Use of Electrotherapeutics. A. Granger, New Orleans.  
 32 Tetanus Following Wounds Inflicted by the Explosion of a Gigantic Firecracker. F. M. Thornhill, Arcadia.  
 33 Pathology of Yellow Fever. P. L. Pothier.  
 34 \*Treatment of Yellow Fever. L. F. Solomon.

34. **Treatment of Yellow Fever.**—Solomon asserts that no one stricken with yellow fever should die unless there existed, previously, disease of the heart or of the kidney. He outlines his treatment as follows: The first step necessary is the administration of a large saline purgative, preferably sodium sulphate. This thoroughly cleanses the entire intestinal tract. It is not necessary to give calomel or any purgative, because the sodium sulphate, in addition to its flushing power, also acts as a cholagogue. Often when the patient is seized with the attack there is undigested food in the stomach. If this occurs a short time after eating the patient will vomit and empty the stomach of food. If the seizure comes on three or four hours after a meal, and there is still some undigested food in the stomach, there will be nausea. In such cases Solomon states that it is well to give minute doses of calomel for the purpose of quieting the stomach, so that the sodium sulphate will not be rejected. For this purpose the following combination is the best adapted to the purpose: A powder consisting of 1/4 grain of calomel with 1 grain of ingluvin. This is to be repeated every twenty minutes until four are taken, and then followed in half an hour with one-half or one ounce of sodium sulphate dissolved in a glassful of water. Very frequently the intense headache accompanying the onset of the attack will be relieved after the administration of the saline. If not, relief can be obtained by the old-time hot footbath. One hour after the administration of the purgative, and without necessarily waiting for its action, Solomon begins the administration of the following prescription:

R. Potassi nitratis.....3i    4|  
 Liq. ammoniæ acetatis.....℥iiss    105|  
 Syr. aurant. flor.....℥iv    16|

The adult dose of this mixture is half an ounce, repeated every two hours during the continuance of the fever. The liquor ammoniæ acetatis is administered in conjunction with the potassium salt for its action on the skin, as it causes free diaphoresis, thus favoring elimination. The potassium nitrate in addition to its specific effect as on antitoxin, also acts as a

prophylactic diuretic. Within a few hours after beginning the administration of the above mixture the temperature, no matter how high at the outset, will begin to decline and will decline progressively until the end of the third day, when convalescence will begin.

Archives of Pediatrics, New York.  
 October.

- 35 \*Stenosis of the Pylorus in an Infant. J. C. Griffith, Philadelphia.  
 36 \*Two Operative Cases of Pyloric Stenosis in Infants. T. M. Rotch and M. Ladd, Boston.  
 37 \*Study of Leucocyte Counts in Fifty Cases of Bronchopneumonia, Lobar Pneumonia and Empyema in Children. H. Heiman, New York.  
 38 Feeding Chart for Infants and Its Educational Advantages. C. Douglas, Detroit.  
 39 \*Infection with Scarlet Fever Through Open Wounds. C. Herrmann, New York.  
 40 Infant Mortality in Michigan and Detroit, with an Inquiry Concerning a Normal Infant Mortality. H. M. Rich, Detroit.  
 41 Starvation Diet. E. L. Coolidge, New York.

35. **Stenosis of the Pylorus.**—Griffith reports a case of this kind occurring in an infant on the sixteenth day after birth, the obstruction evidently being chiefly spasmodic, although the obstruction was probably increased by the swelling of the mucous membrane caused by the irritated state of the whole gastrointestinal tract. The child was treated symptomatically and made an uneventful recovery.

36. **Id.**—Rotch and Ladd report 2 cases. One patient was three weeks old. A diagnosis of pyloric stenosis was made from the clinical picture and immediate operation advised. On opening the abdomen the stomach was found dilated to about the size seen in a normal infant of three months, and at the pylorus was situated an oval solid tumor approximately ¾x¾ inches in diameter. A posterior gastroenterostomy was made with clamps and suture, a jejunal loop being used. The child recovered from the operation, and one year later was in good health and of normal development. The second patient was four weeks old. The pylorus was firm, making a mass about one inch long by three-eighths of an inch in diameter. The obstruction was complete. The lowest anterior portion of the stomach was withdrawn from the abdomen and seized with clamps; the jejunum being too small to clamp, was seized with hemostatic forceps, at a portion farthest from the mesentery, and approximated to the stomach. A running stitch, including the peritoneum and muscles, was carried along the posterior approximated surfaces. An elliptical piece of the stomach was incised and a longitudinal slit was made, cutting the duodenum in front of this stitch; a continuous silk stitch was carried around, uniting these openings, and passing through all the layers. The posterior stitch was then continued around through the serous and muscular coats, in front of the deep layer of stitches and tied at the starting point. The clamp and walling-off gauze were then removed and the area washed with salt solution. The stomach and the jejunum were returned to the abdomen. The omentum was tucked around the area. The incision was then closed with interrupted silk-worm stitches through the entire abdominal wall. The patient died on the fourth day after the operation from exhaustion.

37. **Leucocyte Counts in Pneumonias of Children.**—Leucocyte counts were made by Heiman in 19 cases of bronchopneumonia occurring in children from 10 months to 5½ years. The highest leucocyte count taken during the height of the illness was 73,000; the lowest, 12,600. There were 12 recoveries and 7 deaths. In the former all the counts during the first few days of the illness were high, while toward the end of the illness the counts were low except in two cases, one being complicated by mastoiditis and the other by tonsillitis. All the 7 fatal cases gave high counts early in the disease; shortly before death the counts in 4 of these cases were markedly diminished, while they remained high in 3 cases. Heiman also studied 24 cases of lobar pneumonia occurring in children varying in age from 2½ to 9 years. The highest count, while the pneumonia was active, was 55,800; the lowest, excluding a post-typhoid case and a case of pleurisy, was 20,200. There were only 2 fatal cases, and in both a well-marked leucocytosis was present during the height of the disease, while just before death a marked drop in the leucocyte count was noted. In 7 cases of empyema studied there was a marked leucocyto-



sis at the onset. There were 6 recoveries and 1 death; the fatal case gave the highest blood count at the onset of the disease and the highest terminal count. Heiman found that the leucocytosis in the bronchopneumonia is independent of the amount of lung involved, nor does the degree of leucocytosis stand in any relation to the height of the temperature. Though there are some exceptions, the general rule in bronchopneumonia is that failure of the leucocyte count to drop when the pulmonary signs disappear indicates either a complication or a fatal termination of the illness. A constant and considerable leucocytosis may regularly be expected in the lobar pneumonia of children. The degree of leucocytosis is about the same as in bronchopneumonia, but differs in that the white count is higher when the pulmonary involvement is greater. An increasing leucocytosis is the general rule in the lobar pneumonia of children, reaching the maximum just before the crisis. While failure to drop before the crisis may indicate a complication, yet this may be of no special significance. In general, Heiman says, the diagnostic value of the leucocytosis in the pulmonary affections of children is limited. In certain instances, however, the leucocyte count is of great diagnostic aid. When, for example, in lobar pneumonia, resolution and the drop in the leucocytosis has occurred, and there are present signs exciting suspicion that empyema will be a sequel, blood counts should be made frequently at regular intervals. A sharp rise in the count, provided that other causes of leucocytosis can be excluded, is then strong presumptive evidence of a supervening empyema.

**39. Infection in Scarlet Fever.**—Herrmann summarizes his paper as follows: 1. Cases of scarlatinal infection through open wounds have the following characteristics—(a) the period of incubation is short; (b) there is a characteristic change in the appearance of the wound following infection; (c) the neighboring lymph nodes become enlarged; (d) the rash usually (but not necessarily) begins at the point of inoculation; (e) the throat symptoms are mild, there is no exudate or marked involvement of the submaxillary glands; (f) after the rash has reached its height the wound improves rapidly in appearance; (g) desquamation usually (but not necessarily) begins around the wound. 2. Extrabuccal infection with scarlet fever is probably more frequent than is generally supposed. It should be looked for in cases in which (a) the period of incubation is unusually short; (b) those in which the throat symptoms are slight; (c) cases in which the rash makes its first appearance in an unusual location. 3. All children exposed to scarlatinal infection should have open wounds (including vaccination) covered by a protective dressing. 4. The period of incubation in scarlet fever depends on (a) the virulence of the contagious material; (b) the receptivity of the individual; (c) the portal of entry of the infectious material. 5. An individual who is immune to infection in the ordinary way may contract the disease by direct inoculation.

#### Journal of Cutaneous Diseases, New York.

October.

- 42 Epithelioma of the Forehead Having Its Origin in a Papillary Nevus. J. F. Schamberg and R. Hirschler, Philadelphia.
- 43 \*Small Multiple Kerion: An Unusual Type of Tricophytosis. J. F. Wallis, Philadelphia.
- 44 Clinical Aspect and Treatment of Pompholyx. F. J. Leviser, New York.
- 45 \*Mycosis Fungoides and the X-ray. A. J. Markley, Cincinnati, Ohio.

**43. Tricophytosis.**—Wallis cites 10 cases occurring in girls ranging in age from 8 to 17 years. In each case pediculosis was present, and in nearly every instance an existing cutaneous eruption was attributed originally to the pediculosis, which was later shown to be erroneous. The clinical appearance presented was similar in each case of the series; the primary folliculitis followed by pustulation, then by rupture and scar formation with temporary alopecia, followed by restoration of hair, the cycle being repeated in many instances. Particularly characteristic was the recurrence of the lesions on sites of previous lesions. Another feature especially distinctive was the appearance of the black dots at the margins of the lesions, representing the broken-off stumps of diseased hairs. Microscopic examination of the hairs and cultures taken from them demonstrated the presence of ringworm fun-

gus. The microscopic examination, the growth in cultures and the complete recovery without the destruction of hair follicles, producing permanent baldness, is conspicuous. Wallis concludes, in view of these histories and observations, that these were cases of an unusual type of tricophytosis previously neglected and unrecognized by reason of the associated pediculosis capitis. This series of cases also serves to emphasize the necessity of careful microscopic examination in all scalp conditions.

**45. X-Ray in Mycosis Fungoides.**—Speaking of the treatment of mycosis fungoides, Markley says that in the x-ray we possess the most active agent for relieving the tortures and symptoms of this hitherto incurable disease. The history of one case is cited in which the affection involved practically the entire body. The treatment with the x-ray was begun at once, using a soft tube at a distance of eight inches, exposing each area five minutes, making about twelve different exposures at each seance and two seances a week at first. In addition, mild and soothing antipruritic lotions were prescribed. At the end of six weeks practically all the patches had disappeared, and the skin was soft and smooth but very deeply pigmented. The general condition of the patient improved rapidly, as did also her appearance.

#### Journal of Nervous and Mental Diseases, New York.

October.

- 46 Case of Cerebral Tumor Presenting Confusing Symptoms. F. R. Ray, St. Louis.
- 47 Mysophobia. J. Punton, Kansas City, Mo.
- 48 \*Acute Anterior Poliomyelitis in a Youth. T. A. Hoch, Worcester, Mass.
- 49 Anesthesia Associated with Hyperalgesia Sharply Confined to Areola-Nipple Area of Both Breasts, A New and Apparently Constant Stigma in Hysteria. W. W. Graves, St. Louis.

**48. Acute Anterior Poliomyelitis.**—Hoch holds that anterior poliomyelitis is the result of a primary inflammatory disease of the blood vessels of the cord which may be thrombotic or embolic. The destruction of the ganglion cells is secondary and depends in part on the deficient blood supply of the diseased area and in part on pressure and toxins. The pathologic changes occurring in poliomyelitis of children and adults are apparently identical and dependent on similar causes. There is sufficient evidence at hand to consider the disease as a rule of an infectious nature, not depending, however, on a specific micro-organism, but resulting from bacterial infections of various kinds and at times from other poisons. The inflammatory changes are present in the peripheral vessels as well as in the branches of the anterior spinal artery, though these changes are seldom visible until the vessels enter the gray matter. The inadequate collateral circulation within the anterior horns is favorable for sluggish circulation and embolism.

#### Interstate Medical Journal, St. Louis, Mo.

October.

- 50 Treatment of the Acidotic and Sugar States from Traumatism. G. F. Butler, Chicago.
- 51 \*Clinical Study of the Diagnosis of Urinary Calculus. B. Lewis, St. Louis.

**51. Diagnosis of Urinary Calculus.**—Speaking of the value of the Roentgen ray in the diagnosis of urinary calculi, Lewis says that the examination is painless, requiring neither local nor general anesthesia. There is no danger from traumatism or infection, and the danger from burn is practically nil. Not only does the skiagraph show the exact location of the stone, it also shows the number of stones present. It does away with the necessity of doing an exploratory operation for diagnostic purposes. It differentiates calculous nephritis from other conditions in neighboring organs, and the negative diagnosis is as accurate as the positive, except in very stout patients. The percentage of error in all cases skiagraphed has been less than 3 per cent., and in the majority of cases in which there were erroneous negative diagnoses the calculi were so small that they passed without surgical interference.

#### American Practitioner and News, Louisville, Ky.

October.

- 52 Hyperchlorhydria. C. G. Lucas, Louisville.
- 53 Optical Aphasia. J. J. Moren, Louisville.
- 54 Exophthalmic Goiter, Basedow's Disease—Grave's Disease. G. B. Jenkins, Louisville.
- 55 \*Jequerty and Trachoma. P. R. Taylor, Louisville.
- 56 Ventrosuspension and Fixation of Uterus. C. W. Hibbitt, Louisville.



55. **Jequerity and Trachoma.**—Taylor uses jequerity in trachoma. The infusion, tincture or powder may be used. Taylor prefers the impalpable powder, which he dusts lightly on the everted lid. The eye is then closed for two or three hours with a light bandage. The application is always attended with severe pain, which usually becomes intense from three to five hours after the application. Swelling of the lids often occurs, and often extends to the forehead, cheek and nose, and sometimes the lips are swollen. Escharotics, silver nitrate, sulphate of copper, etc., with rollers, may be used in conjunction with jequerity, but the escharotics will produce greater destruction of normal tissue than the jequerity. Taylor has never lost an eye from the use of jequerity, but has had the swelling assume alarming proportions, and for this reason he never applies the powder until the patient is in an infirmary where the swelling can be best controlled. Out of 73 cases, in not a single instance has the result been disappointing, the patients being discharged in from six weeks to three months. Twenty-two cases were placed in the infirmary the second time from four to eight months after the first treatment and jequerity applied again with complete relief. [The United States Dispensary states that according to de Wecker the cold infusion, one part to twenty, has been used in chronic granular conjunctivitis, but is much too strong and is liable to set up violent conjunctivitis or keratitis.—Ed.]

#### Surgery, Gynecology and Obstetrics, Chicago:

October.

- 57 \*Establishment of Cerebral Hernia as a Decompressive Measure for Inaccessible Brain Tumors. H. Cushing, Baltimore.
- 58 Fibroma of the Gastrohepatic Omentum in the Lesser Peritoneal Cavity. J. B. Murphy, Chicago.
- 59 Dermoid Cysts of Intestine and Mesentery. W. Jepson, Sioux City, Ia.
- 60 \*Echinococcus Disease of the Heart. C. G. Grulee, Chicago.
- 61 Diagnosis and Treatment of Some Surgical Diseases of the Urinary Bladder. W. E. Lower, Cleveland.
- 62 Combined Malignant Tumors of the Female Genitalia. P. Findley, Chicago.

57. **Establishment of Cerebral Hernia for Inaccessible Brain Tumors.**—Cushing states that inasmuch as the symptoms accompanying brain tumor are due to the pressure effects of a slowly enlarging foreign body, it should be possible to relieve them by allowing the compressed brain to protrude through an artificial opening in the skull. In younger individuals this may occur through separation of the already fused sutures. Cushing has seen three instances of this kind. He says it would be a mechanically ideal treatment for cases of inaccessible tumor if in adult life it were possible to bring about such a dislocation of the sutures in the cranial vault. As this can not be done, recourse must be had to decompressive methods which are less perfect inasmuch as they do not so evenly distribute the compression. In order to control the growth of the cerebral hernia Cushing now makes the bone defect under the temporal muscle. The advantages are many. An oval opening may easily be made, about five or six by eight or ten cm. in its two diameters without freeing the muscular insertion at the temporal ridge. Being in a comparatively thin and relatively non-vascular portion of the skull, the bone is easily rongeuured away and the opening on one side alone is usually sufficient for decompressive purposes. Should it prove not to be, a bilateral operation of the same kind may be made. The denuded area of the cortex exposes, for the most part, the convolutions below the fissure of Sylvius, including only the very lowest part of the motor strip, so that, even in cases of extreme unilateral bulging, the greatest harm that would ensue would be from an implication of the center for the tongue, jaw and lower part of the face on the one side. The incision is entirely within the hair margin, and the degree of protrusion that may take place under the protection of the muscle may not be at all obtrusive. Cushing states that the results obtained by this method, which is described in full, have been most gratifying.

60. **Echinococcus Disease of the Heart.**—Grulee believes that his case was probably one of primary echinococcus disease of the heart with secondary infection of the lung. This is suggested (1) by the diffuse infection of the latter; (2) by the peripheral location of the cysts in the lungs; (3) by the inti-

mate connection of certain of the cysts with pulmonary vessels; (4) by the presence of daughter cysts in a cyst located in the right auricle, and (5) by the fact that an existing pulmonary tuberculosis was all on the right side, while the echinococcus cysts were about equally distributed between the two lungs. No trace of the echinococcus disease was seen in any other organs than the lung and heart.

#### International Journal of Surgery, New York.

November.

- 63 \*Uterine Curettage; Indications and Contraindications; Technique; Complications. E. E. Montgomery, Philadelphia.
- 64 Early Indications for Mastoid Operations. W. S. Bryant, New York.
- 65 Surgical Aspect of Cystoscopy and Ureter Catheterization. G. W. Jones, Keokuk, Iowa.
- 66 Perinephritic Abscesses in Children. G. R. Curran, Mankato, Minn.
- 67 Pathology and Operative Treatment of Cholelithiasis. C. G. Cumston, Boston.
- 68 Dangers Attending Neglect of the Ears During Scarlet Fever, Diphtheria and Measles. A. L. Bennett, Denver, Colo.
- 69 Uncommon Acute Infections with Surgical Treatment. S. E. Maynard, Burlington, Vt.

63. **Uterine Curettage.**—Montgomery says that uterine curettage is so pregnant with disastrous possibilities that it should only be essayed by one who is so skilled and trained in aseptic methods that he can protect his patient from danger of infection. The procedure in the most careful hands may be attended with perforation of a softened uterine wall. The occurrence of perforation does not of itself demand an abdominal section for closure of the opening, for in the great majority of such injuries the patients recover without any serious symptoms, but in case of injury of intestine from perforation and the dragging of a loop of intestine through the opening, or in the presence of sepsis, the peritoneal cavity should be opened by abdominal section in the first instance, and the injured intestine treated by suture or excision, as the lesion may demand, while in the second instance the section may be either abdominal or vaginal, as operator elects.

#### American Journal of Surgery, New York.

October.

- 70 Plea for the Early Routine Extirpation of all Neoplasms. B. Saunders, Ft. Worth, Texas.
- 71 Paraffin in Surgery. W. H. Lockett and F. I. Horn, New York.
- 72 Cystoscope and Ureter Catheter in the Diagnosis and Prognosis of Surgical Diseases of the Kidney. F. Bierhoff, New York.
- 73 History of Artificial Limbs. J. MacDonald, Jr., New York.
- 74 Cholecystitis. R. W. Hardon, Chicago.

#### Journal Mississippi State Medical Association, Vicksburg.

November.

- 75 Idiosyncrasies of Patients. L. L. Minor, Hollywood.
- 76 Therapeutic Evolution. H. Christmas, Tchula.
- 77 Tetanus Following a Gunshot Wound. C. C. Thompson, Columbia.

#### Southern California Practitioner, Los Angeles.

October.

- 78 An Historical Address, on College of Medicine of the University of Southern California. W. Lindley, Los Angeles.
- 79 Medical Education—Yesterday and To-day. G. MacGowan, Los Angeles.
- 80 International Society of Surgery. L. Willis, Los Angeles.
- 81 Famous Controversy Concerning the Use of Cantharides Internally. T. L. Cooley, Philadelphia.
- 82 Diseases of Women and Children. W. A. Edwards, Los Angeles.

#### Medical Examiner and Practitioner, New York.

October.

- 83 Hernia in Relation to Insurance. W. McA. Eccles and G. E. Gask, England.
- 84 Eye and Ear Work. W. Rider, Rochester, N. Y.
- 85 Medical Examiner and Life Insurance. A. S. McDaniel, San Antonio, Texas.
- 86 Syphilis Mortality. T. Solomonsen, Copenhagen.
- 87 Importance of the Early Recognition of Arterial Changes and of Chronic Vascular Hypertension in Relation to Life Insurance. W. H. Hitchcock, and D. Fulton, Los Angeles.
- 88 Insurance Feature of Labor Organization. W. B. Watts, Peoria, Ill.

#### St. Louis Courier of Medicine.

November.

- 89 Tumors of the Cerebellum. E. A. Babler, St. Louis.
- 90 Cancer of the Uterus. G. Gellhorn, St. Louis.

#### Archives of Otology, New York.

October.

- 91 Case of Double Mastoiditis with Extensive Involvement of the Zygomatic Cells. W. P. Brandegge, New York.
- 92 Secondary Anesthesia Hemiplegia as a Complication of the Mastoid Operation. W. G. B. Harland, Philadelphia.
- 93 Operative Treatment of Infective Sigmoid-Sinus Thrombosis. J. D. Richards, New York.



## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

November 11.

1. Exophthalmic Goiter and Its Treatment. G. R. Murray.
- 2 \*A Conception of Disease. F. Treves.
- 3 \*Treatment of Syphilis by Intramuscular Injection of Mercury. F. J. Lambkin.
- 4 Tropical Diseases. R. Boyce.
- 5 Nature of Tick Fever in the Eastern Part of the Congo Free State. J. E. Dutton and J. L. Todd.
- 6 \*Brubli's Disease (Splenic Anemia) with Special Reference to the Blood Changes Found. P. W. Bassett-Smith.
- 7 Two Cases of Febrile Tropical Splenomegaly (Kala-Azar) and a Suggestion. P. Manson.
- 8 Guinea-Worm and Its Hosts. W. M. Graham.
- 9 Tropical Diseases of the Skin. J. M. H. MacLeod.
- 10 \*Pinta. F. M. Sandwith.
- 11 Tropical Forms of Pityriasis Versicolor. A. Castellani.
- 12 \*Geographical Distribution and Etiology of Pellagra. L. W. Sambon.
- 13 Framboesia Tropica (Yaws). J. C. Graham.
- 14 Pian (Yaws) in French Indo-China. M. E. Jeanselme.
- 15 "Dhobie Itch" and Other Tropical Trichophytic Diseases. A. Castellani.
- 16 \*A Tropical Skin Disease. J. Bell.
- 17 Presence of Spirochetes in Two Cases of Ulcerated Parangi (Yaws). A. Castellani.
- 18 \*Involvement of the Scalp in Leprosy. G. Pernet.
- 19 Sprue and Hill Diarrhea. J. Cantile, A. Duncan, L. W. Sambon, D. J. Galloway, F. O. Stedman and others.
- 20 \*Diarrhea from Flagellates. A. Castellani.
- 21 Beri-Beri. J. T. Clarke, R. T. Hewlett, H. Wright, L. W. Sambon, D. J. Galloway and others.
- 22 Peculiar Schistosomum Egg. S. R. Christophers and J. W. W. Stephens.
- 23 \*Method of Taking Quinin in the Prophylaxis of Malaria. St. G. Gray.
- 24 Malarial Fever in British Central Africa. H. Hearsey.
- 25 \*Snake Bite, Treated Successfully by Local Applications of Potassium Permanganate. L. Rogers.
- 26 Blood Counts in Acute Hepatitis and Amebic Abscess of the Liver. L. Rogers.
- 27 Seven Cases of Liver Abscess Operated on Between July, 1904, and July, 1905. J. Cantile.

2. Conception of Disease.—Treves attempts to show that there is nothing preternatural in disease, that its phenomena or symptoms are marked by a purpose, and that that purpose is beneficent; that the processes of disease are aimed not at the destruction of life, but at the saving of it, and that its manifestations are the outcome of a natural effort for cure. He says that disease, as popularly realized, is not one of the ills that flesh is heir to, but one of the good gifts, for its motive is benevolent and protective. He says that he can not express this more concisely than by saying that if it were not for disease, in the popular sense, the human race would soon be extinct. A case is cited illustrating the beneficent effect of the inflammatory reaction which occurs following trauma. To the layman this suggests disease, when in reality the trauma probably would encompass the death of the patient if it were not for this inflammatory reaction. The inflammation which is dreaded so much by the laity is a benevolent process with one purpose, that of protecting the body, and one aim, that of cure. Without the protection of inflammation, says Treves, the human race could hardly survive a month. When inflammation does supervene, therefore, it is the surgeon's part to make it as tolerable to the patient as possible, and as soon as it becomes evident that Nature is intending to throw certain matters from the system, the surgeon, acting on that hint, opens an abscess or incises a tense swelling. He who grumbles about his cold, says Treves, is finding fault with a measure of relief to which he owes his life. What the patient may justly grumble at is the undoubted misfortune that he is the subject of bacterial infection, and he may also, with reason, complain of the discomfort incident to being poisoned; but it is hard to blame Nature for successfully defending him against the effects of this casualty. Methods of treatment whether carried out by Nature or by art, are seldom pleasant, but they are not blameworthy. The symptoms of a malady are in reality the expressions of a desperate attempt on the part of the body to fight the exciting cause of that malady. According to this conception Treves refers to appendicitis, malaria, Malta fever, diphtheria, tuberculosis and bubonic plague. Speaking of cancer, Treves speculates as to whether or not extracts or active principles taken from the glands that are active during the period of development in children, such as the thymus, would exert an influence late in life which they

seem to be intended to exert when growth is alert in the young. He wonders whether or not the introduction of the active principle of such a gland in a case of cancer would cause a disappearance of the tumor.

3. Intramuscular Injection of Mercury in Syphilis.—In all, 3,230 patients with syphilis were treated by Lambkin by the intramuscular method. They represented syphilis in all its various forms—slight primary abrasion, with indurated inguinal and cervical glands, followed by a roseolar rash; true Hunterian chancre, with glandular enlargements, followed by various rashes, papular, psoriatic, pustular, etc.; phagedenic chancre, rapidly destroying tissue, accompanied or followed by rupial and serpiginous ulceration, causing destruction to both soft and hard parts; the later sequelæ of syphilis being represented by paralysis, both local and general, from cerebral and spinal lesions, and also by many cases of tabes of undoubted syphilitic origin. The treatment necessitated some 60,000 intramuscular injections. Of this number about 10,000 consisted of injections of the soluble salts—calomel and the salicylate of mercury. The remainder—that is, 50,000—was made up of injections of metallic mercury. Most of these patients have been lost sight of, but 30 or 40, with whom Lambkin has been in touch for 10 or 15 years, have since married; none of them has had any return of the disease, nor has the offspring borne traces of hereditary taint. No injections were followed by abscess, nor by embolism or severe stomatitis. On the whole, he says, the success which he has obtained from the intramuscular method of treating syphilis is out of all proportion to that which was obtained in days gone by when using older methods. The remainder of the patients (230) were treated in the last four months. They have all done well.

6. Splenic Anemia.—Bassett-Smith, in an attempt to establish a relationship between splenic anemia and affections in which the Leishman-Donovan bodies are found, investigated 2 cases. As a result of these observations he concludes that splenic anemia is not due to any parasite, but belongs to that class of cases which come under the term of "tropical splenomegaly" in which the Leishman-Donovan bodies play an important rôle.

10. Pinta.—Under this name Sandwith describes a tropical disease caused by a fungus which produces various discolorations on the uncovered parts of the skin and sometimes on the mucous membranes. It is also known as spotted sickness and *le caraté*. Dirt and poverty seem to be predisposing causes. The exciting cause is the *Trichophyton pictor* which produces what may be called an aspergillosis of the skin.

12. Pellagra.—Sambon calls attention to many analogies between pellagra and some of the protozoal diseases, and suggests that study of the prevention of pellagra be made in the direction of its being caused by an animal parasite.

16. Tropical Skin Disease.—The disease described by Bell occurs in the form of a large circular patch on the side of the foot, about the size of the palm of the hand, red and irritable in the center, with circular edges undermined, and burrowed in places. It is caused by the *Rhizoglyphus parasiticus*. Treatment with 4 per cent. formalin in glycerin produces immediate results.

18. Involvement of Scalp in Leprosy.—Pernet cites 2 cases in nodular leprosy in which the scalp was involved. The diagnosis of the infiltrations of the scalp rested on clinical grounds alone, but Pernet is convinced of its correctness. There was no certain basis on which to make a diagnosis of syphilis.

20. Diarrhea from Flagellates.—Castellani reports 2 cases of severe diarrhea caused by several varieties of flagellates, such as the trichomonata, cercomonata, *Entamoeba undulans* and the *Lambia intestinalis*. The affection yielded to the injection of a solution of methylene blue, using three pints at a time.

23. Quinin Prophylaxis of Malaria.—The method of taking quinin recommended by Gray is based (a) on the fact that the life cycle of the parasites is nearly always forty-eight hours, and (b) that eight or ten days must elapse after infection before they become sufficiently numerous in the blood to cause an attack of fever. Hence it follows, says Gray, that if



a full dose of quinin (10 or 15 gr.) be taken on two successive days, with an interval of eight or nine days before the next two doses are taken, the parasites will always be destroyed before they can cause fever. The method has proved as efficacious as the five-grain-a-day plan, with the advantages that there is one week when the individual is not taking any quinin at all (which is fully appreciated by those who are susceptible to the unpleasant effects of the drug) and less than half the quantity is used.

25.—See ¶35, this issue.

The Lancet, London.

November 11.

- 28 Chips from a Surgical Workshop. H. Marsh.
- 29 \*Parathyroid Glands in Exophthalmic Goiter. L. Humphry.
- 30 Case of Xanthoma Diabeticorum. W. J. Procter.
- 31 Abscess of the Spleen in Enteric Fever. A. W. Harrington.
- 32 \*Extraordinarily Rapid Diminution of Renal Dropsy Under Citrate of Caffein. H. D. Rolleston and J. Attlee.
- 33 Acute Gastric and Duodenal Ulcer. R. E. Sedgwick.
- 34 \*Ectopic Gestation which Apparently Ruptured Twice. J. C. H. Leicester.
- 35 Epidemic of Dysenteric Diarrhea. T. Orr.
- 36 Ready Method of Differentiating Streptococci and Some Results Already Obtained by Its Application. M. H. Gordon.

29. **Parathyroids in Exophthalmic Goiter.**—Humphry urges that in fatal cases of exophthalmic goiter, of myxedema, of tetany in children, and in cases of death following operations on the thyroid gland, the parathyroids should be examined carefully, for the purpose of ascertaining whether or not there is evidence of any pathologic change. In 2 cases of exophthalmic goiter examined, Humphry found that in the parathyroids there were gross changes consisting of extensive infiltration of fat between the columns of gland cells; in fact, the gland tissue was largely replaced by fat. In two other cases the same process was found, but only in the beginning stages. Humphry also examined the parathyroids microscopically in 18 cases of death from various causes—namely, accident, tubercle, pneumonia, Addison's disease, bulbar paralysis, Bright's disease, diabetes, leukemia, cancer, convulsions and old age. The ages of the patients were from 1 year to 71 years; 12 were female and 6 were male. Twelve were between the ages of 1 and 50 years; the parathyroid glands in these appeared normal, with the exception of one. The gland tissue was compact and practically free from the infiltration of fat; the arrangement of the cells showed instances of the different types of gland tissue. The one exception was from a girl, aged 14 years, who died from burns. The parathyroid in her case showed some excess of fat and she was found to have an enlarged thymus weighing 18 grams. The thyroid appeared to be normal, but was not examined microscopically. Of 6 patients whose ages were from 50 to 72 years, 4 showed well-marked fatty infiltration of the parathyroids; the one most affected was from a case of diabetic coma in a man aged 60. Humphry suggests that the parathyroid gland may have an important function to perform, one that is independent of the thyroid function, and that disturbance of this function may stand in some relationship to the various diseases investigated, especially exophthalmic goiter.

32. **Caffein in Renal Dropsy.**—After all other methods to relieve the edema had failed, Rolleston and Attlee administered citrate of caffein,  $7\frac{1}{2}$  grains three times a day, for twenty-five days, when the dose was gradually diminished until it was discontinued entirely about eight days later. The effect of the caffein was manifested almost at once, the urine increasing in amount with a proportionate lessening and final disappearance of the edema.

34. **Twice Ruptured Tubal Pregnancy.**—Leicester cites this case to illustrate the difficulty of diagnosing a ruptured tubal pregnancy when the symptoms are vague and indefinite, pointing toward abdominal disease rather than to the actual condition.

Indian Medical Gazette, Calcutta.

October.

- 37 Anti-Malarial Measures—Ancient and Modern. H. Hamilton.
- 38 \*Snake-Bite Treated by Incision and Application of Permanganate of Potash. L. Rogers.
- 39 Report on the Epidemic of Plague in Hughli-Chinsura Municipality, January to May, 1905. D. G. Crawford.
- 40 Varieties of Bubo Met in Bubonic Plague and the Rational Treatment of Each Kind. E. F. G. Tucker.

- 41 Treatment of Cataract in Children. H. Smith.
- 42 Significance of the Pyriform and Globular Bodies Present in the Circulation and Organs in Various Forms of Disease. A. Lingard.

38. **Permanganate of Potash for Snakebite.**—Rogers treated 12 cases of snakebite with potassium permanganate, according to the method proposed by Lauder Brunton. In 4 cases the treatment was commenced at once; in 3 cases a full half-hour elapsed before it was commenced, but in two of these a ligature had been applied shortly after the infliction of the bite. In 3 other cases three-quarters of an hour, one hour and four hours respectively elapsed before treatment was begun, but it still proved successful in saving the life of the patient. Only 2 of the 12 patients died. In the majority of cases the snake inflicting the wound was a cobra. The 2 patients who died did not come for treatment until nine and eleven hours respectively after having been bitten.

Annales des Mal. des. Org. Gen.-Urin., Paris.

Last indexed XLIV, page 139.

- 43 (XXIII, No. 5.) \*Etude clinique sur la pathogénie et la sémiologie de l'albuminurie. E. Lancereaux.
- 44 (No. 6.) La séparation endo-vésicale des urines. Sa valeur au point de vue du diagnostic de l'état anatomique et fonctionnel du rein. T. Tuffier and A. Mauté.
- 45 \*Palpation Through the Rectum.—Le toucher rectal. Moyen de diagnostic et de traitement dans l'urétrite blennorrhagique aigue. P. Lebreton.
- 46 Des uréthrites aigues non-gonococciques. T. Vannod (Berne).
- 47 Electrolysis in Treatment of Stricture of Urethra.—De l'électrolyse dans le traitement des rétrécissements de l'urètre. Alcaide (Valencia).
- 48 (No. 7.) Les affections tuberculeuses des reins (of kidneys). L. Bernard.
- 49 Dispositif nouveau pour redresser les images cystoscopiques (to straighten cystoscope picture). P. Denis (Brussels).
- 50 (No. 8.) Fistules rénales consécutives à la nephropexie. F. Gardner (New York).
- 51 Quelques mots sur l'onanisme. C. Féré.
- 52 La rachistovainisation dans les maladies des voies urinaires. P. Héresco and L. Strominger.
- 53 Indications réciproques du cathétérisme et de l'intervention chirurgicale dans l'hypertrophie prostatique. L. Charrasse.
- 54 (No. 9.) Sur le traitement des prostatiques en rétention incomplète chronique aseptique avec dilatation de la vessie Nicolich (Trieste). See page 588 of volume XLIV.
- 55 (No. 10.) \*L'anastomose intertesticulaire après la section d'un canal déférent. G. Gatti.
- 56 Sur 2 cas de calculs du rein (kidney). Oraison.
- 57 Traitement de l'arthrite aigue blennorrhagique du genou par les injections intra-articulaires de sublimé (in knee). L. Galliard.
- 58 (No. 11.) Diverticule vésical d'origine probablement traumatique sans obstacle à l'émission de l'urine. Serrallach.
- 59 (No. 12.) Un nouveau électro-cystoscope. W. K. Otis (New York).

43. **Albuminuria.**—Lancereau distinguishes three types of albuminuria, according to the epithelial, vascular or nervous origin. The prognosis varies with each type. It is very serious when the secreting epithelium of the kidney is destroyed, and favorable when the elements are still capable of recuperation. The prognosis is grave also in albuminuria of vascular origin, due to kidney lesions, with a constant and progressive tendency. Albuminuria of nervous origin scarcely modifies the general health; it is not accompanied by attacks of uremia, except under the rarest circumstances, and a complete cure may be obtained. Treatment should vary for these types. In the epithelial form it should be directed to restoring the epithelium to normal and to getting rid of the obstructing debris. After failure of other measures he has sometimes had the urine increase from a half pint to a quart or two quarts or more in 36 hours under the influence of from 6 to 10 drops of tincture of cantharides taken during the day in a mucilaginous julep. Raw milk also favors the diuresis in these conditions. In albuminuria of vascular origin, the aim is to act on the vessels, and the best remedy he has found to date for this purpose is from 1 to 3 gm. of sodium or potassium iodid in 24 hours. Milk is not so important here as in epithelial albuminuria, and need not be ordered except in case of an uremic attack. In albuminuria of nervous origin, the antispasmodic remedies are indicated, with hydrotherapy, an alcohol sponge on rising, and tepid, alternating hot and cold or even cold douches have proved beneficial in his experience. The diet is of importance, because there is generally dyspepsia in young and glycosuria in older subjects. He forbids wine and acids to the younger patients and puts the older ones on a diabetic diet, substituting potatoes for bread. His experience has been very gratifying with treatment along these lines, but in case of an attack of uremia he resorts at once to drastic diuretics and purgatives with the utmost energy, allowing no food but



milk sipped slowly every two hours, with tea and coffee if craved. In the nervous type of albuminuria, the amount of urine approximates normal, the tint is reddish or slightly yellowish. It never has the pale, skim-milk tint of the vascular type. The density ranges from 1015 to 1020, and it is not more abundant during the day than at night. The albumin precipitates in small flakes and may range from 0.5 to 2 or 3 gm. or more in the 24 hours. The albuminuria may be continuous or intermittent, orthostatic or cyclic. The general health is influenced but little. The microscope shows no casts nor epithelial cells in the urine, or, at most, only a few leucocytes and rare crystals of uric acid or calcium oxalate. This form of albuminuria is frequently associated with glycosuria, but the albuminuria does not continue a progressive course. It may cease abruptly or persist indefinitely. Generally curable and mild, this type of albuminuria still exposes, under certain conditions, to uremic accidents, as after getting chilled or exhausted or during the decline of some infectious disease. Energetic, appropriate treatment generally restores conditions to normal, but individuals presenting nervous albuminuria are, as a rule, less resistant to diseases than normal persons and succumb more readily, especially if they are at the same time glycosuric. Consequently their hygiene should always be supervised.

**45. Palpation Through Rectum in Urethritis.**—Lebreton presents numerous arguments to demonstrate that rectal palpation is one of the best, if not the best, means to detect a latent posterior urethritis. It is also an important therapeutic measure in this case, as massage and "expression" of the prostate, through the rectal walls, aid materially in the cure of lesions in this region. If the pressure of the finger on the prostate does not elicit pain, then massage should not be done, as the gland is yet sound. Massage is also contraindicated when the pressure is painful only along the median line, showing that the prostatic urethra is the only part involved. Massage under these conditions would only serve to spread inflammation to hitherto sound parts. On the other hand, massage is indicated whenever the lateral lobes are sensitive to pressure, regardless of the degree of painfulness. Massage should always be preceded by filling the bladder so that the liquid flowing out afterward will sweep out the debris resulting from the manipulations. In case of an actual abscess, massage is contraindicated until after the abscess has been evacuated, as it might induce perforation into the rectum or urethra. Evacuation through a transverse perineal incision is preferable, followed by massage.

**55. Intertesticular Anastomosis.**—Gatti says that degenerative processes follow when one testicle is grafted on the other, unless the manipulations have been extremely gentle. He has found it possible to make an anastomosis between the testicles after severing one vas deferens, thus insuring an outlet for its secretions. When this was done with the minimum of traumatism, the parts healed without degenerative processes and normal function was retained. There is only a very slight proliferation of connective tissue when the operation is done without resection of gland tissue. Anastomosis between the testicles should be advised in case of operative or traumatic lesions of the vas deferens of a sound testicle, but not after epididymectomy for tuberculous epididymitis. Gatti has had excellent results from this intertesticular anastomosis on dogs, and thinks that the conditions will prove much more favorable in man. He incises the tunica vaginalis and the tunica albuginea in the form of an X and then turns back the four triangular flaps made by this incision. The denuded surface of the two glands thus exposed by the turning back of the flaps is lightly freshened with a sharp knife, and they are held in contact with a stitch at each corner. The article is illustrated. (Mauclair's experience in engrafting an atrophic testicle on its sound mate was mentioned in THE JOURNAL, 1903, page 62 of volume xl.)

Bulletin de l'Acad. de Médecine, Paris.

60 (Year LXIX, Nos. 33-34.) \*Flies and Cholera.—Mouches et choléra. A. Chantemesse and F. Borel.

60. Flies and Cholera.—Chantemesse comments on the fact that more than a million and a half of victims have succumbed to cholera in the last four years. The disease spreads by transportation to long distances, by propagation from city

to city and by dissemination from house to house, from individual to individual. Transportation of the contagion to long distances in merchandise is of such rare occurrence, he says, if it occurs at all, that prophylactic measures in this line would be worse than the danger to be feared. If the contagion could be transported in the goods and baggage of persons coming from infected countries, then the progress of cholera would have been entirely different. It would have followed the routes of navigation, and prophylactic disinfection, by the usual technic to date, would not have prevented this. The drinking water taken on board in an infected port would certainly infect the persons on the vessel during a long voyage if danger from this source were to be apprehended, but this is not the case. During the last four years the 4,000 ships returning from the Orient through the Suez Canal have brought 200,000 men in their crews and 500,000 passengers, and yet only 13 of the vessels have had cholera on board and only 29 persons were affected. Some of the persons were in the stage of incubation when they embarked, but in others the disease appeared from fifteen to thirty days after embarkation. These individual breakings out of the disease are extremely dangerous, and they are the only features to be feared in regard to the transportation of cholera to a distance. In one instance a ship from Java had a case thus break out twenty-nine days after leaving. If it had started from Bombay, the passengers would have been landed in France by the twentieth day, and the disease might thus have developed after the individual had been nine days on French soil. The maritime sanitary police are helpless in face of occurrences of this nature. The pathogenic microbes may lurk in the human organism without manifesting their presence. Gotschlich was sent, this summer, to Tor to examine the pilgrims returning from Mecca. Cholera did not make its appearance in Mecca this year, but he was ordered to examine the intestines of every pilgrim succumbing at Tor to any disease. He found cholera germs in several of the Russian and Turkish pilgrims from regions where cholera had been prevalent when they started on their pilgrimage. The identity of the cholera germs was confirmed by Gaffky, Köhler, Kolle and Meinicke, to whom they were sent for corroborative testimony. During the Mecca pilgrimage of 1905, no cases were observed which resembled cholera either clinically or in its pathologic anatomy, and yet several persons carried in their intestines for more than five months live cholera germs, capable of reproduction, and neither the bearers nor their neighbors developed cholera. The vibrios must have been very scanty or very much attenuated or a favorable opportunity for passing them to susceptible individuals must have been lacking. Recent data suggest that the limit of latent microbism of this kind is six or seven weeks at most. For this latent microbism to be still active after thirty days it seems to be necessary for the bearers of the bacilli to find some environment where filth or other conditions cause the revival of the attenuated microbes. Marseilles is only seventeen days from Bombay, and yet the town has never been infected by cholera arriving directly from India. Propagation of cholera from town to town is limited by the fact that three or four days of desiccation kill off the germs in baggage, clothing, etc. For this reason infected clothing arriving at Paris from India is not dangerous, while it would be extremely dangerous if it came from a town only a day's journey away. Flies can readily transmit the germs; their mouths, feet and intestines were found to harbor the vibrios in some tests which Chantemesse reports. Cholera is most fatal in the countries without sewerage, and it is there that flies most abound. The fly can not transport cholera to a distance nor propagate it from town to town, but it is a most powerful means of dissemination, and the dying down of epidemics in winter is due to the lesser number of flies. He concludes with the remark that in time of a cholera epidemic it might be well to placard the walls with the saying of an American writer: "It should be more of a disgrace for a housekeeper to have flies in her house than bedbugs in her beds."

Revue de Gynécologie, Paris.

Last indexed page 1367.

61 (IX, No. 5.) \*Hystérectomie abdominale avec évidement pelvien et recherche des ganglions pour cancer de l'utérus. A. Pollosson (Lyons).

62 \*Le sarcome de l'utérus. Symptômes. Diagnostic. Traitement. G. Piquand.



- 63 \*Traitement de l'infection puerpérale grave par la laparotomie ou la colpotomie, sans hystérectomie. L. Sourdilte.  
 64 De l'occlusion au niveau de l'angle collique gauche (left angle of colon). A. Nores (Cordova, Argentina).

61. **Abdominal Hysterectomy for Cancer.**—Pollosson relates the particulars of 32 cases of uterine cancer in which he operated by the abdominal route. He had previously preferred the vaginal route, but the ultimate results were unsatisfactory and he adopted Wertheim's technic. He removed the uterus and the tissues surrounding it in a single large mass. The ureters have to be detached from the mass first, and, when possible, transverse clamps should be applied to the vagina before cutting it. This prevents infection of the peritoneum. He gives the minute technical details of his operations and reviews the results. Several of his patients succumbed to intercurrent affections and a few did not survive the operation. Examination of the glands and tissues in these cases showed that all the diseased tissue had been unmistakably removed. In 23 cases in which he explored with his fingers, through the peritoneum, the glands of the region, he found them suspicious in 8 and removed them. In 4 of these the glands proved to be cancerous. In conclusion, the details of each of the 32 cases are given, and also a life-size photograph of the mass as removed from two patients.

62. **Sarcoma of the Uterus.**—Piquand discusses the symptomatology and diagnosis of sarcomata of the parenchyma, of the mucosa of the fundus and of the cervix. He has found 171 cases of the first group on record in which an operation was attempted. The operative mortality was 9.3 per cent. and recurrence is known in 29 cases. The ultimate outcome is not known in most of the others. In 36 patients with sarcoma of the mucosa seen a few months or years later, there had been recurrence in only 12 and 24 were in good health from one to eleven years after the operation. In 53 cases of sarcoma of the parenchyma, 28 of the patients were in good health from nine months to nine years after the operation. There are thus 52 permanent cures on record. In 19 cases of diffuse sarcoma of the mucosa, the uterus was removed in 16 and 3 of the patients are without recurrence from 17 to 26 months later, while 8 have not been followed and 4 soon succumbed. In 48 cases of sarcoma of the cervix, 3 patients died during the operation and recurrence was observed in 33. Only 12 are reported as cured, and the majority of these have not been traced since. The incomplete operations were always followed by recurrence.

63. **Laparotomy as Treatment of Puerperal Infection.**—Sourdilte has treated 4 patients with severe diffuse puerperal peritonitis by mere laparotomy or posterior colpotomy, and succeeded in saving 3 of them. Removal of the uterus is a serious operation, and its record to date in puerperal infection is the reverse of encouraging. The outcome proves it to be either a useless mutilation or else that the prognosis was inevitably bad. A mere laparotomy or colpotomy enables the exact condition of the parts to be ascertained and has direct healing value in itself. As it entails no shock, he urges that it should be done early in case of severe infection, without waiting for the woman to be touched by the wing of death, after failure of curetting or drainage of the uterus. Done systematically, in time, it would enable the condition of the uterus and adnexa to be inspected, and, if a threatening lesion were found, to have it removed while the patient's resisting powers were still able to cope with a major operation. He reports a number of cases in which laparotomy or colpotomy unmistakably saved the patients in diffuse puerperal peritonitis or postabortion infection, and urges the general adoption of laparotomy with drainage as the routine procedure in threatening puerperal infection. Several surgeons have published reports of successful cases of this kind, but no one before, he remarks, has advocated this as the systematic technic for treating serious postpartum or post-abortion infection. The entrance of air attenuates the virulence of the toxins and germs, especially the anaërobic, which, as a rule, are largely involved in puerperal infection. Dialysis is promoted and the drainage carries away the dialyzed morbid products.

Berliner klinische Wochenschrift.

- 65 (XLII, No. 38.) \*Habitus phthisicus und tuberkulöse Dyspepsie. B. Stiller.  
 66 \*Zum Verständnis der Wirkung der Röntgenstrahlen bei der Leukämie. J. Arneht.

- 67 Zur Frage der sogenannten atypischen myeloiden Leukämie. K. Helly.  
 68 \*Erfahrungen auf dem Gebiete der Therapie mit Röntgenstrahlen. M. Cohn.  
 69 \*Ueber prophylaktische Maassnahmen gegen die Diphtherie. P. Aaser.  
 70 \*Spectrum Test for Blood.—Ueber den Wert des Hämochromogenspektrums. A. de Dominici.  
 71 Zur Wirkung des Chlorbaryums und Barutins. H. Brat.  
 72 Immunisierungsversuch gegen Strychnin. H. Meier.  
 73 Zur physikalischen Therapie der Neurasthenie. A. Laqueur.

65. **Habitus Phthisicus and Tuberculous Dyspepsia.**—Stiller has found that the floating tenth rib, which he long ago proclaimed to be a sign of the asthenic habitus, is also a sign of a consumptive tendency. This kind of body supplies a predisposition to tuberculosis as well as to nervous dyspepsia. The individual whose build stamps him as a candidate for tuberculosis is also a candidate for nervous dyspepsia. This explains why tuberculosis is complicated with dyspepsia in from 70 to 90 per cent. of all cases. He has found that the degree of movability and the extent of the defect in the tenth rib is an index of the extent of the dyspepsia and nervousness. In extreme degrees, the ninth rib may be movable also and the eleventh and twelfth ribs may move much more freely than common. He has observed a number of cases in which apparently healthy individuals sank into a condition of severe dyspepsia, neurasthenia and emaciation in consequence of some trivial stomach or intestinal trouble—in one instance a tapeworm. They lost rapidly from forty to sixty pounds or more, and years were required to regain their former weight. Signs of gastropnoia or nephropnoia developed in most of them. Some constitutional disease or latent cancer seemed probable, but the rib stigma showed that the individual was hereditarily burdened with a tendency to dyspepsia and nutritional disturbances. Circumstances had been so favorable hitherto that he had kept at the highest limit until some accident upset him. In such cases there must be not only a lack of stability in the digestive, but also in the assimilating organs, probably due to participation of the intestinal sympathetic system in the asthenia of the central nervous system. This serious tendency is revealed solely and alone, he claims, by the rib stigma in an otherwise robust physical development.

66. **Roentgen Treatment and Leukemia.**—Arneht's experience and study of leukemia under Roentgen treatment have convinced him that this treatment reduces the consumption of the neutrophiles, eosinophiles and mast cells of the circulating blood. The extent of the reduction depends on the duration and intensity of the exposures, which may lead finally to far-reaching, although never quite complete, restoration to normal of the blood. The morphologic behavior of the blood cells shows that there can be no question of destruction of the circulating leucocytes or injury of the blood-forming organs under the influence of the rays. Roentgen exposures have an entirely different action on the sound and on the leukemic human organisms, as he explains in detail. He defines leukemia as the expression of an immense destruction of leucocytes and consequent constant demand for production of more, with some special stimulus for the hyperplastic development of the blood-forming organs. This stimulus may be some special property of the still hypothetical virus affecting these organs.

68. **Roentgen Treatment.**—Cohn summarizes his conclusions in the statement that in lymphatic and myelogenic leukemia the exposures may induce subjective well-being, and all the appreciable objective signs of the disease may also subside, but experience has shown that the symptoms return, on complete suspension of the treatment, after a longer or shorter interval. It is necessary, therefore, after an apparent cure has been realized from prolonged Roentgen treatment, to continue intermittent treatment, with one or two sittings each week. Still better prospects are offered in Roentgen treatment of pseudoleukemia and of sarcoma originating in the lymphatic apparatus. Canceroids, when not too extensive, are positively cured in a comparatively brief time. In superficial cancers of the face, Roentgen treatment deserves the preference over surgical on account of the absence of scarring. Prophylactic exposures after a cure has been obtained should be unconditionally advised. More radical treatment than Roentgen exposures are required for carcinomata infiltrating into the deeper tissues or covered with sound skin. He explains the lack of influence of the rays on the enlarged spleen in many cases as due to the



chronic hardening of the capsule. In exposing the spleen he uses excessively hard tubes, at a distance of from 10 to 20 cm., the sittings from ten to fifteen minutes long, once a day. To prevent dermatitis he orders the abdomen to be washed with a soft sponge and tepid water three times a day, and after each washing alcohol is rubbed into the skin to toughen it. At night, lanolin or other salve is rubbed into the abdomen. With these precautions he has never had any trouble from dermatitis, even when the total duration of the exposures was twelve hours without a pause. There is almost always slight transient redness of the skin after from eight to fourteen days, accompanied by itching, especially at night.

**69. Prophylaxis of Diphtheria.**—Aaser is convinced that preventive injections of serum are reliable for prophylaxis. He relates a number of instances in which incipient epidemics were aborted by preventive injections of antitoxin, even although exposed individuals were found to harbor diphtheria bacilli in their throats. As the immunity conferred does not last more than two or three weeks, he repeats the preventive injection after from two to four weeks if there is still opportunity for contagion.

**70. Hemochromogen Test for Blood.**—De Dominicis reaffirms the extreme simplicity and reliability of his test for detection of blood by means of the spectrum of hemochromogen. The loose scrap of dried blood is placed in a droplet of pyridin on an object glass and ground fine with a glass rod. A drop of ammonium sulphate is then added, and a cover glass placed over it. A chromatic reaction can then be observed, while hemochromogen crystals form, and the spectrum for hemochromogen becomes apparent. If the scrap of blood is on a dark background it must be made mechanically permeable to the light. A few mm. of a single thread of a blood-stained garment are sufficient to give the hemochromogen spectrum immediately and distinctly. This test gives positive results when others fail, and the spectrum is more sensitive than that of oxyhemoglobin. He commends this as by far the best general routine test for detection of blood with very little material.

#### Deutsches Archiv f. klinische Medizin, Leipsic.

*Last indexed page 1767.*

- 74 (LXXXV, Nos. 1-2, Fiedler *Festschrift*.) Ueber die vierte (Filatow-Dukes) Krankheit. O. Unruh.
- 75 \*Behavior of Circulatory Apparatus in Acute Infectious Diseases.—Zur Kenntnis des Zirkulationsapparates, etc. Schmalz.
- 76 \*Ueber Myokarditis und Gefässerkrankungen im Kindesalter, insbes. nach akuten Infektions-Krankheiten (in children). F. Förster.
- 77 \*Untersuchungen über rheumatische Myokarditis. P. Geipel.
- 78 Zur Pathologie und Aetiologie des Malum Dupuytren. G. Buch.
- 79 Otitic Brain Abscess in Left Temporal Lobe with a Peculiar Form of Speech Disturbance.—Otitischer Hirnabscess im linken Schläfenlappen, etc. M. Mann.
- 80 \*Intraperitoneale Infusion und Ernährung (infusion and feeding). A. Schmödt and H. Meyer (Dresden).
- 81 Physikalisch-chemische Untersuchungen an Ergüssen in Körperhöhlen (effusions). H. Meyer. Id. W. His.
- 82 Ueber Rachitis tarda. G. Schmorl.
- 83 \*Zur Frage der chirurgische Eingriffe bei lienaler Leukämie. H. Lindner.
- 84 \*Puerperal Affections of the Lungs from Thrombosis and Embolism.—Ueber Lungenerkrankungen im Wochenbette, beruhend auf Thrombose und Embolie. Leopold.
- 85 Zur Behandlung des Puerperal-Fiebers mit intravenösen Collargol-Einspritzungen. Osterloh.
- 86 Ueber metastatische Hautentzündung bei Pyämie und über Hautentzündungen bei Infektions-Krankheiten im Allgemeinen (metastatic inflammation of skin). J. Werther.

**75. Behavior of Circulatory Apparatus in Acute Infectious Diseases.**—Schmalz declares that the greater his experience and the more he is able to follow the consequences of infectious diseases into later life, the more he is convinced that every kind of infection is liable to injure the organs of the circulation, the injury ranging from the slightest, most transient effects to severe, fatal lesions. The injurious influence of the underfeeding and the long lack of exercise must also be taken into account. He reviews the findings and course of the cardiovascular affection in various acute infectious diseases. In 4 cases of diphtheria and 5 of scarlet fever, and in the majority of 52 other diphtheria and 19 scarlet-fever patients, the cardiovascular apparatus still showed disturbances when the patients were dismissed, and examination later confirmed the morbid findings. The trouble was generally mitral insufficiency, sometimes combined with subjective disturbances.

He does not know of any research on the later course of the heart disturbances in cases of typhoid, measles and pneumonia. They frequently persist until the patients are dismissed, at least.

**76. Vascular Affections and Myocarditis in Children.**—In this first part of his monograph Förster discusses acute primary myocarditis, myocarditis after burns and in cutaneous affections and diphtheria. Fiedler described in 1897 an acute interstitial myocarditis as a primary and isolated affection of the myocardium. He had observed 5 cases of it and 4 have since been reported by others, all but one terminating in death. The patients were adults. Förster here describes the first case known in a child. Myocarditis after severe burns has been observed. It is liable to develop tardily in children. In 2 cases in his experience the children died on the twenty-eighth day after they apparently were well on the road to recovery. He has also witnessed a case of fatal myocarditis complicating eczema of the face and scalp. In diphtheria he notes that the frequency of myocarditic complications increases with the age of the patients, his figures ranging from 14.3 per cent. of the children under 2, to 88.8 per cent. of the children between 11 and 15. The insidiousness of the heart disturbances in diphtheria imposes the greatest caution on the physician, at least until after the fourth week, when he detects even the slightest intimation of a heart or vascular disturbance in the course of diphtheria. Repeated examination of the pulse, especially during the first two weeks, is indispensable in connection with examination of the heart. In his experience the first symptom was in the pulse in 10 and dilatation of the heart in 2—all in the first week. In the second week the pulse was the first symptom in 6, and dilatation in 6, with heart sounds in 5. He noted dilatation of the heart in 29 out of his 40 cases of diphtheritic myocarditis. In none of these patients to date is the heart absolutely normal again. When the myocarditis sets in early it generally proves more severe.

**77. Rheumatic Myocarditis.**—Geipel describes the findings in a number of hearts from cases of articular rheumatism. The findings are peculiar and pronounced, but they are not specific for rheumatism, as he has found the same in cases of contracted kidney, etc.

**80. Intraperitoneal Infusion and Feeding.**—Schmidt and Meyer report extensive research on animals to determine the tolerance of the peritoneum for injected solutions. Weak solutions of sugar and dextrin were promptly absorbed and did not cause material irritation. Oil was tolerated still better, and application of these findings in the clinic confirmed the fact that a small amount of oil injected into the peritoneum is tolerated without reaction and is absorbed. In 2 patients with advanced cancer the oil seemed to be absorbed and oxidized while the general condition improved. Intra-abdominal infusion of oil is far preferable to subcutaneous administration. It does not cause pain, and much larger quantities can be injected. The oil is rapidly absorbed and does not irritate the peritoneum in the least. When injected with a drug it seems to diminish the irritation from the latter. Infusion of solutions of albumin or sugar has not proved so practicable in several respects, at least in the concentration of 5 per cent. used in the tests reported. In regard to preliminary injections to enhance the resisting power of the peritoneum before an operation they describe their experiences with 5 to 10 c.c. of a 0.9 per cent. salt solution in from 250 to 500 c.c. of horse serum. In other cases the horse serum was used alone or the saline alone. The combination of the two, however, induced the highest leucocytosis. The infusion was made from seven to nineteen hours before the operation. The injection was almost entirely painless, and is a perfectly harmless procedure. It attains the desired aim, namely, the inducing of a slight irritation of the peritoneum with general leucocytosis. After experiments on animals several experiences were made with oxygen introduced into the peritoneum of patients with double pneumonia or tuberculous peritonitis or cirrhosis of the liver. The procedure proved feasible and harmless. The only danger might be that if the abdomen were very much inflated with the gas, some might find its way into the right ventricle. In the cases of tuberculous peritonitis the absorption of the



ascites seemed to have been promoted by the introduction of the oxygen. In one case in particular repeated tapping had been unable to arrest the formation of ascites, but after the introduction of the oxygen it did not reaccumulate and the patient was dismissed in comparative health. In this case, after withdrawal of 1,750 c.c. of fluid, 1,700 c.c. of oxygen had been introduced. In the course of the next week or so the abdomen increased somewhat in size, but not enough to require tapping, and before the month was out there was no further trace of free fluid in the abdominal cavity. The patient was a woman of 30. Further experiments with injection of sodium bicarbonate in diabetes and of cocaine in severe gastric crises gave negative results, and signs of irritation deterred them from further experiments in this line. In any event, only weak and isotonic solutions should be injected. It is possible, they think, that fine results might be obtained by direct application of the drug when it is desired to exert a direct local influence on the peritoneum or intestines. In conclusion Schmidt and Meyer suggest the possibility of thus arresting hemorrhage with adrenalin, or of influencing tuberculous ascites by an emulsion of iodoform and glycerin, and also the practicability of reducing irritation by infusing oil or of influencing peristalsis by appropriate medication introduced into the abdominal cavity.

**83. Surgical Treatment of Splenic Leukemia.**—Lindner refers to a case in which the general health improved remarkably after removal of the spleen, although the entire syndrome of splenic leukemia was not banished by the operation. Four cases are on record in which the patients were restored to health by splenectomy, including Carsten's case. On the other hand, reports have been published of 28 cases in which no benefit was derived from the operation.

**84. Puerperal Embolic Lung Affections.**—Leopold relates a case in which a woman convalescing from childbirth had three severe embolic attacks with consecutive infarct in the lungs. The case is another example of the premonitory value of the climbing pulse (*Kletterpuls*), and it further shows to what grave danger the apparently healthiest parturient woman is constantly exposed for days. It also emphasizes the necessity for scrupulous avoidance of every unnecessary demand on the lung, heart and abdominal muscles. The probable source of the embolism was a varicose vein on the leg. The patient finally recovered.

#### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 87 (XXXI, No. 40, October 5.) \*Aetiologie und Behandlung der Appendicitis. Lucas-Championnière.  
 88 \*Prognose und Behandlung der Uterus-Myoma. E. Knauer. (Concluded).  
 89 Zur osteoplastischen Resektion der äusseren Augenhöhlen wand (outer wall of orbit). W. Czermak. (Concluded).  
 90 \*Diätetik des vorgeschrittenen Kindesalters (of children from 2 to 15). Monti.  
 91 Zur bakteriologischen Choleradiagnose. E. Friedberger and A. Luerssen. Id. A. Böhme.  
 92 Zur Kenntnis des Virus des Molluscum contagiosum des Menschen. M. Juliusberg.  
 93 Therapeutische Fortschritte auf dem Gebiete der Gynäkologie (progress). J. Klein.  
 94 Artificial Ems Salts for Eye Lotion.—Augenbäder mit Lösungen von künstlichen Emser Salz. Hesse.  
 95 Official Report on Relations Between Human and Bovine Tuberculosis. (See news columns, page 1339.)  
 96 Patents of Interest to Physicians.—Erfindungen aus dem Gebiete der Medizin, der öffentlichen Gesundheitspflege und der Krankenpflege. G. Justl.

**87. Appendicitis.**—Lucas-Championnière ascribes great importance to preceding influenza and to an undue proportion of meat in the diet as factors in the etiology of appendicitis. He operates as soon as the diagnosis is certain, unless from eight to ten days have already elapsed.

**88. Uterine Myoma.**—Knauer does not approve of electricity or caustics in treatment of myomata of the uterus. He advises expectant treatment when women are near the menopause unless forced by hemorrhage, pain or other symptoms of disturbance to adopt other methods. He operates through the vagina and warns against going too far in the effort to retain the uterus and thus compromising the later results.

**90. Dietetics for Children.**—Monti expatiates on the necessity for adapting the diet to the stage of development of the digestive organs and to the needs of the growing organism, giving detailed directions for children from 2 to 15 years old.

## Books Received

SCIENTIFIC MEMOIRS BY OFFICERS OF THE MEDICAL AND SANITARY DEPARTMENTS OF THE Government of India. Issued under the Authority of the Government of India by the Sanitary Commissioner of the Government of India, Simla. Calcutta: Office of the Superintendent of Government Printing, India, 1905.

No. 13. Oriental or Delhi Sore. By Captain S. P. James, M.B., I.M.S. Price, 10 annas, or 1s.

No. 14. A Parasite Found in the White Corpuscles of the Blood of Dogs. By Captain S. P. James, M.B., I. M. S. Price, annas 10 or 1s.

No. 15. A Parasite Found in Persons Suffering from Enlargement of the Spleen in India (Third Report). By Lieut. S. R. Christophers, M.B., I.M.S. Price, annas 10, or 1s.

No. 16. The Specificity of Antivenomous Sera, with Special Reference to a Serum Prepared with the Venom of Dabola Russell. By Captain G. Lamb, M.D., I.M.S. Price, annas 6, or 7d.

A MEMOIR OF DR. JAMES JACKSON, with Sketches of his Father, Hon. Jonathan Jackson, and his brothers Robert, Henry, Charles and Patrick Tracy Jackson; and Some Account of their Ancestry. By J. J. Putnam, M.D. Cloth. Pp. 456. Price, \$2.50 net. New York: Houghton Mifflin & Co., 1905.

SURGICAL DIAGNOSIS: A Manual for Students and Practitioners. By A. A. Berg, M.D. Illustrated with 215 engravings and 21 plates. Cloth. Pp. 543. Price, \$3.25 net. Philadelphia: Lea Brothers & Co. 1905.

RADIOTHERAPY IN SKIN DISEASE. By J. Belot, with a Preface by L. Brocq. Translated by W. D. Butcher, M.R.C.S. Authorized translation from the Second French Edition, with thirteen plates and twenty-eight illustrations. Cloth. Pp. 463. New York: Rebman Company, 1905.

PHYSICAL DIAGNOSIS, Including Diseases of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By E. Le Fevre, M.D. Second Edition. Revised and Enlarged. Cloth. Pp. 479. Price, \$2.25 net. Philadelphia: Lea Brothers & Co., 1905.

MUTTERPFLICHT UND KINDESRECHT. By Dr. Med. Eugen Neter. Mit einem Vorwort von Kinderarzt, Dr. H. Neumann, Berlin. Paper. Pp. 91. Munchen: Verlag der Aerztlichen Rundschau (Otto Gmelin).

UNIVERSITY OF MISSOURI STUDIES. Topography of the Thorax and Abdomen. By P. Potter. Science Series, Vol. 1, No. 1. Paper. Pp. 142. Price \$1.75 net. Published by the University of Missouri, 1905.

ARMY LIST AND DIRECTORY. Officers of the Army of the United States. November 20, 1905. The Military Secretary's Office. Paper. Pp. 91. Washington: Government Printing Office, 1905.

NEW YORK STATE LIBRARY. Yearbook of Legislation, 1904. Edited by R. H. Whitten, Sociology Librarian. Cloth. Price, \$1.00. Albany: New York State Education Department, 1905.

AROUND THE WORLD VIA INDIA. A Medical Tour. By N. Senn, Ph.D., LL.D. Cloth. Pp. 347. Chicago: American Medical Association Press, 1905.

DIAGNOSE UND THERAPIE DES EKZEMS. Dr. S. Jessner, Königsberg i. Pr. Paper. Pp. 96. Würzburg: A. Stubers Verlag (C. Kabitzsch), 1905. Pries, mk. 1.50.

## NEW PATENTS.

Recent Patents of Interest to Physicians:

802728. Apparatus for lifting and transporting invalids. Wm. Amos, Providence, R. I.  
 802596. Formaldehyde-generator. Wm. E. Ramsay, Perth Amboy, N. J.  
 802601. Sterilizer for surgical dressings, instruments, etc. Samuel G. Scanlan, Madison, Wis.  
 802527. Device for preventing sea-sickness. Wilhelm Schmidt, Wilhelmsheide near Cassel, Germany.  
 802835. Double salt of ferric chlorid and cotarnin hydrochlorate and making same. Arnold Voswinkel, Berlin, Germany.  
 802969. Cooling-case for soda-fountains. Wm. W. Butler, Decatur, Ill.  
 802980. Making oxalic acid, etc. Frederick A. Feldkamp, Newark, N. J.  
 803476. Truss. Wm. Fielding, Lewiston, Me.  
 803282. Microacoustic or device to assist the hearing. John R. Gault, Montooth, Pa.  
 802286. Clavicle dressing. James W. Hingston, Chicago.  
 803170. Atomizer or nebulizer. Olin C. Knight, Kalamazoo, Mich.  
 803498. Cranial saw. Harvey C. Masland, Philadelphia.  
 803352. Thermometer for water-bags. Rachel Meyer, New York.  
 803193. Appliance for surgical beds. Emily H. Richards, Oak Park, Ill.  
 803145. Machine for removing and putting on the tops of capsules. Benjamin T. Winchester, Windsor Hills, Md.  
 804086. Womb supporter. Martin J. Barchfeld and F. C. Hunt, Girard, Ohio.  
 803892. Auriphone. Robert W. Goers, Syracuse, N. Y.  
 803619. Invalid-bed. Bella McMahan, Six Points, Pa.  
 803922. Artificial limb. Harry J. Morris, Wichita, Kans.  
 803708. Massaging implement. Alvah U. Patchen, Syracuse, N. Y.  
 803639. Thermometer. Charles J. Tagliabue, Brooklyn.  
 803640. Syringe. Charles J. Tagliabue, Brooklyn.  
 803956. Surgical apparatus for internal examination. J. C. Zubli, Amersfoort, Netherlands.  
 804207. Artificial leg. John Bunderle, Jackson, Minn.  
 804584. Syringe. Charles J. Davol, Providence, R. I.  
 804784. Surgical Table. Edward L. and E. B. von Eschen, Kirksville, Mo.  
 804229. Forceps and the like. Thomas C. Hutchinson, Decorah, Iowa.  
 804407. Syringe. Alcinous B. Jamison, New York.  
 804484. Therapeutic apparatus. Carl O. Lindstrom, Chicago.  
 804272. Respirator. Wilhelm Schwarz, Pforzheim, Germany.  
 804776. Thermomedical device. Dexter M. Small, Providence, R. I.  
 804680. Scalp-massage brush. Rowland M. Smith, Chicago.  
 804682. Making protocatechuic aldehyde. Rudolf J. M. Sommer, Vienna, Austria, Hungary.  
 804687. Pasteurizing apparatus. Frank Tyson, Canton, Ohio.



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## Address

### CO-ORDINATED SPECIALISM IN PUBLIC HEALTH WORK.\*

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#### DIFFICULTIES.

In America two causes are operative in rendering it difficult to protect the health of the public. One is the lack of real knowledge on the part of the public in regard to the scientific truths which underlie the conservation of its chief asset, viz., its health; and the other is a tendency in the preservation of individual freedom to lose sight of our obligation to respect the rights and privileges of others who may be less assertive.

It is probable that each of these factors may operate as the cause of the other and it is difficult to discuss one without encountering complications dependent on the other. Endorsement of public health protective measures in a general way by an individual has usually the mental reservation that they be so applied as to safeguard him against his neighbor but not in such a manner as to impose hardship on him for his neighbor's benefit. The spread of accurate knowledge and the universal application of the golden rule are both to be advocated as necessary to secure permanency in the support by the public of the provision and enforcement of logical regulations which at present is only to be had under the stress of great fear, and is then but temporary and spasmodic. Individuals and families are willing to submit to nearly any course of treatment or to any restrictions imposed when the fear of sickness or death suddenly confronts them, but when the strain is removed they forget the lesson learned and the promises made. The public reacts in the same way and is willing to submit to discipline only when the necessity for it is plainly demonstrated by epidemics with high mortality or in the face of striking disaster. If such times could be utilized for the formulation and passage of logical regulations and the public could be induced to support the continuous administration of such measures and to take the same interest in the protection of its health as of its wealth or honor, progress would be rapid. It becomes necessary to convince the public, therefore, first, that health is its most important possession; secondly, that it can be conserved and improved just as accurately and certainly as any other asset; and, thirdly, that preventive medicine is immensely cheaper and more efficient than curative procedures.

In countries like those represented in our association where the right of the individual is the primary consideration, there is a particular prejudice against the

assumption of special or expert knowledge on the part of individuals or groups of people, and yet it is necessary in the government of people by themselves that there should be specialization so that responsibility may be wisely placed and the greatest good to the greatest number insured. There is nothing, however, in which individual right to opinion is so rigorously asserted as in the matter of health; and through the medium of the press and in daily converse all kinds of peculiar and often pernicious views are voiced. The semi-mysterious seems to be attractive rather than the logical and those who are really interested in private welfare and public health are often tempted to long for a temporary monarchical form of government or military dictatorship if thereby the suppression of baneful theories of the cause, prevention and cure of disease and the advertisement of doubtful and dishonest remedies could be secured. This is, of course, impractical, but in lieu of it, the appointment of competent boards nominated by the leading national or international scientific, medical, public health and engineering societies so as to permit the preparation and censorship of technical material in popular form for distribution through the Associated Press and government bulletins, would result in the gradual education of the public. The substitution of real scientific truths, given in simple language so that children might readily understand, for the so-called "physiology and hygiene" now provided by some localities as textbooks, would prepare our coming citizens to understand and protect themselves. Were such a comprehensive system feasible in the countries represented by our association, the question of the education of the public and of securing enthusiastic support for public health legislation and its administration would probably be solved.

#### DEGREE OF RESPONSIBILITY OF PHYSICIANS.

The total burden of responsibility should not be placed, as it frequently is, on physicians. Their eager support of measures intended to safeguard humanity is usually misunderstood and misjudged because their honesty of purpose is questioned when they endorse methods which, if logically carried out, will diminish their financial resources. As a physician not engaged in active practice, I wish to pay tribute to the practicing members of the profession by asserting, without fear of successful contradiction, that they have no superiors in unselfish devotion to their fellowman, often in the face of a total lack of appreciation, and too frequently in the face of suspicion or active opposition.

The practicing members of the medical profession who stand highest in their particular lines are the most enthusiastic, honest and earnest supporters of public health protective measures, and urge most strongly the necessity of special qualifications and the broadest and most thorough training for those who are to be made responsible for their intelligent administration. They are the first to realize that their own training and experience, being largely in the direction of curing rather

\* Presidential Address, American Public Health Association, Boston, Sept. 26, 1905.



than preventing disease, must be supplemented by all the other allied sciences and that public health work has become a profession or a specialty which involves the necessity of a knowledge not to be obtained until in very recent years in the medical colleges, universities, engineering and technical schools.

A glance at the program for this meeting will give some idea of the complicated mechanism and careful training in varied lines which are required in the care of the health of the public; and their necessity should be recognized and demanded by the public. This most important matter should not be left, as it often is, in the hands of those whose knowledge and ability is along political rather than sanitary lines. Sanitarians have been far too little appreciated, not only by the general public but also by the medical profession. The general public is inclined to regard a public health office of any kind as a "political plum." Years of experience, each one of which adds to the knowledge and value of any official, are apt to count for naught. The medical profession, on the other hand, too often regards a physician who is willing to undertake work of a particularly arduous character which essentially differs from and precludes him from general practice and yields little financial return, as lacking in ambition, independence or foresight. Such posts have been, therefore, unattractive, since the remuneration is usually small and the loss of medical practice and prestige is likely to be as certain as the tenure of office is uncertain. Reform in this direction is growing. Universities are preparing to co-operate with boards of health in providing special training. The time is now ripe when the public should demand that those entrusted with the care of its health should have special training and higher remuneration.

It is absolutely necessary to place such work on a sure and firm foundation. The value of experience already gleaned should be recognized and every community should try to retain the services of officials who have shown their ability and faithfulness in the various branches of public health, as well as other public work. The city in which we meet has set an excellent example in this respect and is to be congratulated on her appreciation of the initial ability, integrity and wide experience of the chairman of her board of health, who for over thirty years has devoted his life to the welfare of Boston; has been a leader in our association almost since its organization, and was once its president. We of Minnesota have piratically annexed the director of the Boston City Board of Health laboratory and are still unrepentant, being selfish enough to want the best.

#### SPECIALISTS NEEDED.

The older method of securing experience by experimentation on the public should be superseded by requiring preliminary special training at universities and by boards of health, so that, while retaining for the good of the public the service of those already trained and competent, they may be reinforced and, when necessary, succeeded by those who have received such special training. Undoubtedly, the public should demand the possession of special qualifications both in the executive and in the other technical branches of public health service. Elective and appointive positions should be filled by those who have received special training and, as evidence of their special qualifications, have degrees or diplomas granted by competent authorities, as in Great Britain, where a diploma of public health is demanded of all medical health officers. Bacteriologists, chemists, engineers and other technical men should have special

training in public health work before the responsibilities of public service are entrusted to them. A knowledge of the clinical manifestations of disease is imperative, but often much more than clinical experience and ability is essential. While in scarlet fever, smallpox and certain of the infectious diseases it is nearly always possible to diagnose the condition present and by so doing to protect others from infection, there are a number of diseases in which clinical observation alone proves utterly insufficient.

As illustrating this, diphtheria may be mentioned. It is the presence of diphtheria bacillus which constitutes the danger of infection. Preventive measures should be and are demanded when this bacillus is present. Bacteriologic methods have very greatly shortened the necessary isolation period. In diphtheria it is impossible to base the necessity for protective measures on the local condition of the throat or the general or constitutional manifestations of disease. For this work, and many other branches also, competent bacteriologic advice must be at hand. It is not the typical cases which cause serious trouble to the sanitarian, but rather those in which the diagnosis is unsuspected or obscure. In many conditions the laboratory is able to afford most valuable aid. A laboratory method of diagnosing smallpox has been evolved by Howard in the further pursuance of the classical researches of Councilman and his associates. The dread of cholera has to some extent disappeared by a better understanding of its cause and means of transmission. Here again bacteriologic methods are used almost entirely for diagnosis and the only preventive therapeutic interference which has been utilized is that of Haffkine, whereby cultures of bacteria are used for inoculation in order to induce immunity. The wonderful revolution in protective methods against yellow fever is well known to all. The work of Reed, who was vice-president of our association at the time of his death, can be credited already with the saving of thousands of lives, and the commercial benefits which have accrued to the American continent can scarcely be estimated since a prolonged period of quarantine and universal disinfection have been shown to be unnecessary and illogical. It is unfortunate that the wonderful efficiency and co-ordination of the methods employed by the United States Army in Cuba could not have been fully utilized in the present epidemic, but we Americans do not like discipline and as a result of a division of the responsibility and lack of far-reaching, supreme authority in the beginning, the ignorance and fear of the masses have lost our country many lives.

The startling results claimed for Japan in protecting her soldiers against disease in the field do not appear to be so much dependent on superiority in scientific methods as on a clock-like discipline and patient, far-sighted attention to detail. In the Japanese army the authorities seem to respect sanitary knowledge and to be willing and anxious to place responsibility on the sanitarians and medical officers, who are left supreme in their own domain. A similar policy, with careful selection and adequate recognition of the sanitary officials, would be found to be well worthy of emulation in Panama.

In malaria, practically the same measures are to be employed as in yellow fever, both of them involving the necessity for biologic knowledge, as it is very important to know and recognize the different members of the mosquito family. The activities of flies, bugs, vermin and other such agencies in the spread of disease have to be recognized and familiarity with general biologic



principles is demanded on the part of the health official. The chemist must be utilized in the study of foods, water and sewage as they relate to the health of the public. Engineers now are specially trained in public health lines so that municipal and sanitary engineering are taught in certain of the technical schools and universities. The city in which we meet furnishes many communities with experts along such lines through the Massachusetts Institute of Technology. The Massachusetts State Board of Health by its scientific investigations in water supply, sewage disposal, food adulteration and kindred problems has won the respect of sanitarians throughout the world, not only by the methods evolved, but by results achieved. With the certain knowledge now available through our sanitary clinicians, statisticians, chemists, engineers, bacteriologists, biologists and other specialists, it would appear to be a relatively simple matter to conserve public health, but there are certain other factors which must be recognized and dealt with.

#### COMPLEX MODERN LIFE DEMANDS CO-ORDINATED PROTECTIVE EFFORT.

Apart from the difficulty of establishing satisfactory disciplinary measures in our free countries, it must be remembered that life in this age is extremely complex. Our cities have grown enormously. Facilities for rapid transit now make it possible for individuals to reside many miles from their work. Groups form and re-form many times a day, and it is impossible to know the exact previous environment of each individual who helps to constitute a particular group. Rapid transit means increased responsibilities for sanitarians. The grouping together of individuals in schools, colleges, religious institutions, offices and shops calls for a study of public health along social economic lines. Specialism in commercial and professional life is so great that we have diseases incident to occupation. It is very apparent that the difficulties of protecting the public against itself are increasing every day, and that both highly specialized and very broad general knowledge must be available in those who are united in this work. No one individual can acquire, so as to be able to utilize, all of the specialized knowledge in these various lines. It becomes necessary, therefore, to have all such branches available and co-ordinated. A short consideration of some features of necessary co-ordination may not be amiss. While we are often described as a practical people, impatient to utilize results rather than to acquire the original scientific data by tedious research; the description is true only in part. Anesthesia by ether, the determination of the causative factor in yellow fever and many other both scientifically and universally important discoveries have had their origin here. The brilliant work of Americans in the study, prevention and cure of tuberculosis is universally recognized, and Theobald Smith, Ravenel, Pearson, de Schweinitz, Biggs, Trudeau, Bowditch, Knopf, Flick and others are household names the world over. The ideal co-ordination of effort in the fight against this dread disease has been secured, and the National Association for the Study and Prevention of Tuberculosis will doubtless be the means of stimulating local effort in the utilization of every honorable means to educate and protect humanity. This kind of work shows the power and ability of our people, and it may be said that no countries excel those of America in the application of scientific methods to the protection of public health. The vastness of the countries and the possession of potential rather than actual wealth in the newer communities

render the work more difficult, but as a compensation there is a corresponding freedom from the chains imposed by precedent and tradition. We are in the process of manufacturing these latter.

#### RELATION OF EXECUTIVE TO LABORATORY WORK.

Laboratories are utilized almost universally in America in public health work. There are, however, many misconceptions in regard to the function of the laboratory in public health service. Primarily, the work undertaken by such laboratories should be in direct relation to public service, and not a means of gratifying private curiosity or of affording information which is of value to individuals alone. Laboratory work should be extended wherever possible, so as to afford guidance to executive action. This does not at all mean a limitation to pure routine. Research is necessary, in fact demanded, along many lines. It should have for its object the study of conditions in order to obtain information which may serve as the immediate or future basis of executive protective activity and legal restriction. Universities, special institutions for research and private and hospital laboratories are available for the study of diagnostic and curative methods applicable to the individual rather than to the public, but it is in the public health laboratory that research along public health lines must be done.

In municipal health work, the laboratory is in close contact with the problems to be studied, but very frequently it is necessary for the laboratory men to leave the laboratory and to accompany executives, inspectors or others, so as to see and know the actual existing conditions and guide their work accordingly. In state or federal work, it is often imperative for the laboratory worker to visit the locality under investigation. It is impossible, in most instances, to render valuable service or to give intelligent advice based on shipped specimens and meager data. Nor is it economical to spend days, weeks or months in working at problems which have been entirely obscured or at best rendered vastly more difficult by lack of foresight or of specific knowledge on the part of those for whom the investigations are to be made. For years our experts have endeavored to show the impossibility of giving specific information in relation to the sanitary quality of waters or the location of contaminating foci, and to afford advice involving structural and other details by the examination of samples collected and shipped to the laboratory. The delay between collection and analysis has been an element of error, and even more so in sewage work.

Certainly in bacteriologic work it would seem strictly proper to begin the analysis of water and sewage in the field. In the examination of blood for *Plasmodium malariae*, of sputum for *B. tuberculosis*, of blood for the presence or absence of the Widal reaction in typhoid fever, and of cultures taken from the throats and noses of suspected diphtheria cases and in a number of other lines including rabies, glanders, anthrax and actinomycosis, it is usually possible for the laboratory to examine and report on shipped specimens where intelligence has been exercised in their collection and transmission. At best, however, it is not ideal, because the value of data is frequently not appreciated by the person who desires the examination.

Furthermore, to be of value to public health administrative bodies, each piece of work should be capable of utilization as a guide to future work. Every individual who utilizes a public health laboratory for securing information should feel under obligation to make the necessary return for such gratuitous expert report, by



supplying all data in regard to past and present conditions and subsequent history of events so that the whole may be recorded in such form as to be of permanent value to the particular locality and to sanitarians in general. No work on the laboratory or executive side should assume such routine form that it ceases to possess interest. The research spirit should so dominate the work that even in matters of so-called routine observations and records are made in such manner as to afford the possibility of arriving at new and conclusive views. Boards of health and officials in whom this research spirit is lacking are sources of danger to their communities.

When so much emphasis is laid on the use of scientific methods in medicine and public health there is danger that in the recognition of the value of such laboratory investigation and minute technical observation the absolute necessity for sound judgment and ability to appreciate relative values of the points brought out by such precise methods may be underestimated. It is too often assumed that in the various chemical, bacteriologic, biologic or mechanical tests the correct information and conclusions are rapidly and almost mysteriously attained. Many of the methods are most laborious and time-consuming. The microscope, the culture tube and the chemist's balance and retort are extremely delicate implements, which bring to light many new and sometimes complicating factors. Really, at times they almost seem to increase the difficulties and to lead away from practical results. Here is where the necessity for sound judgment, so erroneously designated "common sense," becomes most important, and where a knowledge of all local conditions must be considered and correlated with all other data. The only remedy for apparent discrepancy is more data and further study.

#### SCOPE OF PUBLIC HEALTH WORK AND METHODS.

In regard to the problems undertaken by sanitarians and laboratories, as a general principle the epicurean doctrine must prevail. Questions which involve the welfare of many should receive consideration before those which concern the interests of individuals. Problems for whose solution there seems to be a reasonable hope must take precedence of those in which there appears to be little likelihood of arriving at definite results.

Public health authorities established for and by the whole people should be independent of the coercion of individuals. Because a board of health is a public institution is no reason why any individual should demand investigation of the problems which interest him alone. Those who are actively engaged in public health service should be selected primarily on account of their fitness and because the people have confidence in them. To them should be entrusted not only the carrying out of the necessary work, but the formulation of that work. Sanitary laws and ordinances either should be formulated by health authorities or submitted to them for approval or modification and bodies whose duty it is to enact legislation should be guided by those who are entrusted with the protection of the public health. It is illogical to place individuals in positions of trust and responsibility and to hedge them in by suspicion or by perverse or inefficient legislative measures so that the successful carrying out of the work is impeded or prevented. Responsibility without adequate authority is farcical.

It is apparent, as we have seen, that nearly every phase of human knowledge must be utilized in successful effort to protect the health of the public. Usually

on one individual the administration of the work falls. This being so, it is absolutely essential that he keep in touch with the other phases of the work, and at least be versed in their principles. The composite judgment of all the available experts should be secured and included in any final opinion which the executive voices and, so far as it can be done, expert work should serve as the basis of all executive action. Importance of close contact of laboratory workers with field problems can not be overestimated. The correctness of this conclusion has been proved by an experience of several years in the State Board of Health work in Minnesota. To facilitate such work, branches of the State Board of Health laboratory are being established throughout the state. In the saving of time, the accuracy of information received and the applicability of results of laboratory investigation to the work in hand, much is gained by such means. Where branch laboratories do not exist, one or more laboratory men accompany the executive officer or his representative into the field or at times the laboratory man is entrusted with executive power. A number of state institutions and hospital laboratories throughout the state are frequently used as temporary headquarters. It has been suggested, however, that for many phases of the work a traveling laboratory which can readily be provided in a railway coach would be most advantageous, as it would permit certain laboratory work to be finished much more quickly. In any event, it could be begun on the spot and completed in the main laboratory. In general, for problems including epidemics of the various bacterial or parasitic diseases, water, sewage, milk and food investigations and other matters, necessitating the presence of the laboratory worker in the field, such as a traveling railway laboratory, sidetracked for the purpose, would be most useful in the saving of time and effort and in serving as an object lesson. The expense would be very much less than that incurred by the provision of innumerable laboratories on a permanent basis in rural districts or small towns and villages. The chief benefit secured would be in the co-ordination of effort by the authorities and the instruction of the public in its own welfare. Such a plan was utilized most advantageously by Dr. Hamilton Wright in the Federated Malay States.

Railways find it most advantageous to provide themselves and the engineering departments of certain universities with laboratory cars containing instruments of precision and facilities for observation in their important problems, such as conservation of power, the adjustment of grades and the relation of speed to expense. Commercial enterprises and government and state departments have realized the utility of traveling laboratories in agricultural education whereby demonstrations can be given to farmers and others as to the most scientific and practical methods of increasing and conserving the crop yield.

#### AIM OF THE ASSOCIATION.

Each one of us has a different set of problems to solve, and it would be idle to attempt to go into all the various phases of work represented in our association. Our annual meetings permit each one of us to profit by the experience of others engaged in similar or parallel work. It has been the aim of the association from its very beginning to stimulate research and to standardize methods of technical and executive procedure. With the growth of the countries represented and the gradual organization of new territory our association has kept in touch. The increased tendency to utilize methods of



science and accuracy in medicine and commerce has been shared in or perhaps led by the association in the establishment of its laboratory section. Considerable trepidation was experienced by many members for fear that in the division of the program interest might be divided. The real need which existed has been fully demonstrated by the history of the section which has shown the value to be obtained from the meeting together of technical men in the evolution and standardization of methods and interpretation of results. On the executive officer falls the necessity and responsibility of taking definite action, to suppress, eliminate or prevent conditions which are inimical to public health. The technical worker is apt to become interested rather in his methods or scientific results than in their practical application. The effect of the establishment of the section has been to interest each different worker in the problems and affairs of his colleagues in the same and other lines, and the blend has been beneficial. In this day of specialism it is necessary at all times to keep the inter-relation of the various phases of the work most clearly defined, and there is room for question as to whether the present arrangement of the program for our annual meetings is best suited to our needs. Undoubtedly we need one technical section and probably should have more. It may appear desirable perhaps to consider a greater subdivision into sections, such as executive, statistical, bacteriologic, chemical and engineering sections. Each section should include in its sectional business and program only those matters which involve technical points. The bacteriologist is interested in matters which pertain to the making of culture media, the preparation or technic of some particular stain and similar procedures, but every member of the association is interested to know the general principles which underlie these matters, and particularly interested in the results to be obtained by their application. A chemist is not necessarily interested in structural materials or the methods employed in estimating engineering problems, but chemists and all other members of the association are interested in the results achieved by engineers and the general plans and principles of the work which they undertake. The minutiae of chemical technic are profitable only to the chemist. Executive details and legislative matters are of chief interest to those who are entrusted with the administration of such affairs in their own communities and the other technical workers are interested only in a general way, or insofar as these matters affect or complicate their work. It would be necessary, however, to scrutinize program material very carefully in order to determine whether it is of sufficiently technical character to be of interest only to a particular group of technical men, or if it is of general interest. If it is not particularly technical and deals with matters of general interest and importance, it should certainly be considered in general session. Most of the work undoubtedly should be done in joint session so that all members may participate and the meetings may continue to be the means of harmonizing rather than separating the various active factors in public health work. The ideal arrangement would consist in the grouping of allied subjects. To illustrate: A joint session on the subject of typhoid fever would be valuable. The bacteriologists might present papers dealing with such general matters as methods of isolating *B. typhosus* from various sources and the germicidal effects for typhoid bacillus of certain substances with which they may have experimented; or of their experience as to the value of the so-called Widal reaction; or

of the persistence and localization of *B. typhosus* in the human body. All of those matters should be presented in the most practical way without emphasis on minute technical details. Both chemists and bacteriologists might be able to afford data concerning food, milk and such other materials in relation to the spread of typhoid fever. Engineers should participate in such a program, giving the results of their inspection and investigation of water supplies and sewage disposal. Executive officers and statisticians should give their experiences, including the use of legislative machinery, the administration of regulations and the compilation of statistics. The relation of the disease to railway travel and military life should not be overlooked. Such a method of approaching problems would enable each worker to arrive at, modify or change the point of view of his fellows, and a far greater value would be received by all than if all of each technical worker's experience and results were to be given before his particular section simply because his communication contained technicalities. These technicalities should be eliminated from the general paper and presented in the briefest possible way and usually in a demonstration form before the particular technical section to which they belong.

The American Public Health Association is the only association of any magnitude which is devoted entirely to the interests of public health. Its traditions are that it should be big enough and strong enough to meet emergencies and keep pace with or rather to anticipate advance. Every one in this age and generation is familiar with the trust method as applied to commerce. Its opponents are loud in their denunciation of the method—not because it does not succeed, but because it succeeds too well. The success of the trusts is due to the fact that every method and every agency which can be advantageously used is used. There is a complete correlation of all potent factors. Such should be the attitude of our association, and success will attend our efforts if made along these lines for the benefit of the people whom we serve.

#### ORGANIZATION AND PROSPECTS OF THE ASSOCIATION.

The work of the American Medical Association in the organizing of physicians throughout the United States is one of the greatest advances of the present time. This work is very largely entrusted to one of the oldest and most valued members of our association, and it is impossible to estimate the real good which is being accomplished by Dr. McCormack in persuading members of the medical fraternity to drop all points of difference and unite on those matters which are common to all and for the good of all humanity. This work of organization does not contemplate for a moment interference with other more highly specialized or technical medical associations. It will be of the greatest possible benefit to our association, which has a field peculiarly its own. It should be the policy, however of the American Public Health Association to anticipate demands for special work and special information along lines which are closely applicable to public health, and care must be taken that in our land of societies without number we do not lose because we have failed to provide a place and a stimulus for workers in all lines which directly affect our work.

There are great difficulties to be met and overcome. Not least is the instability of local organizations, and our association should at all times endorse the great value of experience and the importance of continuing competent workers in their positions. Effort should be made not only to enlist the active co-operation of every



good public health worker in America, but to retain him in active membership in our association. It is axiomatic that what is difficult to obtain is appreciated. On this principle it may be wise to consider the desirability of a more careful selection and rigid censorship of the membership of our association. Another point worthy of consideration is the effect on our meetings of selecting some central location as a permanent meeting place, provided that the educational effect both on the association and the locality visited be not lost. Succeeding meetings now may be held many hundreds or thousands of miles apart, rendering it at times very difficult for members to attend. The time of meeting also should be considered in relation to universities because of the necessity which all recognize of securing the co-operation of educational institutions in the general teaching of hygiene to all, and in the specific training which is essential for those who are afterward to engage in public health service.

The dignity and permanency of the American Public Health Association may be taken for granted, and it must continue to feel its responsibilities so that it may become advisory to the governments of those countries which constitute the association. But the question arises as to whether its present constitution which provides for an annual meeting lasting five days, with a complete interregnum of 360 days in each year, is best calculated to meet emergencies and bear responsibilities, and whether it tends to permanency of structure and administration. There are many matters which arise between meetings which demand careful consideration and immediate action.

The publication of the transactions of the association is a matter which has engaged our attention for years and is still unsettled, partly through lack of funds and partly on account of our peculiarity of organization. The question of income so that research may be fostered and possibly studentships or fellowships established for the study of specific problems, is an important matter which we should consider. I would suggest that at this meeting the association take under advisement some of the matters touched on and that the possibility of certain changes in organization be considered. To secure greater permanency of administration and for the purpose of carrying on at all times the necessary business and of increasing available funds, it might be well perhaps to consider the establishment of a board of trustees similar to that of the American Medical Association. The administration of the affairs of the association could be safely left to such a board, which should represent every phase of public health activity, and whose members should be long enough in office to ensure the carrying out of permanent policies.

Public health work in the main consists in making people do what they do not wish to do for their own good, and is certainly not a popular profession. As one of the younger members I can not but speak with enthusiasm of the work and achievements of the older members of our association, which, through their efforts, has been such an active factor in public health work for over three decades. Their motto has been to retain what is good, but to be on the watch for something better. It must be remembered that this is a work in which many of our members have been engaged for the greater part of their lives with relatively little financial encouragement and at times no appreciation of what they are doing by those for whom they are doing it. Their reward should be the contemplation of and partic-

ipation in the working of a huge machine of which the constituent parts, revolving though they may be in intricate and complicated cycles, yet with no loss of energy in friction, operate for the benefit and conservation of mankind.

## Original Articles

### THE TABETIC FOOT AS A FACTOR IN THE ATAXIA OF THE LOWER EXTREMITIES IN TABES DORSALIS.\*

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This paper, the joint production of a neurologist and an orthopedist, attempts to bring facts toward a solution of a problem hitherto considered strictly neurologic in character, with the purpose of supplying in each case knowledge which is lacking in the other. The advantages of such a combination are obvious, and in the case of this paper, as in other instances, the different points of view have tended to solve a problem which up to this time has not been considered in all of its different phases.



Fig. 1.—Pronation to a high degree. See Tracing I, Fig. 2, showing preservation of the arch.

#### THE PROBLEM.

The problem set before us was, in brief, the consideration of the factors concerned in the ataxia of the lower extremities in tabes dorsalis, apart from the usual elements which have been considered the essential ones. The theories of tabetic ataxia have been considered chiefly with the view of those who believed that the ataxia was a result of disturbances in sensibility, using the term in its broadest sense, or of those who held that the origin of the ataxia was central. Our own efforts were not concerned with this side of the question at all, but strictly with the tabetic gait and factors in the causation of this gait, apart from the disturbances in the sensory nervous system. In the walking and in the standing of the tabetic there are easily two sets of factors involved, one has to do with disturbances leading to the ataxia and the other with the instruments by

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



which the peculiar gait is accomplished, that is, the mechanical factors involved in walking and standing. This paper, then, is concerned chiefly with the mechanics of the tabetic gait as influenced or not by the mechanics of the foot, ankle and, to a lesser extent, by those of the knee joint.

As a consequence of the observations afterward to be recorded, an effort was made to correct the obvious errors in the mechanics of the foot and ankle used in walking by devising an improved shoe. This has developed gradually as the correct mechanical principles involved in a tabetic gait became more and more impressed on us. Thus the paper may be considered from two points of view, first, a study of the mechanics of the foot and ankle in tabetic gaits and postures, and, second, an attempt to improve the faulty mechanism so that a tabetic will be given a fairly normal implement with which to learn to walk. It might be noted here that from the therapeutic point of view the limits of this

of the cases is open to the slightest doubt. The gait and posture were studied by both of us at many different times, and the conclusions so determined were carefully discussed in the light of the data obtained by measurements, photographs, tracings and foot prints. With the general principles so determined, the attempt at therapy was based and the improvement in gait noted.

#### LITERATURE.

Scant mention of the tabetic foot in the sense used in this paper is to be found in the literature of tabes or in the orthopedic literature which treats of the pronated foot.<sup>1</sup> A brief note on the hypotonic flattening of the foot in dementia paralytica is given by Féré.<sup>2</sup> There is one tracing of such a foot included in his paper, but no mention of the pronation and none of the arch. Féré thinks that the flattening is due to the hypotonia plus the increasing weight of the patient which he studied. There is no hint contained in the paper that he finds



Fig. 2. Tracings of tabetic feet showing preservation of longitudinal arch and pronation as shown by the outer edge of foot raised from paper, X and XI especially.

paper must be obvious, for the reason that results in therapy depend for their proof on a large number of observations made by a large number of different individuals.

#### MATERIAL.

The material on which this paper is based consists of fifteen cases of tabes dorsalis observed during a period of two years. The number was thought large enough, as no question of statistics was involved and no source of error due to small numbers of observation was an important element. Furthermore, this small series could be easily controlled and observed. In no sense was the material selected. As time and opportunity presented, these cases were examined, the results noted, and the final conclusions were determined from the facts observed in the whole material. The methods of study were very simple. The cases were studied clinically by the usual neurologic examinations. The diagnosis in none

any connection between this and the ataxic gait. The foot shown, however, is very like the ones which we have studied in our work. Most of the literature on the so-called tabetic foot—*pied tabétique*—is concerned with

1. Some of the literature not referred to in detail below is as follows:

Lovett and Cotton: "Practical Points in the Anatomy of the Foot," Am. Ortho. Assn., vol. II, p. 298.

Jakob: "Treatment of Tabes Dorsalis," Handbuch der Physikalischen Therapie.

Ueber Muskelschwäche bei der Tabes Dorsalis," Neurologisches Centralblatt, 1896, No. 8.

H. S. Frenkel: "Grundsätze der Uebungs Therapie," Berl. Klin. Woch., No. 19, vol. xxiii, 1905.

R. W. Lovett: "Affections of the Arch of the Foot Commonly Classified as Flat Foot," Trans. Amer. Orthoped. Assn., vol. viii, p. 78.

Biodgett: "Static Foot Errors," THE JOURNAL A. M. A., Aug. 24, 1904.

Ferd Schultze: "Die Behandlung des statischen Platt-Fusses," Zelt. für Orth. Chir., vol. xlii, p. 502.

2. Féré: "Note sur L'Anplatisement Hypotonique du Pied chez les Paralytiques Generaux," Nouvelle Iconographie de la Salpêtrière, No. 1, 1904.



descriptions of the arthropathies in the feet of tabetics.

In Hoffa's<sup>3</sup> well-known monograph there is no mention made at all of the points brought out in this paper, although he has a material of twenty-six cases of tabes in which various orthopedic measures were tried.

There is frequent mention made of club foot in tabes called *pied bot tabétique* by the French writers, who seem to have done most of the work in this connection. Joffroy, in 1885, described this deformity for the first time. He seems to have realized that it differed from the ordinary club foot. He lays particular stress on the fact that the club foot of tabes is not due to the atrophy of the muscles as in the paralytic club foot, nor is it due to an osseous process, but to the flaccidity of the muscles. He calls it the atonic club foot. The hypotonia plays here also an important rôle.

Idelsohn,<sup>4</sup> in a paper on the pathology and histology of the tabetic foot, considering this term only as descriptive of the tabetic arthropathy, mentions the frequency of the combination of the tabetic foot with flat foot. This, by the way, seems to be a very commonly accepted opinion, the frequency of flat foot in tabes. It is to be regarded as an error in observation, because the tabetic foot is not a flat foot at all, but is a pronated foot. To the orthopedist this distinction is obvious enough. These brief and altogether unsatisfactory references are all that can be found in recent literature. It seems to show that the points brought out in this paper have not been given the proper degree of attention or that the very patent fact of foot deformity in tabes has been regarded as definitely settled when the term flat foot has been used to describe it.

As to our own observations on the gait and postures assumed by tabetics, we have noted a marked variation in degree and kind, depending apparently on the amount of ataxia, with the reservation that complicating factors, such as blindness, double vision, etc., are excluded. On standing, the tabetic unconsciously assumes a position which supplies to him a broad base of support. This broad base is secured by strongly everting the feet and standing with the knees well apart and at times one foot or the other advanced. The gait, which has been described as pseudo-spastic, is simply a progression of this standing position. The strongly everted foot is lifted and brought forward with an uncertain sort of slap and placed on the ground in a position of eversion. Oppenheim,<sup>5</sup> failing to note the importance of the eversion and pronation of the foot, thus describes the typical gait in tabes: "The patient lifts the free leg abnormally high by means of the overacted flexion and outward rotation of the hip joint. Then he throws it down forcibly, meanwhile overextending the ankle joint and foot, so that the foot is set down in a stamping manner, heel first. The knee of the resting leg is abnormally strongly overextended. He walks rapidly with unequal steps, looks always with his eyes fixed to the ground and would fall if he turns his eyes in another direction." The toe falls to the ground, because the heel strikes first. The gait may be described in a few words as pseudo-spastic, uncertain, irregular and everted.

As Whitman<sup>6</sup> has shown, there is a marked mechani-

cal disadvantage produced in either standing or walking with the foot in an everted position, as the body weight falls inside the tarsal arch and the tendency is to roll the foot inward. i. e., pronation. Accompanying this pronation of the foot the weight-bearing line also falls to the inside of the knee joint. These two mechanical disadvantages we have observed to be very evident in our series of cases. The degree of pronation was so striking in many of these cases, as, for instance, in Case 1, that the feet presented the appearance of being absolutely flat.

Tracings were taken in order to demonstrate the presence or absence of the arch of the foot. Invariably it was found that the arch had not collapsed. In some of the tracings the outer edge of the foot is raised from the paper, showing the degree of pronation present. In none of the tracings is there any evidence of arch obliteration. The discrepancy which exists between the appearance of these feet in standing and walking and the evidence as shown by the tracings is perfectly apparent. The feet were found to be flexible to a marked degree. This flexibility in many of the cases extended to a condition of hypotonia.

As far as these fifteen cases go, we are inclined to the opinion that the tabetic foot is a pronated foot; that this pronation is a result of the tabetic changes in the cord and peripheral nerves which make it necessary on account of the loss of muscle sense and other sensory changes for the individual so affected to assume the everted pseudospastic gait; that the arch of the foot is not collapsed, but that it is much lowered, due to the hypotonic condition of the muscles; that this pronation as well as the hypotonia, varies from the extreme condition, which the photograph (Fig. 1) shows, to a condition where the pronation is not easily observed, and that this variation seems to depend on, or rather to accompany, the amount of ataxia.

In observing these cases it immediately occurred to us that a correction of this faulty walking machine would be of benefit to the patient. The things to be accomplished seemed to be to correct the pronation and to hold the foot when bearing weight in a supine position, to construct a shoe that would supply a broad standing base. These needs being fulfilled, it would be possible for the tabetic to learn to walk much more readily and comfortably than when handicapped by the mechanical disadvantages incident to eversion and pronation.

It might be mentioned in this place that the Fraenkel<sup>7</sup> method of exercise treatment was used in most of these cases in conjunction with the attempt to improve the mechanism of walking.

We at first placed under the feet of our patients the ordinary steel flat-foot plates designed to correct pronation. It soon became apparent, however, that it was necessary to supplement this form of support by broadening the walking base. Later we have given up the steel plate and are depending on a modification of the shoe designed by Mr. Thomas<sup>8</sup> for the treatment of ordinary valgus. Briefly, this shoe presents the following points: The heel is run forward on the inside to the distance of from half an inch to an inch. Between the inner and outer soles a wedge-shaped piece of leather is placed

3. Hoffa: "Die Orthopedie im Dienste der Nervenheilkunde," 1900.

4. Idelsohn: "Ein Beitrag zur Pathologie und Histologie des Tabischen Fusses," Deut. Zeit. für Nervenheilkunde, vol. xxvii, Nos. 1-2, 1904.

5. Oppenheim: Lehrbuch der Nervenkrankheiten, Fourth Edition.

6. Whitman: "A Study of the Weak Foot," Trans. Am. Orthopedic Soc., vol. viii.

7. Fraenkel: "Die Behandlung der Tabischen Ataxie mit Hilfe der Uebung," 1900; also "Ursachen der tabischen Ataxie," Neurologisches Centralblatt, 1897, Nos. 15 and 16.

8. Thomas: Bulletins et Memoires de la Soc. med. des Hopitaux, 1885 (Quoted in Maladies de la Moelle Epiniere Dejerine).



which is designed to raise the foot at its inner edge an eighth to a quarter of an inch. Various flat-foot appliances, such as cork pads or steel plates, are placed in this shoe to support the hypotonic arch. Some of the patients presented a hypotonic condition of the ankle joint, which we have treated by having a leather stiffening in the inside of the upper.

As a direct result of the pronation there is undue strain thrown on the knee, transmitted to the hip and affecting the spine. Dane,<sup>9</sup> in an article entitled "The Effect on the Leg of Pronation of the Foot," comes to the following conclusions: "In addition to the generally recognized motion of the malloli inward and slightly downward, the normal outward rotation of the tibia is replaced by an exaggerated rotation inward. These changes acting together produce an alteration in the obliquity of the axis of flexion of the ankle joint sufficient to destroy the mechanism by which the normal joint is enabled to support the body weight. As a consequence, flexion must be prevented and equilibrium be maintained wholly by muscular force. This increased rotation of the tibia interferes to a great extent with the operation of the mechanism by which complete extension of the knee should lock the joint and render it proof against the constant tendency of the body weight to flex it. The knee must, therefore, in subjects with pronated feet be kept in extension by constant exercise of muscular force."

From a clinical point of view, the cases offer nothing of interest. They represent an average lot of tabetic cases such as come to every neurologist. Excluded from this series are bed-ridden tabetics, and those who have arthropathies of the feet, and those who have any complications which in themselves might explain the condition of the feet.

From the tracings here shown the character of the feet is apparent. That they are pronated can not be denied, and that they are not flat feet is also definitely proved. An interesting point might be mentioned here, and that is that there is very evidently some relation (how close we are not yet ready to say) between the degree of pronation and the degree of ataxia. This is well shown by Fig. 2. This is the most normal foot in the series and this case had absolutely no demonstrable ataxia. We are inclined to believe that this observation, if it is proved to be a fact, will be of some diagnostic and prognostic importance.

#### THERAPEUTIC ATTEMPTS.

In the face of the obviously wrong mechanics of the tabetic's implement of walking, a correction was indicated, based on the degree and the kind of deformity found. This correction was only gradually arrived at, as we were on absolutely new territory. The shoe that we are using now is the result of a number of experiments, and we are by no means as yet certain that we have devised the perfect shoe for the ataxia gait of tabetics. The following represents the principles on which the shoe was devised and the reasons for each improvement:

The internal excursion of the ankle and the inward rolling of the foot we have tried to overcome by means of an artificial support, realizing that, in addition to the mechanical disadvantages in walking, the position tended toward abduction and flattening of the long arch of the foot. The plate known as the Whitman plate is in the ordinary case an effective device for the correction

of pronation, reminding the wearer at each step by its pressure on the scaphoid that the foot must be supinated. The nervous changes in tabes dorsalis leading to anesthesia remove this element and make it necessary to have a support that gives definite pressure to counteract the pronating tendency. After we had tried various steel supports, we came to the conclusion that the difficulty was not in holding up the arch, but in preventing the inward roll of the foot. This fact has been demonstrated by Hoke and Bradford.<sup>10</sup> We found it to apply especially to the tabetic foot, having the above nervous elements to combat.

The shoe designed by Thomas we have used of late with the best results. This shoe shifts the weight to the outer side of the foot and holds the foot in a supine position. Using the knowledge given us by Hoke and Bradford,<sup>10</sup> the support inside this shoe is placed so as to supply the lifting resistance beneath the internal cuneiform bone, that is well forward of the astralalus in order to check the pronation. A cork insole cut so as to meet these conditions we have found by experience to serve better than a steel plate, its points of advantage being its lightness and the lack of dangerous rigid pressure.

Realizing that the tabetic needs a broad, sure footing, we have used an ordinary broad, straight-last, laced shoe. To this we have added the lengthened heel and the raised inner edge as the main factors of correction. As to the amount of supination necessary we have had some difficulty; at first we put all of our cases into well-marked supination, throwing the weight well to the outer arch of the foot. In some of the cases it soon became apparent that this position was causing trouble, as there was too much strain on the ligaments. As a result of this development, we have been trying of late to judge the amount of pronation in a given case and to give to this case a support that corrects this pronation, but does not overcorrect it.

Another point that is of less importance, but that nevertheless has aided some of our patients to a material degree: we found that by putting a series of transverse cleats on the sole of the shoe the footing was made more secure; these cleats are similar to those that are seen on the shoe of a football player. They are one-eighth of an inch high and run across the sole zigzag or straight lines about an inch apart, three in number. These cleats have given an added sense of security, especially when the patient is walking on a plane surface; incidentally the increased height has prevented, in one case, the toe striking the ground in the forward movement in walking. In several cases the hypotonia has been present to such an extent that the ankle joint has needed support; this need has been filled by adding a leather stiffening to the inside of the upper of the shoe. Such a shoe as this we have found to be of undeniable advantage to this class of cases. It is important to have the sole and heel level so that the surface contact is perfectly applied, allowing no rocking.

In regard to the therapeutic results of this study, we are much inclined to be very conservative, as is consistent with a method as new as this one is. We have little doubt, however, that the patients to whom we have given the shoe have shown from that time on a marked improvement in their gait. They all have said that they feel very much more comfortable, have less hesitation in

9. Dane: "Some Effects on the Leg of Pronation of the Foot," Trans. Amer. Orthopedic Assn., 1897.

10. Hoke and Bradford: "An Anatomic Consideration of Pronation and Its Relation to Treatment," Trans. Amer. Assn., vol. viii, p. 175.



walking, have more confidence in themselves and are enabled to walk greater distances than before without fatigue. From our own observations we are convinced that the improvement in these patients is not imaginary, suggestive or due to faulty observation. The striking improvement in the posture of these patients is well worthy of note and is particularly of value because some of them had occupations that required upright positions for long periods of time. From a mechanical point of view the tendency to assume normal attitudes in both walking and standing was especially striking. Another factor of some importance was the disappearance of pain in some of these cases. If the pronated foot in otherwise normal individuals causes pain by the overexertion of certain muscles, this same condition must be harmful in tabetics. We feel that further study in this direction may throw some light on the production of the arthropathies in tabes, for the reason that faulty attitudes, by throwing weight and strain on structures not designed to withstand them, may more easily become the seat of the joint and bone changes typical of those found in tabes dorsalis.

#### CONCLUSIONS.

1. This series of observations has shown unquestionably that the foot of a tabetic with any degree of ataxia in the lower extremities is a pronated foot.



Fig. 3.—Standing position of a tabetic showing strongly everted feet.

2. The effect of this pronation leads to muscular strain on the ankle, knee, hip and spine. This, together with the hypotonia, tends to break down the long arch, thus producing a faulty mechanical instrument by which walking is accomplished.

3. The pronated foot plays an important and hitherto unrecognized rôle in the production of the ataxic gait in tabes.

4. Correction of this faulty mechanism tends to increase the ability of a tabetic to learn to walk normally.

5. In conjunction with the Fraenkel method of exercise treatment, the correction of the faulty mechanism of the foot indicated in this paper offers the most favorable treatment for the ataxic gait of tabes dorsalis.

#### DISCUSSION.

DR. H. T. PERSHING, Denver, Col., said that in the past efforts to relieve tabetic symptoms have been very restricted, and that anything which will enable the patient to walk better is likely to be of very great service. Dr. Pershing mentioned the shoemaker, told of by Dr. Patrick several years ago, who made a special kind of shoes for tabetic patients and sold them for \$100 a pair. Dr. Pershing said that at first it seemed absurd that any one would be willing to pay such a price for a

pair of shoes, but now he can easily see that a pair of shoes properly made to correct the mechanical defects in tabes would be worth a great deal more than that. He classes the orthopedist nearer the neurologist than any other specialist, and stated that he gets more help in his work from his colleague, Dr. Packard, an orthopedist, than from any other man. Dr. Pershing also mentioned the fact that Dr. S. Weir Mitchell's Hospital in Philadelphia is known as the Orthopedic Hospital and Infirmary for Nervous Diseases.

DR. JOHN PUNTON, Kansas City, Mo., said that all neurologists who treat tabetic patients know how limited are the means for giving them relief, and that any method of treatment which assists in any way to overcome the ataxic gait is most valuable. If the method advocated by Dr. Schwab can be borne out by practical experience, Dr. Punton considers that he has made a step in advance in the treatment of tabes, for which he deserves thanks.



Fig. 4.—Everted pronated feet in tabetic gait.

DR. SMITH ELY JELLIFFE, New York, declared that when an individual has an ailment that is bound to last for 13, 15, 20 or 25 years most physicians lose enthusiasm in his treatment. The physician is apt to tell such persons that there is very little to be done for them, and as a consequence they stray into the hands of irregular practitioners and help to make those individuals successful. Neurologists are to blame, Dr. Jelliffe said, for not taking enough pains with these patients. In referring to shoes for tabetic patients, he said that, while shoemakers in Chicago charge \$100 for a pair of shoes for these patients, in New York one man charges from \$3,000 to \$4,000. A shoemaker there has profited for many years in the construction of special shoes for tabetic patients for which he charges a special price, and the chief reason that he is able to succeed is that very few neurologists and very few orthopedists



have taken as much pains as that shoemaker has. He is entitled to his profits, to a certain extent. Neurologists are not quite so careful nor so optimistic as they might be, and the cases drag on indefinitely because of the obvious past experiences in the treatment of tabes.

DR. DAVID I. WOLFSTEIN, Cincinnati, Ohio, said that he knows of a man who paid \$750 for a pair of these shoes, and he had to take them back to the shoemaker to have them fitted. The man returned home very happy with the shoes, but in about two or three months he ceased wearing them and the shoemaker had the \$750. Dr. Wolfstein does not know what became of the shoes. He asked Dr. Schwab whether or not progression in the hypertonicity would be overcome by correction applied to the tabetic foot, and if he has had an opportunity to examine the condition of the tabetic hand in cases of ataxia of the upper extremities, and whether or not that is explained by the same conditions as in the foot.

DR. J. W. PUTNAM, Buffalo, N. Y., said that it is the original name of the disease, progressive locomotor ataxia, which has so influenced physicians and made them unwilling to attempt the treatment of the disease. One must be careful to avoid

simple movements become easier. The same thing is true in regard to the mechanical correction. It is the importance of the relative position of the shoes, of the relative balance of the muscles. The two factors must work together. If the patient relies on a \$5,000 pair of shoes, minus the Fraenkel movements, there would not be much benefit. This correction of the tabetic foot is of very little value of itself, but in combination with the education of the brain and the development of the muscles many of these patients may obtain a great deal of benefit.

DR. SIDNEY I. SCHWAB stated that an investigation based on fifteen cases must be regarded as preliminary to further work along the same lines. There is a possibility that further study in the mechanics of the tabetic foot will give much valuable information. When he spoke about the two or three patients who never had any pain after the shoes were worn, he did not refer to the typical tabetic pain, but to muscular pains which were attributed to the wrong position of the foot. He emphasized one point in regard to combining this method with that of Fraenkel and that has reference to the effect on the patient in a psychologic sense. The greatest relief that one can afford tabetic patients with ataxia of the lower extremities consists in the restoration of their gait to somewhere near normal



Fig. 5.—Pronation and eversion of feet in standing.



Fig. 6.—Corrected attitude of tabetic wearing modified shoes.

too great confidence in any system of mechanical correction, for no mechanical correction can be of permanent value. When suspension was first used in the treatment of locomotor ataxia the explanation was made that it relieved the patients by stretching the spinal cord and changed the nutrition of the cord, and that the benefit to the patient was permanent; but as years went by and the number of observations continued the number of patients that were benefited decreased. Dr. Putnam believes that the greatest advance made in the treatment of locomotor ataxia was started by Fraenkel in his movement treatment. He gave the patient at first the simple movements and when he was able to accomplish these he added more difficult movements, such as walking backward, and lengthened the steps. It is simply in the development of the muscles along that line that the education comes to the legs, just as the education comes to the hand of the skilled piano player. The more one gives exercises and the more these are varied the more the direction of the nerve paths is changed; the more self-reliant the patient is made the more he will improve. When he becomes more able to carry out the difficult movements the

conditions. Most patients do not care whether they have a knee jerk or not. They do not care whether they have an Argyll Robertson pupil or not, but they do care about their inability to work without exciting attention. The thing that separates a tabetic from the rest of the normal world, from his point of view, is his peculiar gait. If that can be corrected so that it approaches to the normal, then many thousands of happy moments are added to the tabetic's life. The patient's chief concern is centered on this point. If the gait in a tabetic can be corrected, all that can reasonably be expected from therapeutics is accomplished. The shoe as Drs. Schwab and Allison have planned it adds about three or four dollars to the cost of a good shoe. They have heard that a very expensive shoe for tabetics which is manufactured at an excessive price is on the market. The probability is that this shoe is made with a very broad base, thus insuring a certain amount of firmness to the patient. In respect to the effect of this treatment on the hypotonicity, Dr. Schwab does not feel that the material is sufficiently large to speak with any certainty. He has no means of observing the degree of hypotonicity or



rather of measuring its extent. Certainly no marked change has been produced. The probability is that if the joint is hypotonic it will always remain so. We simply tried to correct the mechanical function of the joint and not its anatomic condition. As far as the ataxia of the hands is concerned this is an entirely different proposition. The hand bears no constant weight, and this weight-bearing function of the foot creates the problem under consideration. The shoes have been worn by some of the patients about eight months. Drs. Schwab and Allison have found so much to learn and so much to correct that they can not say that the best sort of shoe has as yet been devised. The fact that the patients feel more secure the moment that they wear the shoes has been a constant observation. Some of the most important features of the shoes were suggested by the patients themselves.

## THE WATER SUPPLY IN SHIPS FROM ITS BEGINNING TO THE PRESENT TIME.\*

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The problem of the water supply for sea-going ships is one of the most important and, at the same time, one of the most difficult to solve of all the problems of naval hygiene. It certainly is not a simple question. Ships can not always choose the source of their water supply. It may be impure or even infected to begin with. But even granting that it was faultless when collected, it may not remain wholesome during a long cruise.

The early efforts of the old sanitarians to provide faultless drinking water for seamen are full of pathos. Before the last century men did not know in what wholesome drinking water consisted. Much less did they know how to preserve it pure and sweet. When in addition to the ignorance of the age we find all efforts toward progress met either with cold indifference or active opposition, we may easily see why so little advance was made and feel a deep sympathy with the old ship's surgeons, Blane, Lind, Trotter, Fonssagries and many others in their fight against such obstacles.

To-day, with the help of chemistry and biology, the naval hygienist has come nearer solving the problem of a perfect water supply. While there are yet a few details to be perfected, we feel that they will soon be remedied and we, therefore look to the future with confident hope of success.

### SOURCES AND COLLECTION OF WATER.

Until recently little or nothing was known about what drinking water should or should not contain. Of the two classes of impurities, organic and inorganic, the inorganic was the first to be investigated. About 1850 chemistry was far enough advanced to come to our aid and give us a few analyses of water. Later in the century biology helped us to discover the source of the more dangerous form of organic contamination and gave us means and methods for preventing the same.

A century ago, however, nothing of all this was known. The old sanitarians were influenced in the choice of water not by knowledge but by personal whims, a condition which even to-day has not wholly passed away. Neither chemistry nor biology has given us analyses that can be considered as generally applicable to all places and conditions at the same time. Different localities on the earth's surface produce waters of differ-

ent compositions, and neither a chemical nor a biologic examination of a given water may be of any great value without a local inspection of its source. When we, moreover, consider that it is the proper and judicious interpretation of all the data involved that can give us an adequate idea of the nature of a water, we ought rather to be surprised at what the old sanitarians did know than at what they did not know.

Dr. Gilbert Blane,<sup>1</sup> for instance, tells us that "spring water is to be preferred to running or stagnant water," saying "unless it is taken at the source or near it, it is apt to be impregnated with decayed animal and vegetable substances, such as grass, wood and dead insects. This is an inconvenience that is greatest in hot climates, where everything teems with life and where materials of putrefaction are both more abundant and more prone to corruption."

That the greatest danger was hidden in the organic impurities of water was already well known in the middle of the eighteenth century, at least to Blane, we have a right to infer, for he says of that kind of impurity that "it is the most pernicious impurity" and that "the mineral impregnations common in springs are seldom in any degree unwholesome and do not, like the other, make the water corrupt." These are certainly correct observations and would pass muster to-day. The great and urgent necessity in those early times of navigation to procure a good and wholesome drinking water for a ship, in most any part of the world, sometimes took those old sanitarians far afield to inspect any lake, brook, spring or well that offered such a supply and made them practically acquainted with the natural sources of water the world over.

That meteoric water was at least in part depended on for furnishing a supply of drinking water, is perhaps easily understood, and may, moreover, be gathered from the early writers. Thus, Captain Cook, during his memorable cruise between 1772 and 1775, during which it is said that he lost but one man from disease, attributes to rainwater the swelling of the glands of the throat, and Gautier says of glacier water that it is very unhealthy. But Saussure already has called attention to the fact that the people in the high Alps, as well as the Esquimos, known to consume water from melted ice and snow, were essentially healthy peoples; and Wilson<sup>2</sup> says of rainwater: "When carefully collected, kept for a week or two in an iron or brickwork cistern, until its organic matters are decomposed, there is probably no better drinking water to be obtained." The explanation of all this is, as we know now, that rainwater, especially when collected in mid-ocean, is essentially a distilled water. While free from positive contamination, it never contains mineral salts to make it palatable.

One danger not sufficiently recognized in the early days of navigation is becoming better appreciated in recent years. That is the danger from contamination of water during its transport from shore to ship. A water perfectly pure and wholesome at its source may, by the time it reaches the ship or the sailor's stomach, be totally the reverse. Water, no matter from what source, must be taken to the large ships by a water boat. Barrels, wooden or iron tanks, earthenware vessels or even open rowboats may intervene between the natural source of supply and the scuttle-butt, with all the

\* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. "Observations on Dis. of Seamen," 3rd Edition, London, 1799, p. 297.

2. "Naval Hygiene," by Joseph Wilson, M.D., U. S. Navy, Philadelphia, 1879.



chances of contamination which such transport suggests. It is useless to say that, in these days of distilled water, these methods are no longer in practice. Every naval surgeon knows that a cruising ship will often take water from shore and fill its tanks with it, whether it is merely feed water for the boilers or not. These same tanks are used again for drinking water and consequently can remain safe from infection only when none but pure water is allowed to be stored in them. Again, every cruising ship will now and then get into places in which the most primitive methods of watering a ship are the only resource.

The usual method of examining water after it had reached the side of a ship in a water boat was merely perfunctory and of no practical value whatever. A sample of it was indifferently collected in a tumbler or tin vessel by a messenger boy and sent to the apothecary for examination. The only test applied was the nitrate of silver test for chlorids and the water was pronounced good or bad in proportion to the turbidity being much or little. Better training of naval surgeons in methods of hygienic water analyses and a more liberal supply with the means to carry them out on board ship have wrought great changes and improvements within recent years. But unless the naval sanitarian watches every step which the water takes from its source of collection until it finally reaches the tanks of his ship, he can form no adequate idea and make no trustworthy report as regards the quality of the water collected. No chemical or bacteriologic examination will give him data sufficient to make a complete and sufficiently reliable report on the quality and fitness of the water in the ship.

#### STORAGE OF WATER.

The storage of water on board ship dates from the time when ships first took to the high seas and went out on long voyages away from land. For short voyages in small boats little water was needed and the time of storage was short. This small amount was kept in earthenware vessels, and even to-day this is the favorite and handy means of keeping small amounts.

For long voyages, however, where the crews are large, this method is inadequate and wooden barrels at first took the place of earthenware jars. Notwithstanding the fact that water thus stored became putrid after a while, this antiquated method of storing endured over 200 years. Putrefaction was expected to occur as a matter of course and was so universal on shipboard that sailors had the common superstition that water had to putrefy three times before it became drinkable. No one ever succeeded in preventing this putrefaction of water stored in wooden casks or barrels.

That the wood of the barrels out of which the casks were made had something to do with putrefaction of the water stored in them was well known to the old, observing sanitarians, who had various ways of treating these casks so as to preserve the water in good condition. Says Blane,<sup>1</sup> "The purest water is apt to spoil by producing a putrid glare on the inner surface of the cask which contains it. There is a great difference in this respect between a new cask, especially if made of moist wood, and that cask which has been hardened and seasoned by age and use. Several contrivances have been proposed for preparing casks that hold water, but none have been found by experience so effectual as letting them stand for some time full of sea water, and it is a great advantage of this method that it is so easily practicable." And then he continues to say: "We consider all water kept in wooden vessels as more or less

liable to putrefaction, but there is a substance which is neither rare nor costly that effectually preserves it sweet. This is quicklime, with which every ship should be provided in order to put a pint of it into each butt when it is filled."

"It is probably owing to the small amount of quicklime found in Bristol water that it is so incorruptible. It has the advantage of not being injurious to health but, on the contrary, is rather friendly to the bowels, tending to prevent fluxes." Finally, he fortifies his recommendations by experience, saying: "In the year 1779 several ships of the line arrived in the West Indies from England, and they were all afflicted with the flux except the *Stirling Castle*, which was the only ship in which quicklime was put into the water."

Blane explains the action of quicklime by the destructive property which it has on animal life and on the "glare" that collects on the sides of the cask, as much as on a species of vegetation of the order called algæ by the naturalist. He also speaks of alum, cream of tartar, vinegar, vegetable and fruit juices and tamarinds as having been made use of. He relates, among others, that the fleet under Sir Charles Saunders found that the waters of the St. Lawrence produced fluxes and that this quality was removed by throwing in four pounds of burnt biscuits into each cask before it was used. But he adds, "there is nothing so effectual and subject to so few inconveniences as quicklime." Thomas Trotter,<sup>3</sup> after treating on diet, remarks: "We can not leave the dietetic part of our work without adding some remarks on water. We were employed the whole summer of 1792 in making experiments on the best method of preserving water pure and sweet in long voyages, and a summary of this is published in a later work called 'Medical and Chemical Essays,' printed by Jordan, Fleet street, for Mr. Maubray of Portsmouth, to whom I presented a copy at the time his printing office and materials were burned, in December, 1794. We found, after trying everything, that the best practicable method was gently charring the casks in putting them together, both staves and heads, which rendered the surface unfit to decompose the water. But so little was this practice deemed perfect by the victualling board that Mr. Reeks, the cooper at Weevil, showed us an order from the commissioners expressly forbidding it, as they said it blackened the fluid." Then he continues: "It, moreover, makes the casks last longer by hardening them against worms in hot countries and also less liable to shrink from the hoops.. The whole process," he says, "is dependent on chemical principles in the above work and no one has dared to say that they are wrong." "I now, in the name of the service, request some captains to take the business up and carry to sea a given number of casks filled with pure water, one-half charred according to our way and the other half in the common way. Some trusty person must superintend the duty that it may be fairly tried, for we know it must succeed."

#### PRESERVATION OF WATER.

Nowadays, none but a few fishermen perhaps use the wooden casks for water. Since we can not and will not wait for our water to become thrice corrupt, as the old saying was, some shorter means had to be found. It was becoming more and more recognized that the method of storage had to be improved in order to preserve water sweet. The otherwise good effects of charring having proved of merely temporary benefit, sulphurization was

3. Trotter, Thomas, M.D.: *Medicina Nautica*, London, 1804, vol. ii. p. 167.



tried and found better. The manner after which sulphur was used is as follows: The sulphur was burned in the barrel and then the barrel was filled one-fourth of its capacity with water, then some more sulphur was burned and the barrel filled half full of water, and so on until the barrel was full. Then, for every ten liters of water twenty drops of sulphuric acid was added and the barrel covered up. Such water, though with an acid taste, was not disagreeable to drink.<sup>4</sup> Then the addition of oxid of manganese was attempted in the proportion of one gram to 150 liters, as had been recommended by Perrinet. Although this process gave the water an acid, rather astringent taste, it was inoffensive, more expeditious and much easier carried out than sulphurization. In 1822 four barrels of water were treated in France, two by charring and two by addition of oxid of manganese. After 33 months the water in the former two was found to be in a putrefying condition and that in the latter two was found good to drink in spite of its taste. The facts could not be denied and every one had by this time come to recognize that all efforts to render wooden barrels a fit means for water storage had miserably failed in one way or another. Recommendations for substituting iron casks for wooden barrels were first made as early as 1739 by Sibon, a captain at the port of Toulon,<sup>5</sup> while General Bentham is said actually to have introduced iron casks into the British navy in 1798, after previously experimenting with them for years. This was done later also in the French navy, and the cruiser *Uranie*, fitted out to go on a scientific

expedition, was the first ship of the French navy supplied with iron tanks alone. This does not mean, however, that the practice became universal immediately. On the contrary, it spread very slowly, indeed, for we have in our own navy a fairly recent record of the use of wooden casks down to the latter part of the last century. Rear Admiral G. W. Baird,<sup>6</sup> U. S. N. (retired), writes me that the sailing sloop *Constellation*, of 1,186 tons displacement, carrying a crew of 228 men, had 48 iron tanks and 124 wooden casks, containing 32,364 gallons, 120 tons of water. The amount of space which these water casks occupied is shown in the further statement of Baird, when he says: "The 48 iron tanks alone weighed 31 tons, there being no record of the weight of the casks. In this ship it will be seen that a little over one-eighth of her total displacement was taken up in the water supply." The delay in the introduction of iron tanks must be attributed to two principal causes: (1) In prebacterial days no satisfactory explanation could be given for the occurrence of putrefaction in wooden barrels, and therefore no good reasons seemed to exist why the same water should not putrefy in iron casks as well as in wooden vessels. It was not recognized and, conse-

quently incredible that the source of putrefaction consisted in bacterial action on sulphates contained in the water. Now that we know of sulphur bacteria engaged, on the one hand, in reducing sulphates to sulphuretted hydrogen, and in oxidizing the latter to sulphates, on the other, we can better understand at least one of the causes of this trouble and how the porous wooden walls became the culture plates for that class of organisms.

(2) The other reason is that iron casks, although a great improvement over wooden barrels, also had their serious objections themselves. One of these was that they were expensive and the other was that the iron was quickly oxidized and the resulting rust deposited in large quantities. The iron rust that forms as a result of the direct contact of pure water with the unprotected iron plates is at first deposited; when the ship gets under way it becomes suspended in the water. When we add to this the heat of a tropical climate and of a hot ship, a drink of such water, it may easily be imagined, is not very refreshing, to say the least of it.

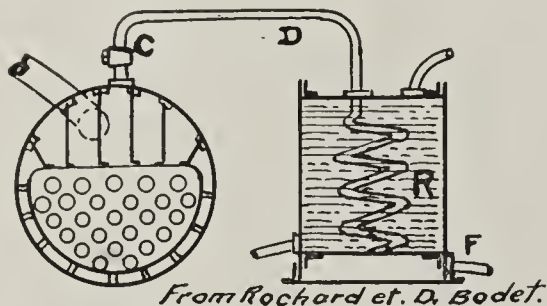


Fig. 1.—Distilling apparatus of Rochard and Bodet.

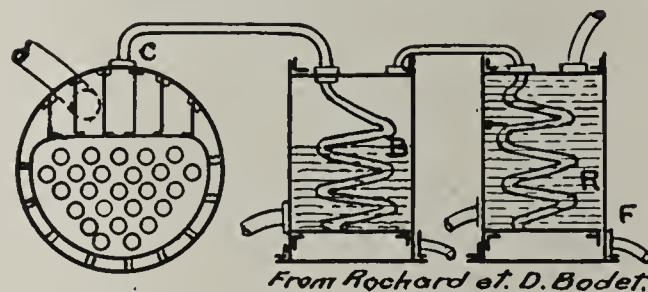


Fig. 2.—Distilling apparatus showing special condenser.

most commonly employed material to-day and the least objectionable for lining these tanks is Portland cement.

In lining the tanks with cement, various additions to the latter have been recommended. Thus, Sestini recommended that chalk be added to it; but this resulted in a very hard water. The best and simplest process is that recommended by Lefèvre and is as follows: The sides of the tank are thoroughly scraped with a metallic brush to free them from rust. This is followed by flaming the sides with a soldering lamp. After flaming, the best Portland cement, made into a convenient consistency, and prepared with boiled water, is applied with a soft brush and allowed to set perfectly; several coats may be applied if necessary. After the cement has hardened, the tank is ready for use. Such a lining, it is claimed, will last for two years. Chalk, to say the least, is unnecessary. We may conclude, therefore, that the problem of preserving water on board ship is provisionally solved and that iron tanks with a cement lining will be used in the future on all ships of the navy as in those of the merchant marine where the vast importance of a good, wholesome water is recognized and appreciated.

#### WATER CORRECTIVES.

Imagine seamen in the early days of circumnavigation, far away from land and pure water with nothing but bad water to quench an ever-recurring thirst. We can-

4. Rochard and Bodet: "Traité d'Hygiène Navale," etc., Paris, 1896, p. 405.

5. Lefèvre: Thèse de Paris, 1869.

6. Letter; See also Journal Franklin Institute for 1872.



not wonder that they should try by every means conceivable and inconceivable to improve their drinking water. We, therefore, find a host of remedies for bad water some of which even anticipated the methods in use to-day. Says Blane, writing in the latter part of the 18th century: "When the water of wells or brooks is found loaded with mud, the following expeditious method of filtration, described by Dr. Lind, has been practiced with success: 'Let a quantity of clear sand or gravel be put into a barrel placed on one end without the head so as to fill one-half or more of it and let another barrel, with both ends knocked out, of a much smaller size, be placed erect in the middle of it and almost filled with sand or gravel. If the impure water be poured into the small barrel or cylinder, it will rise up through the sand of the larger one in the interval between it and the small one.'" In this description, we can see, without a great stretch of the imagination, the germs of the construction of a modern well or of the present method of sand filtration, if not of the Pasteur-Chamberland candle. Again, with regard to aëration, Blane says: "Such is the attraction of the air for this offensive matter that the water need only be brought thoroughly in contact with it to be rendered quite sweet." Then he describes an apparatus invented by a Lieutenant Osbridge. With this apparatus the water in the cask was raised a few feet and allowed to fall through several sheets of tin plates perforated like "colanders" and placed horizontally. Blane speaks of

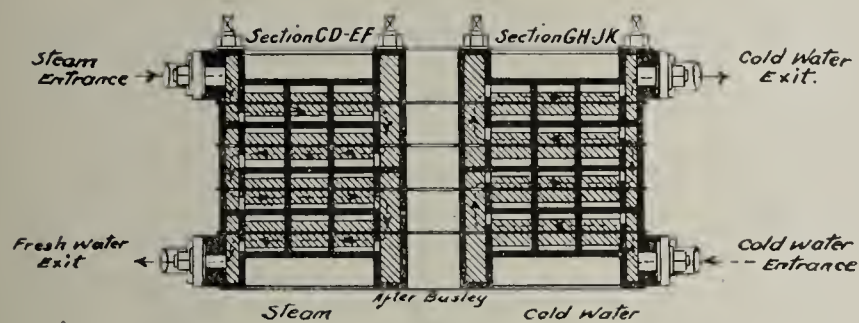


Fig. 3.—Pape and Henneberg condensor.

it as "a machine very deservedly in common use and the working of it is a modern and salutary exercise to men in fair weather." Thus we may take it for granted that, besides filtration, these old sea sanitarians knew well the effects of aëration as far back as 1750.

At that time the water they had to deal with was presumably full of decaying organic matter. These old wooden casks were indeed nothing more nor less than what we now conceive to be septic tanks and in the conditions under which these tanks were kept, down in the bottom of the ship, dark, damp and mouldy places, poorly, if at all, ventilated, the anaërobic must have led an ideal existence. Consequently, aëration produced an improvement almost startling.

#### DISTILLATION OF WATER.

Among all the numerous water correctives, distillation requires a special treatment, on account of the large and important part which it always played in connection with the water supply on shipboard. It is now well recognized that at least one of the reasons why distilling of sea water did not become more quickly popular than it did, was the firm belief entertained at that time—and still entertained by some of the present day—although for better reasons than of old, that something had to be added to it before distilling was begun, so as to "remove the spirit of salt." It was perfectly well known to Dr. Lind and to his sympathizing contemporaries, however, that the distilling could be done without

adding anything to the sea water to begin with. Says Lind:<sup>7</sup> "In 1761, I had publicly demonstrated by various experiments at the Royal Academy at Portsmouth, that a simple distillation rendered sea water perfectly fresh, pure and wholesome. These experiments were made in the presence of Mr. Hughes, resident commissioner of the navy at that port, and of Mr. Robertson, late master of that academy. In the month of May, 1762, an account of this discovery was read at a numerous meeting of the Royal Society in London; in March, 1763, the second edition of my essay on preserving seamen, containing this discovery, was published in London, by the authority of the Lords Commissioners of the Admiralty; which honor their lordships were pleased to confer on account of this important discovery."

Hauton, in 1670, is said to have recommended caustic alkali for the purpose of destroying the bituminous matter. Appleby, in 1734, published his procedure by order of the English admiralty, in which he extolled the virtues of caustics and calcined bones. Butler employed soapsuds. Walcot added antimonial preparations, while

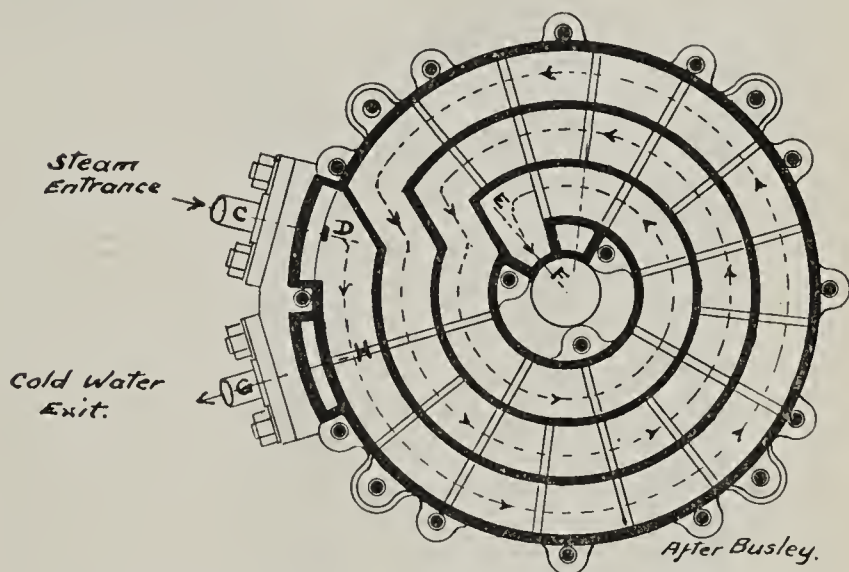


Fig. 4.—Pape and Henneberg apparatus, showing tubular arrangement of condensor.

still others wanted to let the water putrefy before beginning its distillation. Lastly, Perrinet, in more recent times proposed the addition of manganese and charcoal in the proportion of 1:5000.

While, then, the credit of having been the first to suggest and to carry out distillation of pure water from sea water is claimed by several individuals, it may be said that distilling did not come into general use before 1761, when Dr. Lind was fortunate enough to discover that sea water simply distilled, without the addition of any ingredient, afforded a water as pure and wholesome as that obtained from the best springs.

Even the discovery of the learned Dr. Stephen Hales<sup>8</sup> did not find general favor at that time, although received with considerable enthusiasm by some; so that, distilling may be said to have begun in earnest from the time when Dr. Lind's discovery became generally known. The earliest attempts at distillation were clearly not successful. According to Lefèvre<sup>5</sup> it was Gauthier of Nantes who constructed a distilling apparatus as early as 1717 and Dove and Hoffmann constructed one in 1765. Both these were rejected on account of being too cumbersome. The rudest kind of contrivances were at first

7. An essay on diseases incident to Europeans in hot climates. Philadelphia, 1811, p. 242.

8. Stephen Hales, D.D., F.R.S.: "An Account of a Useful Discovery to Distill Double the Usual quantity of Seawater by Blowing Showers of Air up Through the Distilling Liquor." London, 1756.



devised. The stills in Blane's time, employed on English ships, are described as consisting merely of a "head and worm" adapted to the common boiler, and in which distilling was done, while the food was being cooked. More than eight gallons of excellent fresh water were said to have come off in one hour from the copper of the smallest ship of war.

An extemporized distiller by Dr. Lind is described as consisting of a tea kettle with the handle taken off, and inverted on the boiler, with a gun barrel adapted to the spout, passing through a barrel of water by way of "refrigeratory" or kept constantly moist with a mop. In 1763, Dr. Poissonier devised a distiller that could be adapted to the ship's kitchen and about the same time Irving in England devised a similar apparatus, both of which were received with great enthusiasm at the time.

The progress which the introduction of distillers made in the early part of the 19th century was destined to

these experiments, the question raised by Mr. Sage of the existence of a poisonous "alkalino-oleagino-neptunien gas," according to Lefèvre, was finally decided against him. The end of this controversy was likewise the beginning of improved distillers for use in ships.

The distilling kettles consisted of quadrangular cases made of sheet iron, their interior being divided into three compartments by two horizontal partitions. The lower compartment was the hearth or furnace, the middle compartment contained the sea water to be boiled and distilled and the upper compartment was the place where the food was cooked by the steam generated below. Such a distilling kettle was surrounded on the sides by refrigerators through which ran a spiral pipe in which the steam was condensed.

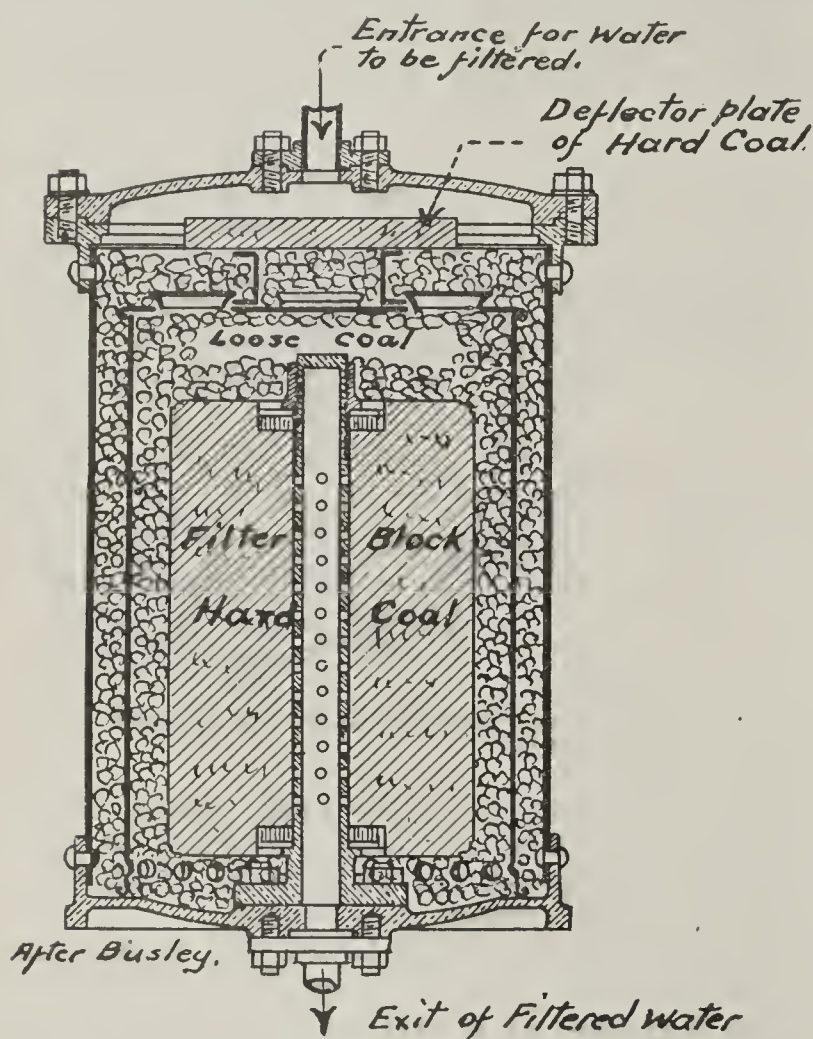


Fig. 5.—A filter of the best pattern showing how the water enters and is at once deflected by a carbon plate over loose pieces of carbon.

receive one more brief check. In 1817, Sage, in an impressive memoir, strongly protested against the general introduction of the distillers of Poissonier and Desormes into ships, claiming that distilled water was dangerous and demanding that new experiments be made before installing these distillers. To judge by what followed the publication of this memoir, it must have made a deep and widespread impression; it also indicates the general importance attached to the whole subject at the time. A series of experiments were at once begun on convicts. Water from the ports of Brest, Toulon and Rochefort was distilled and 41 convicts made to drink none but distilled water for a whole month. Behold! their health was found not to suffer in the least as a consequence of the water they drank. A captain and several other commissioned officers drank of the same water without injury to their health. After

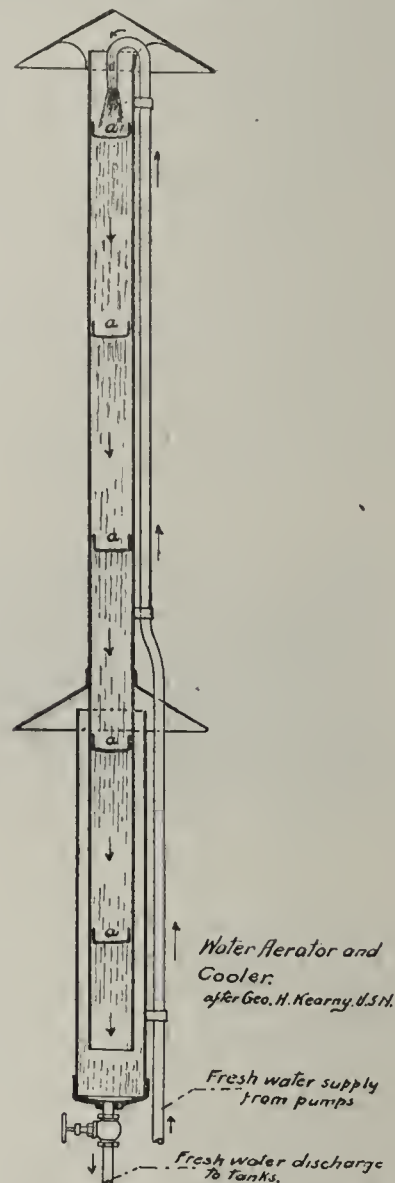


Fig. 6.—Showing aerator constructed by Capt. G. H. Kearney, U. S. N.

It is easily seen that the quantity of water furnished by these distilling kitchens was small and barely gave the amount of water necessary for drinking purposes. The demand for larger quantities was soon supplied by larger as well as better distillers. How slow their general introduction was, into the U. S. Navy in particular, is best shown in the letter from Admiral Baird, already referred to, as well as in the account of an improved distilling apparatus given by him in the *Journal of the Franklin Institute* for 1870 and 1872. The first serious attempt in the construction of distillers for use in the U. S. Navy was begun by him in 1866 on the *Pensacola*, and in 1877-8, I made a cruise on a sloop of war under sail from San Francisco around Cape Horn to Washington, a journey of 112 days, without a distiller of any kind on board.

For a long time, it was steam from the main boilers



that was condensed to furnish potable water. The arrangement was of the simplest kind. One of these boilers was tapped and the steam escaping through a spiral copper pipe was cooled to condensation as may be seen illustrated in principle in Fig. 1. Such water, as might be expected, was almost invariably laden with all the impurities, not only of the sea water, but also with those from the inside of the boiler itself, especially fatty acids, which imparted to the water its well known empyreumatic odor.

Special distillers of greatly improved pattern were made during the latter part of the last century. The most notable among these were the Cousin, the Weis and the Mouraille in France, the Normandy, in England, the Standard Evaporator in the United States and the Pape and Henneberg in Germany. The general principles in the construction of them all is as follows: The sea water is conducted into a special reservoir where it is heated by steam pipes connected with one of the boilers from the main engines. The steam in this arrangement does not mix with the salt water to be evaporated, providing everything is tight, but, after heating the sea water which surrounds these pipes, returns to the main boiler whence it came. The evaporated sea water is condensed in a special apparatus called the condensor (Fig. 2).

Since all the most essential changes and improvements in the present distillers have occurred in that part of it known as the condensor, I may here limit myself to describing what is at present believed to be the best and most economical one in use, namely, the one designed by Pape and Henneberg of Hamburg, Germany.

The Pape and Henneberg condensor (Figs. 3 and 4) consists in a number of flat elements, each one of which is divided into two by a central partition on each side of which the spaces are arranged spirally. The cold water entered from below runs from the circumference to the center of the lower spiral chamber of the lowest element. Thence it rises through an opening in the separating plate up into the lower spiral chamber of the second element, through which it passes from the center to the periphery. From here it proceeds to the lower chamber of the third element and so on until at last it makes its exit from the lower chamber of the upper element. The steam to be condensed, entering above, takes the opposite course, running through the upper spiral chambers of each element in succession, giving off its heat to the cold water, through the thin copper plates (dividing the two chambers), until it issues as water below. The process of the steam's parting with its heat is further favored by the chamber's floors being traversed by ribs, which arrangement causes the steam, as well as the water, to be constantly stirred. It is stated by Busley<sup>9</sup> that the caloric effect of these condensers is almost from eight to nine times as great as that of the ordinary tubular surface condensers. Thus in a condensor of four plates and a cooling surface of 0.56 square meter, the hourly product per square meter surface, is the conversion of 270 Kg. of steam of 116.290 C. into water of 13.60 C. in which is only 2.9 C. warmer than the water used for cooling purposes. (Figs. 3, 4 and 5.)

#### AERATION AND FILTRATION.

In some of the smaller gunboats and other naval vessels that are unprovided with the refrigeration plant and have but a small tank capacity, it often happens

that the distilled water does not remain in the tanks long enough to get cool and the drinking water must be consumed while yet warm. This is especially often the case in tropical climates, just where a cool and refreshing drink of water is most gratefully appreciated. Under such conditions aerators are very desirable.

Figure 6 is intended to show an aerator constructed by Chief Engineer (now Captain) George H. Kearny, U. S. N., according to my ideas, and later, much improved by him installed on board the U. S. S. *Marblehead*. A small pump takes the water from the distiller to the top of the tower where the water drops in succession through a series of perforated copper discs, and, in this manner, becomes cool and aerated. At the bottom, the tower opened into a larger receptacle which served as a reservoir and from which the water was sent either into the tanks or into the scuttle-butt. This aerator did excellent work both as regards aeration and cooling. On board the *Yantic* the men spoke affectionately of their water tower, but my sudden detachment from the ship did not give me time to make the observations I had planned to. The illustration here shown lacks the double cylinder which was intended for the aerator to be installed on board the U. S. *Yantic*. There was to be an air chamber between the inner cylinder through which the water descended and the outer cylinder, to protect the water from the heat of the sun. The openings through which air was admitted to the tower were protected, moreover, by several layers of flannel to remove the dust from the entering air; this also is not shown in the figures.

How carelessly, in former times, some of these aerators were made and used is shown by an incident in my experience in 1890. Shortly after reporting for duty as medical officer of the U. S. S. *Yantic*, in 1890, the unusually large sick list and the nature of the complaints led me to examine the drinking water. This was found to contain organic matter and chlorids in large amounts. The commanding officer insisted that the water was distilled and could not be the cause of the illness. The trouble, however, was promptly traced to the aerator.

The aerator in use at that time consisted of a wooden box about 6 ft. long, 1½ ft. high on one side and ½ ft. wide. The box stood on deck with one of its sides against the engine room hatch; the distilled water entered at one end and passed out at the other, presumably cooled and aerated. When the men were washing the decks, which was done with salt water drawn up in buckets from over the side of the ship, dashing the salt water along the deck, large amounts of it were thrown into the aerator. When it was realized that the *Yantic* was at that time alongside the wharf in the navy yard of New York near the Simpson Dry Dock within 20 ft. of a large privy and urinal, not to speak of the sewers of Brooklyn, no more proof was needed. Suffice it to say that one demonstration of this kind convinced the commanding officer that this aerator was the efficient cause of both the bad water and the sick list and the antiquated piece of apparatus was abolished and the one, described above, put in.

Air injectors and carbon filters were at one time thought to be necessary parts of distillers. The air injectors were usually interposed between the evaporator and the condensor into which latter the air was introduced while the filter was placed between the condensor and the water tank. These injectors seem never to have made good their claims. With the latest distill-

9. Busley, C.: Die gesundheitlichen Einrichtungen der modernen Dampfschiffe, Berlin, 1897.



ing apparatus an oily taste in the water can be avoided and the filters of any kind do not seem to remove that taste when present; with our increased experience and knowledge of the means of distilling sea water in ships, even the carbon filter will probably soon be discarded altogether and pass out of use.

Figure 5 shows one of these filters of the very best pattern. Here the water enters above and, being at once deflected by the carbon plate over the loose pieces of carbon, is distributed through the outer chamber; from here it passes into the inner one and after traversing the inner chamber and the solid carbon block, it runs directly into the tank through the ordinary pipe connections, awaiting its further distribution to convenient places by small steam pumps. The Chamberland filter, after but a trip trial on board ship was given up as impracticable.

According to Plumert<sup>10</sup> the one filter possessing the greatest advantages and the least disadvantages for ship's use, is the micro-membrane filter of Kregor of Vienna. Such a filter is said to furnish 500 liters an hour. But the problem at present before us is to provide such a water by distillation on board ships that does not need to be filtered and, such a water can now be furnished with our present distillers when these are properly managed.

Thus, our experience with peripheral filtration on board ships has resulted similarly to that on shore. The observations of Hesse and Plagge, those of Woodhead and Wood and of Freudenreich and Schöfer have shown that peripheral filtration is, to say the least, not absolutely trustworthy. According to Frankland, Woodhead and others, it was shown that charcoal especially adds to, rather than detracts from, the number of germs after it has been used for some time. This is exactly the general experience with such filters on shipboard; and when the injectors had poured volumes of dust into them, such filters proved to be veritable culture media for germs. All these objections become, of course, accentuated in the tropics.

In a recent article by Le Méhauté,<sup>11</sup> that author wants the air injector to be abolished because of being both useless and dangerous; useless, because the water may be trusted to aerate itself; and dangerous, because the injected air introduces myriads of germs, the nature of which cannot be controlled, although granting that for the most part they consist of non-pathogenic saprophytes. Le Méhauté, moreover, deems the carbon filter superfluous. At one time, says he, it answered a purpose, namely, that of removing particles of lead and greasy matter. Now, since these dangers no longer exist, the filter has become unnecessary.

(To be continued.)

10. Dr. Arthur Plumert: Gesundheitspflege auf Kriegsschiffen, 1900.

11. L'eau potable a bord. Arch. de Med. Navale, 1904, Nos. 9 and 10.

**Arthritis Deformans.**—A characteristic deformity of the foot, says Billings, is a permanent hyperextension of the proximal phalanges, with flexion of the distal bones of the toes. The distal ends of the metatarsals become prominent and tender and make the foot tender, and walking painful and awkward. In most cases, says McCrae, the glands near the affected joints are enlarged. Heberden's nodes, at the terminal phalangeal joints of the fingers, may occur alone or with involvement of the larger joints. The joint (or joints) once attacked seldom clears up suddenly, and the disease, unlike acute articular rheumatism, rarely shifts from joint to joint. The pulse is nearly always above normal. There is rapid muscular atrophy and exaggeration of reflexes. Chronicity is very suspicious of this disease. A highly nutritious diet, arsenic and syrup of iodid of iron are chiefly indicated.—*Denver Medical Times*.

## PRESENT DAY METHODS OF CONDUCTING LABOR CASES AND THE RESULTS OBTAINED.\*

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I selected this subject for presentation before this section because of the great interest obstetric work holds for me among the several branches of medicine with which I am familiar, and because of the gratifying results I have obtained in this line of work.

I have not attempted a critical review of either ancient or modern obstetric methods, but have made the body of this paper a report of my technic of delivery, an analysis of a series of cases which have occurred in my private practice and some few other cases seen in consultation.

Among the splendid activities by which tireless science keeps mankind ever moving forward, it is not often that the obstetrician claims public attention by sensational discoveries or achievements; yet in the broad domain of human progress there has been no more distinct or radical advancement than in that field which calls for the highest resources of both the great branches of medicine.

It is interesting to note in passing that while at one time some disposition was shown to include or to absorb this study under the term of gynecology, there are institutions and professors, among the most learned and eminent, that insist on calling it by the old name of midwifery, although this term bears little more relation to what the science has become than the spiral white and red ribbon of the barber's pole does to the surgery, or rather to the phlebotomy, that the "tonsorial artist" now practices without an anesthetic.

It is within the lifetime of those who would not like to be classed among the aged that the observant Semmelweis decided that all students assisting in the lying-in wards of his Vienna maternity hospital must wash their hands in a "disinfecting" solution of chlorid of lime, and thus within a year obtained a conclusive demonstration of the truth of his theory in the notable lessening of mortality (which had been as much as 30 per cent. or more in some months) among the puerperal patients of the institution.

The question often asked in regard to correlative subjects recurs when we perceive how apparently meager were the resources of our progenitors in the matters of midwifery. How did they get along without the skill and knowledge which the modern practitioner now has the opportunity to acquire? Putting aside the more or less untrustworthy and fantastic excerpts gathered from the Chinese medical writings ascribed to a period of five thousand years ago, we have the Ebers papyrus as the probably oldest authentic medical writing extant. In that document, written fifteen and a half centuries before Christ, there is next to nothing given for enlightenment or help in labor cases, and more than one thousand years later we find the Father of Medicine correspondingly silent in the Hippocratic writings, except in one instance.

There is historic warrant, however, for the presumption that, somehow or other, the increase and multiplication of the human race went forward along the ages

\* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-sixth Annual Session, July, 1905.



in accordance with the Divine command, notwithstanding the absence of professional advice, direction and assistance. Incredible as it seems in our day, it was late in the sixteenth century, when royalty set the fashion of having court surgeons attend parturient ladies, that midwifery began to make strides in scientific advancement. Before that time, as Simpson observes, "Physicians and surgeons had been summoned to the lying-in room only by midwives who found themselves at the end of their resources, to give help in difficult cases, when the child was usually dead and the mother moribund."

I regret that this paper may be open to suspicion of indelicacy as to its implication of egotism, but I feel that to this I only need to enter a simple disclaimer. Though still classable as a junior practitioner, I have had within a period covering some seven years in private practice 207 confinement cases, not only without a fatal issue to either mother or child, but without, as yet, a single development of any of the forms of grave puerperal troubles which eventually beset every obstetrician, such as sepsis, hemorrhage, eclampsia, severe laceration, etc.

I am glad to believe that there are many of my colleagues who could make the same satisfactory report, but I know on the other hand results have been different with many others. This latter fact is at once my apology and warrant for this paper.

In *THE JOURNAL* of the American Medical Association, April 15, 1905, occurs the following abstract from a paper by Dr. Lea,<sup>1</sup> and in order to economize time I will let the abstract of Dr. Lea's report stand as typical for this paper.

The method of treatment adopted by Lea is based on 120 cases. He says a rise of temperature to 101 F., not accounted for by other causes, renders a careful examination of the generative tract necessary. If no sufficient cause is found in the vagina or perineum, and if the uterus is bulky and tender, a specimen of the lochia is removed and a uterine douche given, with due precautions. In 48 consecutive cases this was sufficient in 30 per cent. to bring down the temperature rapidly to normal. For some years Lea has supplemented this by careful swabbing of the interior of the uterus with absorbent wool soaked in a solution of biniodid of mercury in alcohol, 1 in 2,000. If this procedure is inefficient, or if the infection is severe, from the first, the uterus is explored with the fingers, preferably under chloroform anesthesia. If the cavity is perfectly smooth, showing an absence of retained products or of decidua—a condition which is rare—the uterus should be thoroughly swabbed out with the biniodid or some strong antiseptic solution, and packed with iodoform gauze soaked in an antiseptic. If a piece of placenta is found this should be removed, followed by swabbing and gauze packing. If the cavity is large and the surface irregular, due to hypertrophied and necrotic decidua, the patient's safety can only be insured by its complete removal. This is most efficiently done by the use of a suitable curette. Vaginal section may be done as supplementary to curettage if symptoms of pelvic peritonitis are present. If the uterus contains placenta or debris, accompanied by grave infection, hysterectomy is much more dangerous than curettage, and packing should never be done. The best results from hysterectomy have been obtained in cases of periuterine suppuration, gangrene of the uterus, or necrotic myomata.

Here are statistics, advice and methods of procedure that to me are appalling. While my obstetric experience besides Dr. Lea's is, of course, lilliputian. I am sure that had I made digital examinations and had given uterine douches to my puerperal patients whose temperatures had gone to 101 F. and over, I certainly

would have had infected cases about which to compile statistics.

I have followed this rule in labor cases: Let nature do as much as possible in these cases and only do that for the patient that nature seems unable to do. Briefly, my conduct of a labor case has been to insist as far as possible that everything should be scrupulously clean about the lying-in room as regards dressings, instruments, utensils, bed linens, etc., to make no vaginal examinations unless the external parts have first been cleansed with soap and water, to swab out the vagina with a gauze sponge, and thoroughly to coat the finger nails and hand with soap, after washing them and rinsing them in ether; to deliver all patients in the dorsal position, to support the head and perineum by a modification of Merkertschiantz's method, which reduces lacerations to a minimum, and, what I deem most important, to have the fundus of the uterus grasped before the presenting part is born, and firmly held until the child is delivered and the cord tied. This procedure, I am convinced, has prevented in my practice a single postpartum hemorrhage of either great or small degree, and has facilitated the delivery of the placenta in the great majority of cases in from one to three minutes after the cord has been tied. In addition to the above routine, no douches, vaginal or uterine, were given to any cases, either before or after labor.

Where a vaginal or perineal tear occurred, and was sewed, the apposed edges of the wound were carefully swabbed once to twice daily for the first few days with a cotton or gauze sponge to remove the exudate. I have deemed the vaginal and uterine douche of as questionable value in labor cases, as I found it to be in abdominal surgery, and have therefore to date tabooed it absolutely, and I believe that I have obtained results which sustain my radical views in this respect, for I have believed that more infective matter may be put into the vagina and uterus by the douche than the flushing will bring away.

The several patients known or supposed to have had a recent gonorrhea I treated locally for some weeks before labor began by dilating the vaginal folds frequently and swabbing thoroughly and in a painstaking manner with a strong solution of one of the albuminates of silver. Although some rather severe lacerations have occurred, none has ever extended to or near the anus, and in no tear have more than two stitches been applied.

I am aware of three cases in which small pieces of placental mass were retained in the uterus, but for which nothing was done save to watch the condition of the patients. Two of the patients passed the placental fragments the day following delivery, but the third woman did not discharge the retained placental portion until the fifteenth day after her confinement, when she passed a mass of tissue as large as an egg, with an extremely foul odor. From the fourth day of her confinement the lochia had an offensive smell, and as the placental mass was known to be in the uterus the cause of the odor was known. As the woman's temperature never went above 100.3, nor her pulse above 94, I did not interfere in the case, for I believed that fermentation of the placental mass caused the odor, but the lack of abnormal temperature or pulse pointed to the absence of any extremely virulent bacilli; however, had I with a curette broken into the natural barrier of the uterine walls, I would not have been surprised if the woman had developed a severe or fatal sepsis.

Of forceps delivery I can say but little, having used

1. "Some Remarks on Puerperal Infection": A. W. W. Lea, *British Medical Journal*, March 18, 1905.



these instruments but twice since leaving a maternity hospital service shortly after graduation, once in an R. O. P. and once on a primipara aged 39 years, with inertia.

Often it has been most embarrassing and annoying to find hour after hour slipping away and only slow progress being made, when the application of the forceps might have freed me from a long, tiresome wait, but the mother's condition, fortunately, has always warranted a delay, and I have thus refrained from using this mechanical aid which has done so much good for the puerperal woman, but which, if used, when not absolutely called for, has entailed serious injury to mother and baby and sometimes has caused the death of both.

I am sure that if a longer time were given the patient in labor in which to allow normal progress to be made and simple manual aid given the mother during the pains, statistics of puerperal lacerations, sepsis and death would show a marked decline.

Complications in my series of cases were surprisingly few. In one case seen first at term, I extracted a five-inch section of an olivary tipped bougie, forced into the body of the womb four months before in an unsuccessful attempt to bring on a miscarriage. The woman made an uneventful recovery.

One woman was delivered during the second week of a severe attack of typhoid fever, labor being hastened by the approaching crisis of the disease. The child was as healthy as most babies are at birth and the mother stood the shock well; when the child was five weeks old the mother insisted that she was strong enough to give the baby breast nourishment, artificial feeding having been employed in the meantime. The change was successful and the mother and child thrived. I was unable to get a positive Widal reaction from the mother's milk on the baby's blood, although the mother's blood gave the positive Widal.

Another patient was confined on the fifth day of a lobar pneumonia with a temperature of 104, and pulse 140. Her fever fell to subnormal on the second day after labor, and although very ill for several weeks she recovered. The baby was fed from the bottle and did well.

The anomalies of the cord and placenta were the common ones described in obstetric text-books, and lack of time prevents their description.

In about three of the above series of cases the patients had fibroid uteri of a moderate degree and in one case I delivered a syphilitic woman of a full term macerated baby, dead probably a month, and a live baby of probably six months' development, which lived for three weeks. There were separate placentae. The woman had been taking specific treatment for about six months previous to her delivery.

A deplorable case I saw in consultation. A woman had been in active labor for three days with an immense cancer of the cervix. Her physician insisted that her condition was due to a "rigid cystic os" and refused to allow any interference with the case, operative or otherwise. The woman died of exhaustion on the fifth day after repeated attempts of her physician to apply forceps through the cancerous mass.

The fact to which I would call particular attention is one which is, perhaps, oftenest a source of extreme danger, and is too seldom recognized and guarded against. It is this: Just as special circumstances may convert stomach, bladder or colon into a veritable septic center, the position assumed in bed by the greater

number of puerperal patients almost inevitably improvises, as it were, just such a septic cavity quite susceptible of infection, for the more yielding the couch the greater will be the pocket formed, as the patient unwittingly burrows into the bed at the spot where least resistance conjoins with that of her greatest weight. In this depression septic fluids in the bed or stagnant in the vagina are an ever present source of danger to the open uterus with the cervix resting on the vaginal floor, making the entrance into the womb only too easy for infectious fluids. To obviate this I keep the patient's hips well raised from the bed during the whole course of labor, and the vagina is thus kept free from any return flow of liquids contaminated by contact with the pad or bed.

With the field of obstetrics expanded into or supplemented by the gynecology of the day, the ideal combination of physician and surgeon may now find in obstetrics opportunities virtually illimitable for the worthiest and most useful exercise of his talents and skill, for it embraces the whole scope of theory and practice affecting the health and lives of women and their offspring. Even the modest average practitioner, if of the proper grade of intelligence, may enter it with confidence. In either case, to repeat a trite, but never needless, suggestion, it will be found that "soap and water and a good hand brush," with all that this implies will be important essentials for success.

#### DISCUSSION.

DR. W. A. SHANNON, Seattle, declared that all obstetric cases should be treated like surgical cases, and the same precautions taken as in a surgical operation. Then there will be very little trouble with these cases. Dr. Shannon has for some time adopted the method of wearing rubber gloves during his obstetric work, believing it to be eminently proper. A physician is apt to be in a hurry to get away from the house and is likely to extract the placenta too early. He should wait at least twenty or thirty minutes after the birth of the child before expelling the placenta. The external genitals should be scrubbed thoroughly at the beginning of labor, shaving the parts, if necessary. The patient also should be prepared as if for the repair of a lacerated perineum.

DR. J. A. McKENNA said that he has tried rubber gloves and found them in the way and even risky, inasmuch as he could not control the perineum nor make proper traction on the cord while wearing them. He always expels the placenta, or attempts to, as soon as he ties the cord. If the nurse has grasped the uterus properly from above, the placenta will be ready to be expelled in 95 per cent. of the cases as soon as the physician is prepared to deliver it. Nor are the after pains so severe if the uterus is held and the cavities in which blood clots may develop not allowed to form.

#### SUPERIOR ACCESSORY THYROIDIS.\*

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Some writers call the accessory thyroids, "lingual goiter." The term "goiter" given to such affections is an improper one, since the histo-pathology shows that not all aberrant or accessory thyroids have the structure of a goiter, which implies a pathologic thyroid. In several instances the histology of the accessory gland was exactly the same as that of the normal thyroid.

\* This article was prepared to be read before the Section on Surgery and Anatomy of the American Medical Association at the Portland session, July, 1905, but the author was prevented by sickness from being present.



Perhaps, even the term "accessory" is not proper, since in some cases, as will be seen later, the so-called accessory thyroid was the only one of the individual. Aberrant thyroids would be the most satisfactory term, indicating a thyroid situated outside of the normal area. For the sake of convenience, however, I will respect the term "accessory" generally used in the description of these tumors. While anatomists, and even pathologists, are more or less familiar with the accessory thyroid, the clinician has rarely an opportunity to meet such tumors. On account of their very rare occurrence, and because of the grave and even fatal errors that might result from the lack of information concerning such tumors, the study of accessory thyroids must be of interest to every surgeon.

#### HISTORICAL.

Accessory thyroids were known to the old anatomists. Albert von Haller (1779) once saw an accessory thyroid occupying the middle of the thyroid cartilage, and not connected with the thyroid proper. In 1839 von Haller referred to accessory thyroids. Gruber<sup>1</sup> found the isthmus separated from the thyroid and located above it in 2 out of 40 cases. In 1853 Verneuil,<sup>2</sup> while dissecting the muscles of the tongue, found a sessile body the size of a pea situated between the geniohyoid and genioglossus. It proved to have the structure of a normal thyroid.

The accompanying table shows there are not more than 39 cases on record. The first ones were those of Hickman of England in 1868; of R. Wolf of Hamburg, and Bernays of the United States. The rarity of these tumors is also confirmed by the fact that standard textbooks, such as those of Mackenzie, Cohn, Ingals and Bosworth, make no reference to them.

In 1897 Chamisso de Boncourt<sup>3</sup> was able to collect 15 cases of accessory thyroids at the base of the tongue.<sup>4</sup>

#### EMBRYOLOGY.

The thyroid develops from three anlagen, one median and two lateral (von Kölliker, Wölfler, His and Stieda). The median anlage originates, according to Born, from the epithelium of the pharynx, while the lateral ones develop from the epithelium of the fourth branchial cleft (Fig. 1).

The median anlage develops from that part of the sulcus arcuatus which is behind and close to the tuberculum impar (Fig. 1, A). The sulcus arcuatus is the groove situated between the tissue which will become later the epiglottis, and the tuberculum impar, which will become later the tongue. The epithelium of the median anlage becomes thickened, it sinks deeper during the elongation of the neck of the embryo and becomes in this way distant from the inner surface of the pharyngeal opening, with which it is connected by a "slender, hollow pedicle" (Minot), the ductus thyroglossus. The opening of this duct on the dorsum of the tongue corresponds to the foramen cecum (Fig. 1, B, Fig. 2, 1).

His<sup>5</sup> has found in embryos of from 7 to 7.5 mm. that the thyroid is composed of a small bilobed vesicle projecting a pedicle toward the surface of the tongue. In

the seventh week of intrauterine life, the three anlagen fuse together (Minot).

At eight weeks the thyroid gland, according to Mueller, is composed of two lateral lobes and a connecting isthmus. The glandular acini develop centrifugally, and, according to His, their development begins in the human embryo at eight weeks.

According to Mueller, at eight weeks the gland is composed of cylindrical tubes only, 0.014 mm. in diameter. Kölliker admits the existence of glandular vesicles besides.

After twelve weeks Kölliker found vesicles of 0.03-0.11 mm. The glandular cells commence to secrete between the sixth and eighth weeks of intrauterine life (Horsley). Podack, however, found developed follicles with cylindrical epithelium and colloid material much later (five-months fetus). A remarkable feature in the embryology of the thyroid is the richness in vessels in all of the embryos.

#### THYROGLOSSAL DUCT (FIG. 2.)

According to Butlin and Spencer,<sup>6</sup> the word "tract" should be substituted for that of duct, since "there is no evidence of the existence of a duct in any living animal, either during embryonic or later life."

At the end of the tract there is a depression one centimeter in depth, called foramen cecum, first described by Morgagni and afterward by Bochdalek. This is characteristic of man; it has not been found in other mammals, not even in monkeys. According to Butlin and Spencer, the dissected sinus in the Royal College of Surgeons (physiologic series, 1,526 B). may be a simple artefact. The thyroglossal duct or tract connects the thyroid isthmus with the apex of the lingual V. On the level of the hyoid bone the duct is connected with the bone itself, periosteum in front, and with the thyrohyoid bursa behind. The thyroglossal duct was first studied by His in human embryos. Kanthack denied the existence of such a duct, since he could not find it in 100 adult tongues nor in 60 fetal and children's tongues. Kanthack, probably, searched for the duct at a late period, when every trace of the existence of such a duct was lost. Cysts lined by ciliated epithelium, however, tumors having the structure of a thyroid situated between the middle lobe and the foramen cecum, sustain the existence of such a duct. Embryologic remnants of the middle anlagen are also found in animals, and may be displaced downward. Wölfler found in dogs, and Van Bemmelen and Meuron in embryos of sharks, batrachians and lizards, small glandular masses immediately above the arch of the aorta. They are called "aortic glands" and are embryonic remnants of the middle lobe. In man the corresponding remnants are always situated above the normal thyroid, never below. The existence of the embryonic thyroglossal tract can not be denied since a case of congenital accessory thyroid causing asphyxia is on record.

#### PHYSIOLOGY OF THE THYROID GLAND.

I will not go much into details concerning the physiology of the thyroid gland. Various functions have been ascribed to it, so numerous, so different, that it would require a special article to enumerate them. From clinical and experimental observations, we know to-day that the thyroid is an organ with internal secretion, its products destroying toxic metabolic substances, which normally accumulate in the blood. The ablation of the thyroid gland is followed by nervous and metabolic de-

1. Gruber: "Ueber die gland thyroidea accessoria," Virchow's Archiv, vol. lxxvi, pp. 447-454.

2. Verneuil: Archives générales de médecine, 1853, p. 464.

3. Chamisso de Boncourt: Deutsche Zeitschr. f. Chir., vol. xix, 1897.

4. Those who are interested in the literature of the subject are referred to the following: Deutsche Zeitschrift f. Chir., vol. xix, 1897; Deutsche Chirurgie (Pitha-Billroth), vol. ii; Monograph "Schilddrüse," Von Eiselsberg; "Diseases of the Tongue," Butlin and Spencer; Annals of Surgery, Sept., 1904, p. 323.

5. His: Anatomie Menschlicher Embryonen, iii, p. 64-81.

6. Butlin and Spencer: "Diseases of the Tongue," p. 4.



rangements. Astley Cooper and Rapp were the first to remove thyroids in animals. The former observed that after the extirpation of the thyroid the animal becomes sick and stupid. The latest experimenters have invariably observed that the removal of the thyroid is followed by tetany or cachexia, both equally fatal. In solitary cases where the animals remain healthy after the removal of the thyroid, von Eiselsberg assumes that, in all probability, the salivary gland was removed instead of the thyroid, or that the thyroid was only partially extirpated; or, as I believe, that accessory thyroids have taken the function of the true thyroid. Extirpation of half a thyroid is not followed by tetany. If a part of the other half is extirpated, however, tetany may occur. How much thyroid should be left in order not to compromise the function of the gland, is difficult to say. In some cases very little glandular tissue proves to be efficient; then again a large mass of gland fails to perform the function sufficiently. The glandular mass left after a partial extirpation of the thyroid is subject to ulterior macroscopic and microscopic changes. The gland left generally becomes hypertrophic.

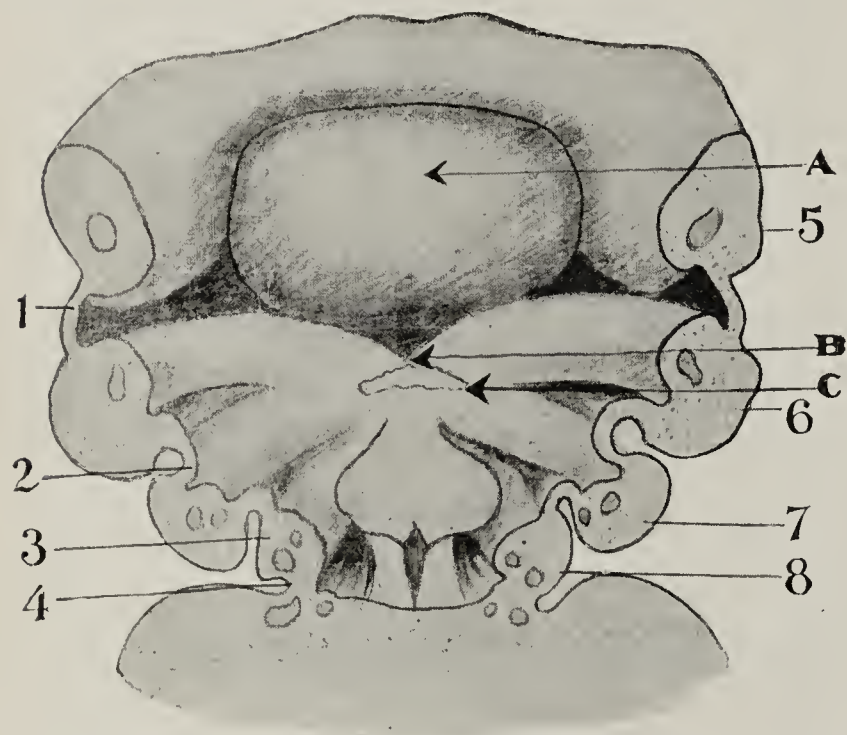


Fig. 1. Vertical section through pharynx of a human embryo of 10 mm. 1, 2, 3, 4, bronchial clefts; 5, 6, 7, 8, bronchial arches. A, tuberculum impar, forming front portion of tongue; B, foramen cecum; C, Anlage of thyroid gland. (After His. Reproduced from *Annals of Surgery*, September, 1904, page 322, Henry A. Storrs).

#### PHYSIOLOGY OF ACCESSORY THYROIDS.

In many instances, it is presumed, the accessory thyroid supplements or takes the function of the normal thyroid. Our supposition is supported by experiments. Von Eiselsberg<sup>7</sup> refers to a goat which did not develop myxedema after removal of the normal thyroid. He adds that the goat had an accessory thyroid. Another goat of the same parentage, not possessing an accessory thyroid, developed pronounced myxedema after the removal of the normal thyroid. Recently, I have extirpated the thyroid of a goat, for the purpose of studying the "compensatory changes"—if any—in various organs. The tissues removed had, histologically, the structure of normal thyroid. To my great surprise, the thyroidectomized goat is in excellent health, and has not developed myxedema. I have not ascertained, as yet, whether the goat possesses accessory thyroids. In some cases, however, the presence of an accessory thyroid failed to pre-

vent the recurrence of myxedema when the thyroid was removed.

#### PHYSIOLOGIC COMPENSATION.

In some instances the removal of the thyroid was followed by hypertrophy of the pituitary body. Some physiologists believe this is compensatory. Other organs, as for instance, spleen and thymus, enlarge after the removal of the thyroid, but whether there is any relationship between the ablation of the thyroid and the hypertrophy of these organs, or in other words, whether these organs make a compensatory attempt, it is difficult to say.

#### CLASSIFICATION.

To begin with, accessory thyroids are classified as (a) true and (b) false. True accessory or aberrant

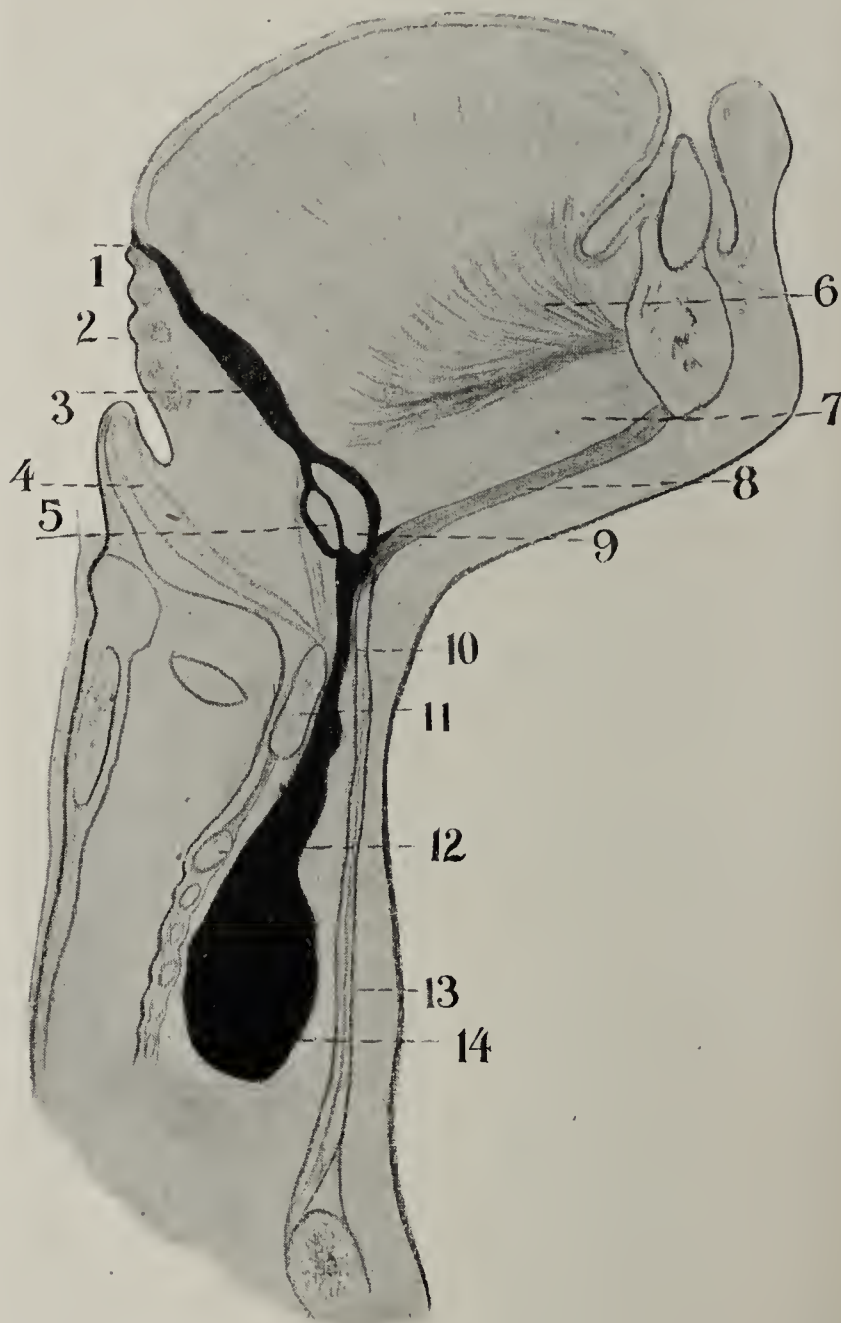


Fig. 2. Diagram of thyroglossal tract and its relations. (Taken from "Diseases of the Tongue," Rutlin and Spencer). 1, foramen cecum; 2, lingual tonsil; 3, thyroglossal tract above hyoid bone; 4, epiglottis; 5, thyrohyoid bursa; 6, geniohyoglossus muscle; 7, geniohyoid muscle; 8, mylohyoid muscle; 9, hyoid bone; 10, thyroglossal tract in front of thyrohyoid ligament; 11, thyroid cartilage; 12, cricoid cartilage; 13, sternohyoid raphe; 14, isthmus of thyroid gland.

thyroids are those not connected with the tissue of the thyroid proper. False thyroids are considered those which are found within some distance of the normal thyroid but connected with the gland. Offshoots of the isthmus, the unusually long pyramid, may be considered as a false accessory thyroid. Baurowicz<sup>8</sup> says that the intratracheal and intralaryngeal accessory thyroids are offshoots of the normal gland.

7. Von Eiselsberg: *Deutsche Chirurgie*, "Schilddrüse."

8. Baurowicz: *Arch. f. Laryng.*, vol. viii, p. 2.



Several classifications have been given with very little variation. Madelung classifies them as superior, inferior, posterior, anterior, lateral, endolaryngeal and endotracheal. The hyoid is the dividing line between the superior and inferior accessory thyroids.

Streckeisen<sup>9</sup> classifies the tumors in the region of the hyoid bone as follows:

a. Glandulæ præhyoideæ, in front of the mylohyoid and hyoid bone.

b. Glandulæ suprahyoideæ, small nodules above the attachment of the mylohyoid muscle.

c. Glandulæ epihyoideæ, between the hyoid bone and the foramen cecum.

In this paper I will deal only with accessory thyroids between the hyoid and the foramen cecum; in other words, along the original course of the thyroglossal duct, in the middle line. The superior accessory thyroids situated to either side of that line will not be considered.

#### LOCATION AND TOPOGRAPHY.

The distribution of accessory thyroids is very wide. The field in which they may be found can be roughly represented by an inverted trapezoid, the larger base

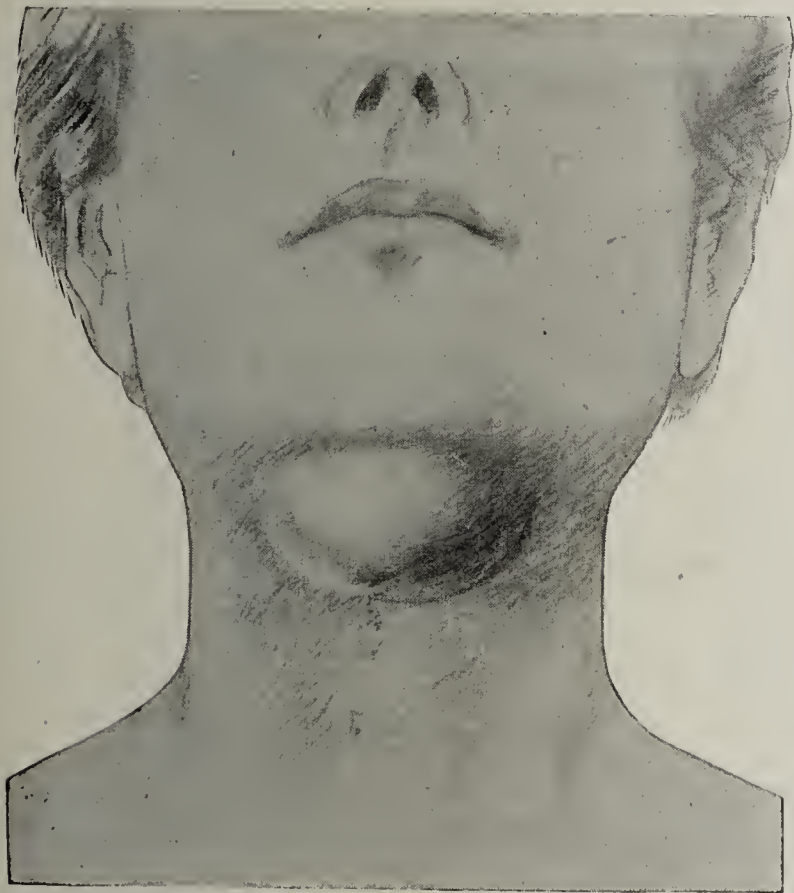


Fig. 3.—Author's case. Tumor projecting in the submental region.

being a line running from one apex of the mastoid process to the other; the smaller base is a line tangential to the arch of the aorta, and the sides are the two sternomastoid muscles. Accessory thyroids have been described outside of the area above mentioned. Osler, for instance, mentions them in the pleura. They have been found in the bones, the abdominal cavity and in various organs also. Such tumors must be considered as decidedly metastatic. The occurrence of accessory thyroids is embryologically explained when they are found in the area above mentioned.

Eberth<sup>10</sup> found small nodules in the lungs of a dog which he considered as metastases traveling along the pulmonary arteries and veins (in other words, hemato-

genous metastases). Neumann<sup>11</sup> extirpated a tumor the size of an apple situated in the region of the elbow. It had the structure of a thyroid and was considered by him to be a colloid sarcoma from the thyroid.

Tavel<sup>12</sup> mentions two interesting cases, one of struma metastatica of the pelvis and the other of metastasis of the thyroid tissue in the parovarian region. Streckeisen found gland particles in the hyoid bone; according to him, the existence of these is explained by the inclusion of embryonic elements of the thyroglossal duct when the hyoid bone is cartilaginous.

K. S. De Graag<sup>13</sup> has referred to a case of struma with metastases in the bones. Patient had a swelling on the neck for eight years. Shortly before death he developed paraplegia. The postmortem revealed a carcinomatous tumor pressing on the spinal cord, containing follicles with colloid substance like the struma itself. It was a spinal metastasis of a malignant thyroid.

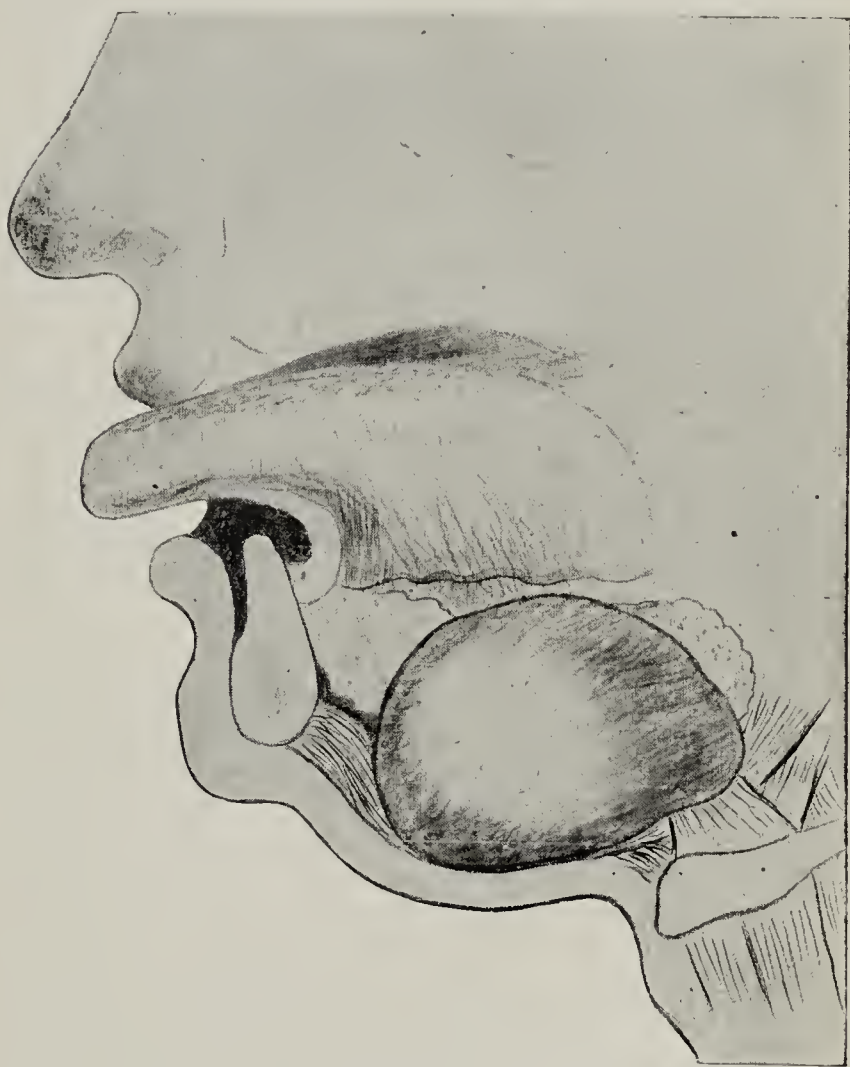


Fig. 4. Author's Case. Section, showing the position of a sublingual accessory thyroid.

I had a case<sup>14</sup> at Mercy Hospital of carcinoma of the thyroid with metastases in the sternum. A spontaneous fracture of the left femur occurred later, which was due to a carcinomatous metastasis from the primary carcinoma of the thyroid (Fig. 3). As I stated in the Year Book for 1903, the bones are the seats of election for secondary carcinoma of the thyroid gland, and should be suspected in all cases of malignant thyroid.

Bland-Sutton<sup>15</sup> refers to non-malignant metastases of the thyroid in the cranial bones.

When the malignancy of the thyroid proper can not

11. Neumann: Langenbeck's Archiv., vol. xxiii.

12. Tavel: Arch. Prov. de Chir., 1904, No. 5.

13. K. S. DeGraaz: Mittheil. aus dem grenzgeb. der medizin u. Chir., 1903, ix, p. 625.

14. Murphy, J. B.: Year Book, General Surgery, 1903.

15. Bland Sutton, Tumors, 1903.

9. Streckeisen: Beiträge zur Morphologie der Schilddrüse, Virchow's Archiv, v. ciii.

10. Eberth: Virchow's Archiv, vol. lv.



be determined, however, we should bear in mind that simple adenomata which are considered as benign may show a malignant tendency and give metastases.

#### ETIOLOGY.

*Age.*—Accessory thyroids manifest themselves at any age. They have been found in the new-born and in the aged. Hickman's case was a child 2 days old; while in the case of Staelin the tumor was found at a post-mortem in a woman of 77. According to Onodi, they develop most frequently between 12 and 35 years of age.

*Sex.*—All writers have observed that these tumors occur mostly in women. The relationship between changes in the female genitalia and the thyroid has been noted (as illustrated in the frequent hyperplasias and degenerations of the thyroid at puberty, immediately following parturition, abortion and pathologic menopause). In the case of Shadle, during suppression of menstruation the accessory thyroid became more swollen and more vascular. We have no palpable explanation for this relationship, but venture to say the development of the accessory thyroid has something to do with the abnormalities of menstruation.

*Occurrence.*—Accessory thyroids have often been found in postmortems, and particularly in the morgues of countries where goiter is common. Pathologists have mentioned the occurrence of such tumors in the Tyrol. Streckeisen found many accessory thyroids in the pathologic institute at Basle.

*Exciting Causes.*—In most of the cases there is no palpable cause for the rapid development of the accessory thyroid. In a few cases, however, acute infectious diseases may be considered as an exciting cause. In Warren's patient grippe was considered its excitant; in Wolf's patient, whooping cough, and in several instances puberty was closely related to the development of these tumors.

#### PATHOLOGIC ANATOMY.

As we stated before, only the tumors situated along the thyroglossal tract will be considered. They are generally found at the base of the tongue, either elevating the organ by their size, or penetrating the muscles and forming an elevation on the dorsum. The size varies from a cherry to an egg, and may even attain that of a fist. The tumor is well encapsulated and is not surrounded by any inflammatory area; the color is a bluish red, which is due to the abundance of vessels. The surface is covered with a smooth, shining mucous membrane, the normal mucosa of the tongue. It is traversed by many vessels, not only on the surface, but even penetrating the tumor. The consistency is soft, and it is often difficult to decide whether one has to deal with a soft tumor or a cyst. Tumors at the base of the tongue are generally single; in Bernays' case, however, the tumor on the dorsum of the tongue was accompanied by another one immediately above the hyoid bone. The tumor may be movable if it is small, or immovable if it attains a great size. It is usually smooth, but it may be made irregular by the existence of small cysts. The contents of the cysts are generally colloid material; if the cyst is large and the vascularization great, the contents may be bloody.

As to the origin of these tumors, according to Butlin and Spencer, there are two theories:

a. They originate from the follicular glands situated on the dorsum of the tongue, or, it would be better to say, from the glands behind the circumvallate papillæ.

b. They are remnants of the thyroglossal tract.

The first theory was originated and is sustained only by Bowlby. I question the theory, as it would require a transmutation of cells both anatomic and physiologic. Such metamorphosis from squamous to columnar epithelium is very rare, even if at all possible. The second theory is supported by Bernays and Bland-Sutton, and by most of the writers who have described such tumors. This explanation is analogous to those referring to many other embryonic remnants.

Butlin considered these tumors at the beginning as simple adenomata, but finally admitted that they were products of embryonic thyroid remnants, and therefore true thyroids.

Some tumors show the structure of a normal thyroid, spaces lined by cubical epithelium and containing some colloid material. Some show the structure of a goiter, some contain embryonic tubules. In Kraske's case, the tubules contained a great many embryonic thyroid cells; in other cases we find cystic conditions.

The accessory thyroid may be encountered where a thyroid exists in the normal location. In several instances, however, the accessory thyroid was the only thyroid found. The accessory gland may undergo cystic degeneration and form large cysts extending from the hyoid bone to the foramen cecum, or it may become malignant; or be, to all appearance, benign and still malignant in its tendency, as is proved by its recurrence after removal and the production of metastases. We know, from Cohnheim, that adenoma gelatinosum of the thyroid, which is benign, may give metastasis.<sup>16</sup> It is also known that enchondromata and myxomata, which are generally benign, may run a malignant course. In 1883 Bryant described a cyst at the base of the tongue reaching the circumvallate papillæ of five months' standing in a girl of 18. It was lined with ciliated epithelium. Johnson describes a congenital cyst situated between the circumvallate papillæ and epiglottis, and lined by several layers of flattened epithelium. In young adults, regardless of sex, cysts situated below the mylohyoid may be found; they are small at first, but may reach the size of a mandarin orange (Liaras). As Durham showed in his researches, these cysts are also lined with ciliated epithelium and arise secondarily in thyroid tumors.

#### PERSONAL CASES.

CASE 1.—Mrs. M. M., aged 34, admitted to Mercy Hospital April 12, 1905; operated on April 13.

*Family History.*—One grandmother had epithelioma of the lip. The other grandmother had carcinoma of the breast.

*Personal History.*—Patient menstruated at 15; it was regular, not painful; no intermenstrual discharge; the amount of menstrual fluid was usually large. Married at 25. Gave birth to five children under normal conditions; no abortions.

*Previous Illnesses.*—Negative.

*Present Illness.*—Fifteen years ago patient had a tumor at the base of the tongue. She was admitted at the time to the Presbyterian Hospital, Chicago. The condition was not diagnosed, but an attempt was made to operate on the tumor through the mouth. So profuse was the hemorrhage that the surgeon had to discontinue the operation. Following that attempt the patient improved, though the tumor did not disappear. She says of the accident during the operation, "I nearly bled to death." Five days after the operation the patient had a second hemorrhage. In the course of time the tumor did not cause very much inconvenience, with the exception of some mechanical irritation. Patient even states that the tumor reduced somewhat in size in the first six years after the surgical attempt. Nine years ago patient noticed below the old tumor a new one protruding in the submental region a little

16. Virchow's Arch., vol. lxxviii.



to the left of the median line (Fig. 3). No serious derangement was noticed. The tumor increased greatly in size until it reached its present dimensions, about those of a hen's egg (Fig. 4). No disturbances of mastication, deglutition or respiration were noticed by patient. General health very good; appetite fair. No gastrointestinal or genitourinary symptoms. No loss of weight or strength in the last fifteen years.

*Operation.*—The tumor was exposed by a longitudinal incision through the muscles, starting from the symphysis menti and extending down to the hyoid bone. The geniohyoid muscles were separated by retractors (Fig. 5). The tumor could be circumscribed by the finger and was enucleated without difficulty. There was no hemorrhage. The wound was closed in the usual way. The day following the operation, patient's temperature reached 101 degrees. On the sixth day there was primary union of the wound. On the ninth day there was some retention of serum and blood under the skin which necessitated a separation of the edges of the wound to allow their escape. No drain was inserted. The patient was discharged cured, April 22.

CASE 2.—Mr. C. H., aged 45, farmer, was admitted to Mercy Hospital Jan. 30, 1901.

*Family History.*—Negative.

*Personal History.*—Patient was born in Germany and came to the United States when a boy. A man of good habits. Married at 18; had six children, all living and in perfect health.

*Previous Illnesses.*—In September, 1900, patient was kicked in the hypogastrium. The accident was followed by hematemesis and distension of the abdomen; elevation of temperature. Gradually recovered and was able to resume his work as before.

*Present Illness.*—Three weeks ago, while looking in his mouth through the mirror, he noticed a swelling at the base of the tongue and slightly to the left. From this time up to his entrance to the hospital, the patient did not have any pain nor discomfort. He had no difficulty of mastication, deglutition or respiration. Was operated on January 31.

The microscopic sections showed large glandular lumina filled with colloid material (Fig. 7).

#### SYMPTOMS, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS.

The diagnosis of the accessory thyroid is very difficult. At first there are practically no symptoms; possibly the patient may have noticed the growth for some time, but may not have suffered any inconvenience from it. As soon as the tumor begins to enlarge, the patient complains of "lump in the throat." There is some difficulty in deglutition; salivation may be increased; some patients have a reflex dry cough not accompanied by expectoration. Most patients notice a change in the pitch of the voice; the voice may be either impaired or entirely changed. When the tumor attains a certain size patients complain of dyspnea, and if the epiglottis is pressed down, symptoms of suffocation may follow. Some patients notice from time to time an iron taste, due to the insignificant oozing of the tumor, or, in case of the rupture of a vessel, the patient may have from a moderate to a very severe hemorrhage. The absence of pulmonary physical signs, cough, expectoration and bacilli or that of gastric symptoms excludes hemoptysis or hematemesis. Generally, there are no constitutional symptoms; anemia, however, may be present in those cases where oozing or hemorrhage has been present for some time. In Schadle's case there was a marked wasting and nervous exhaustion. The discovery of the tumor is generally a source of great mental anxiety to the patient. Many are of the opinion it must be a "cancer," and that an operation will involve the tongue.

Generally speaking, whenever a diagnosis of the true nature of a tumor of the neck is not well established, an accessory thyroid should be suspected (Hinterstois-

ser).<sup>17</sup> If a tumor is found at the base of the tongue or between the hyoid and the base of the tongue, in or near the middle line, if there is no inflammatory reaction around the tumor, if there are no marked subjective symptoms, and if it undergoes periodic variations in size and tension, if the patient be a woman, and especially one who complains of some disturbance of menstruation, the condition is highly suggestive of an accessory thyroid. The diagnosis may be greatly facilitated if, with the presence of such a tumor, we fail to find the thyroid in its normal location. The accessory thyroids are probably more frequent than is believed, judging from the number of recorded cases. They are generally not diagnosed until they become large, strumous, or until they cause alarming symptoms. I think it would be a good practice to administer in each case of suspected accessory thyroid, thyroid tablets. If it then diminishes in size, one could be certain that one's diagnosis was correct. Some surgeons have punctured or attempted to aspirate the contents, which appeared to them to be cysts. Such attempts have been very discouraging, since puncture is often followed by profuse hemorrhage. No fatalities have resulted; nevertheless, I believe such a procedure must be considered both useless and dangerous.

#### DIFFERENTIAL DIAGNOSIS.

After a tumor has been diagnosed at the base of the tongue, either by inspection, palpation or the use of the laryngoscope, if the tumor protrudes on the dorsum of the tongue, the first thought which occurs to the surgeon is whether it is malignant or benign. The absence of ulceration, the fact that the tumor is well circumscribed, even encapsuled, the absence of glandular enlargement, of constitutional symptoms, of pain, the long-standing of the tumor, the fluctuation in size, and the general youth of the patient, undoubtedly dispel the suspicion of a malignant tumor.

The conditions which have to be considered in making a differential diagnosis are as follows:

1. *Cysts.*—Above the hyoid bone in the middle line, cysts are found that are not embryologic remnants of the thyroglossal tract. They may be due to an inclusion of epithelium, which develop suddenly after a local irritation. These are cysts due to remnants of branchial clefts, retention cysts of excretory glands, dermoid cysts.

2. *Ranulae.*—A ranula is due to a retention in the duct of the sublingual or submaxillary gland. The tumor appears on the floor of the mouth and pushes the tongue to one side. It has a thin wall and its contents are semi-translucent. The tumor may be covered by abundant and large veins, in which case the differential diagnosis from an accessory thyroid is difficult. The subjective symptoms are in many respects similar to those of accessory thyroids.

3. *Polyps.*—These are due to a hyperplasia of the lymphatic tissue at the base of the tongue, syphilis and tuberculosis being generally the etiologic factors. Children with hypertrophic tonsils frequently have these lymphatic masses under the tongue. The enlargement of the lingual tonsil may form a tumor to the side of and behind the tongue. "Lyssa" (hypertrophy of the tonsils of the palate) may simulate an accessory thyroid by its location.

4. *Papillomata.*—These are rare. They are divided by Albert into flat and pedunculated.

17. Hinterstoisser: "Beiträge zur Lehre vom Nebenkropf," Wien.



CASES OF SUPERIOR ACCESSORY THYROIDS RECORDED FROM 1869 UNTIL THE PRESENT.

Author and Publication.	Location.	Age.	Sex	Time Between Appearance of Tumor and Operation.	Was the Thyroid Present in its Normal Location?	Results.	REMARKS.
1—Hickman: Trans. London Path. Soc., 1869. Vol. xx, p. 160.	Base and substance of the tongue.	2 days.	F.	.....	?	Death by asphyxia...	No operation; tumor found at autopsy; child died from asphyxia.
2—Luecke: Pitha Billoth's "Handbuch der allg. u. speziellen chir., ii, p. 283," also by Merten, Arch. Anat. and Physiol. 1879, p. 4083.	Tumor size of a fist, situated between the hyoid and the substance of the tongue.	22 yrs.	M.	Congenital....	?	Recovery in six weeks	Removed through the mouth.
3—R. Parker: Trans. London Path. Soc., 1881. Vol. xxxii, p. 238.	"Tubular adenoma of root and dorsum of tongue."	16½ yrs.	F.	?	?	5 years later, half of tumor reproduced; no inconvenience.	"Glandular tubes with cubic epithelium, containing a plug of gelatinous material."
4—Bernays St. Louis Med. and Surg. Jour., Oct. 1888. Vol. lv, p. 201.	Two tumors: Size of cherry at foramen cecum, size of "bantam's egg," extending down toward hyoid bone.	17 yrs.	F.	?	?	Complete recovery in 14 days.	Removed by submental incision.
5-6—Butlin: Trans. Clinical Soc., vol. xxiii, p. 118. and Brit. Med. Jour., Dec. 1, 1894.	1. March 6, 1889, tumor size of hen's egg, removed from base of tongue June, 1889; another appeared in same place. Removed again. 2. Similar tumor, smaller in size.	32 yrs.	F.	One year.....	?	Return of tumor in 3 months; disappeared (after second removal).	Removed through mouth.
7—Wolf: Arch. of Clin Chir., 1889. Vol. xxxix, p. 224.	Tumor size of nut, situated at left of base of tongue.	18 yrs.	F.	Six years.....	?	Slight return; no inconvenience.	Removed through mouth by galv.-caut. loop.
8—Staelin: Jahr. der Hamburgischer Staatskrankenhäuser. 1891—92, p. 413.	Tumor extending from epiglottis to base of tongue.	77 yrs.	F.	No operation.	?	No return.....	Submental incision. Inf. maxilla, tongue divid.
9—J. Collins Warren: Am. Jour. of the Med. Sciences, 1892. Vol. civ, p. 377.	Tumor size of hen's egg, situated at base of tongue.	52 yrs.	F.	22 years.....	?	Tumor found at autopsy—died from pneumonia. No return of tumor...	No symptoms intravital. Sections showed normal thyroid.
10—Galish: Deutsche Zeit. f. Chir., 1894. vol. xxxix, p. 590.	Submental tumor size of a walnut.	24 yrs.	F.	Four months..	Present, normal	No recurrence.....	Submental incision; knife.
11—Baber: Soc. of Laryngol. of Lond., Oct. 10, 1894.	"Swelling" at base of tongue.	16 yrs.	F.	Nine weeks...	?	Recurrence of tumor.	Submental incision; galv.-caut. loop.
12—McIlraith; Brit. Med. Jour., Dec. 1, 1894.	"Lump" on dorsum of tongue.	17 yrs.	F.	Two months..	?	No recurrence.....	Removed through the mouth by knife.
13—S. J. Mixer: Mass. Gen. Hosp. Reports, Aug., 1895.	Small tumor at dorsum of the tongue. Another under the symphysis menti.	24 yrs.	F.	Three weeks..	?	No recurrence.....	Submental tumor connected with the thyroid; not a true access. thyroid.
14—Lympius: Deutsche Zeitschr. f. Chir., 1897. Vol. xlv, p. 451.	Tumor at base of tongue....	34 yrs.	F.	Hoarseness for years; swelling for two.	?	No recurrence.....	Removed through mouth. Tracheotomy.
15—Seldowitsch: Centrbl. f. Chir., 1897, p. 499.	Tumor cherry-size, projecting on dor-sum of tongue.	14 yrs.	F.	?	Absent.....	Myxedema after six months.	Galvano-cautery used.
16—Kraske: Reported by v. Chamisso in Beitr. zur Klin. Chir., 1897. Vol. xix, p. 281.	Tumor at base of tongue, more to the right.	37 yrs.	F.	?	Thyroid found absent before op'n.	Myxedema.....	Cretin preceding operation; removed through mouth; tracheotomy.
17—Reintjes of Nymegen: Reported May 23, 1898, at Soc. of Laryng. and Otol., Holland.	Tumor at base of tongue....	25 yrs.	M.	?	Absent.....	Myxedema.....	Hemorrhage preceded the operation.
18—Treitel: Reported at Berlin Med. Soc., May 25, 1898.	Sublingual tumor.....	?	F.	20 years.....	?	No operation performed.	
19—Benjamins: Nederl. Tijdsch. voorgeesk., 1899.	Goiter at base of tongue....	?	M.	?	Absent.....	Myxedema.....	
20—Posthumus Meyjes: Soc. of Otolaryngology and Laryngol. of Belgium, June 4, 1899.	Right half, base of tongue...	24 yrs.	F.	"Potato" in throat since childhood.	Absent.....	No operation.....	Bloody salivation.
21-22—Schadle: The Journal of A. M. A., Aug. 12, 1899, p. 386.	1. Tumor size of an English walnut. Very vascular. 2. Tumor at base of tongue.	25 yrs. 23 yrs.	F. F.	Six months... Ten years.....	? ?	Removal first followed by hemorrhage; second by perfect recovery. Patient refused operation.	Electrolysis for 2 months, later, submental enucleation. Irregular menses since appearance of the tumor.
23—Holmes: Reference in The Journal A. M. A., Aug. 12, 1899, p. 388.	Tumor size of hen's egg at base of tongue.	Young wife.	F.	?	?	At time of report, "only a small mass left."	
24-25—Watson: New York Med. Jour. Vol. lxx, p. 579, Oct. 21, 1899.	1. Tumor at base of tongue, from epiglottis to circumvalate papillae. 2. Similar location.	50 yrs.	F.	"Lump in the throat" for 10 years.	?	No recurrence shortly after operation.	Partial removal by galv.-caut. loop.
26—Vallas: Rev. de Chir., May 10, 1900.	Small tumor protruding on back of tongue	16 yrs. 22 yrs.	F. F.	Five years.... ?	? ?	No recurrence.... Tumor increased in size in 6 months.	Galv.-caut. was used. Submental incision associated with puncture through mouth.
27—Theisen: Albany Med. Ann., 1901. Vol. xxii, p. 537.	Tumor at base of tongue....	67 yrs.	F.	?	Absent at examination.	No operation, account of advanced age.	Variation in size of tumor goitre when young.
28—Curtis and Gaudier: Rev. Hebdom. de Laryngologie. Otol. et de Rhinologie. Vol. xxiii, p. 417, April 12, 1902.	Tumor size of a nut situated at foramen cecum.	21 yrs.	F.	Five years....	?	Excision—recurrence; operation 3 years later—no recurrence.	Tumor had structure of a colloid goitre.
29—Win-low: Amer. Med. Dec. 13, 1902.	Tumor, oval in shape, situated at base of tongue.	17 yrs.	F.	?	?	No recurrence.....	Patient always complained of sore throat.
30—Smith: Nord. Med. Arkiv., 1902. Vol. i, No. 2.	Tumor at base of tongue....	48 yrs.	F.	?	?	No recurrence.....	Removed by "transhyoid pharyngotomy."
31—Teweles: Wie u. klin. Woch., Feb. 20, 1902.	Tumor, root of tongue, 5 cm. in diameter.	13 yrs.	F.	?	Present, normal.	No recurrence.....	Tumor had structure of normal thyroid.
32—A. Onodi: (Budapest) Arch. f. Laryn. u. Rhin. 13, 1902-03, p. 448.	Tumor occupying left half of base of tongue.	26 yrs.	F.	?	?	No recurrence.....	
33—Gaudier and Chevallier: La Presse Oto-Laryngol. Belge., January, 1903.	Tumor at foramen cecum....	20 yrs.	F.	Three years...	Thyroid absent.	No recurrence; no myxedema.	Subment. incis.; div. of hyoid bone; portion of tumor was left in place.
34—Case of Gorris.....	Lingual tumor.....	?	?	?	(?) Probably absent.	Myxedema followed the operation.	
35—L. R. G. Crandon: Reported by H. R. Storrs in Ann. of Surg., Sept., 1904. p. 324.	Tumor size of nut situated at base of tongue.	9 yrs.	F.	1½ years.....	?	No radical operation at time of publication.	Operation undertaken, but hemorrhage so profuse that operation had to be stopped.
36—J. B. Murphy: Present paper.	1. Submental tumor.....	34 yrs.	F.	15 years.....	Present.....	No recurrence.....	Submental incision.
37—.....	2. Sublingual tumor to left of base of tongue.	45 yrs.	M.	?	Present.....	No recurrence.....	
38—Oliver C. Smith: N. Y. Med. Jour., 1904. lxxx, p. 818.	Acc. thy. on the post. third of the tongue.	50 yrs.	F.	Seven years...	Thyroid ?....	Operated 3 times, recurred twice, third time no recurrence.	Cocain tumor extirpated by ecraseur. No hemorrhage.
39—Allen Ingersoll. Ludlow. Surg. Gynec. and Obstetrics, 1905. No. 3, page 203,	Tumor, base of tongue.....	18 yrs.	F.	Three years...	?	No recurrence.....	Removed through mouth by knife, profuse hemorrhage.



5. *Angiomata*.—These are frequently found at the base of the tongue. They have the same aspect as the accessory thyroids and may present the same clinical feature, that is, oozing or hemorrhage. The color of the angioma, however, is of a deep blue, almost black, and it empties by pressure.

6. *Lipomata*.—This form of tumor is very rare at the base of the tongue. The lemon-yellow color is highly suggestive of this tumor. A puncture would not cause bleeding; there is absence of oozing or hemorrhage.

7. *Fibromata*.—Fibromata in this location are rare. They may be pure or mixed. According to Fisher, they are submucous and are either single, double or triple. They reach the size of a pigeon's egg, have a pale color, and seldom bleed. There are on record two cases of fibroma of the tongue, one described by Pooley and the other by Fith. The first case was that of a girl. The tumor caused symptoms of suffocation and hemorrhage, both of which are met with in accessory thyroids; the differential diagnosis was therefore impossible.

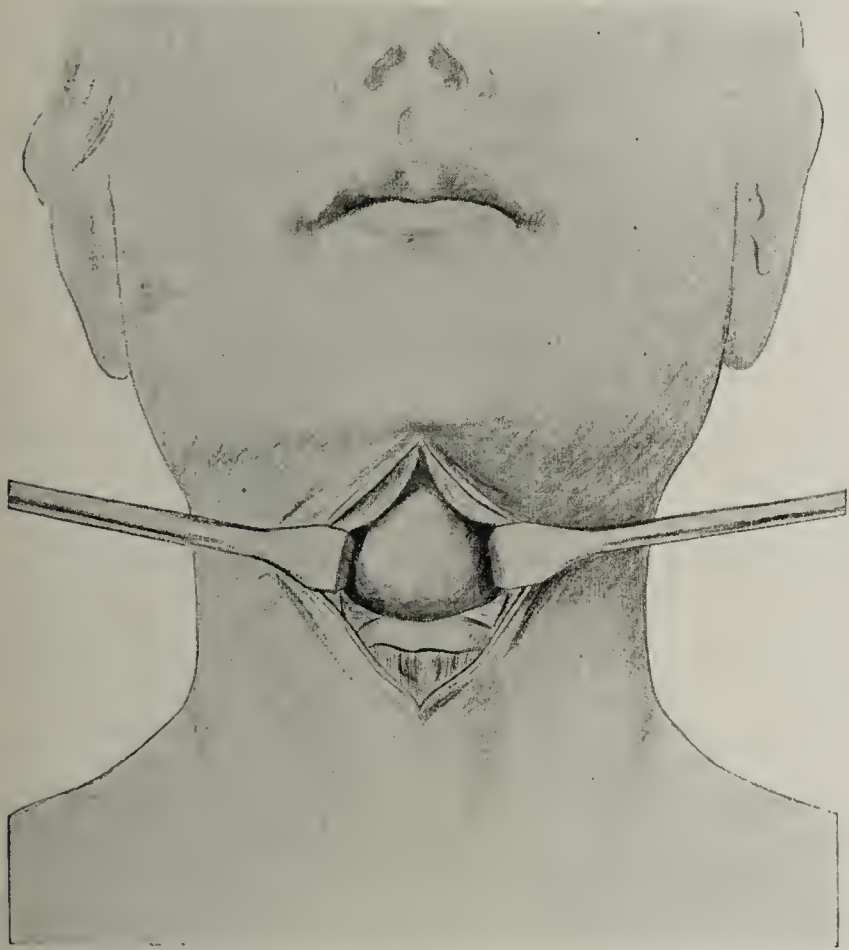


Fig. 5. Author's case. Tumor exposed by a submental vertical incision.

Gibb described a fibroid tumor the size of a billiard ball a little to the left of the base of the tongue. In the museum of the Royal College of Surgeons there is a specimen of a fibroid tumor the size of a walnut, situated at the base of the tongue.

8. *Syphilitic Gumma*.—In the absence of a history of syphilis, one should be able to find some syphilitic stigmata. The gumma usually has a tendency to ulcerate; it is not vascular. Anti-syphilitic treatment would be of great value, since tertiary affections are frequently benefited by specific treatment.

9. *Tumors of the Larynx*.—These first give disturbance of speech and generally distinct symptoms of asphyxia, and should be carefully differentiated.

In the differential diagnosis I desire to call attention particularly to the clinical course, the duration of the growth and the presence or absence of the normal thyroid.

#### TREATMENT.

The treatment is both medical and surgical. Medicinal treatment is generally unsatisfactory. Iodid of potassium occasionally slightly diminishes the size of the tumor. Local application of astringents may also reduce the size somewhat. External counterirritants have been applied, although without any satisfactory results. I suggest the use of thyroid tablets, which have proved to be of benefit in both exophthalmic and simple hypertrophic goiter. Before resort to surgical treatment it is an absolute duty to ascertain whether or not the patient possesses a thyroid in the normal location. As the accompanying table shows, grave mistakes have been made by surgeons who did not

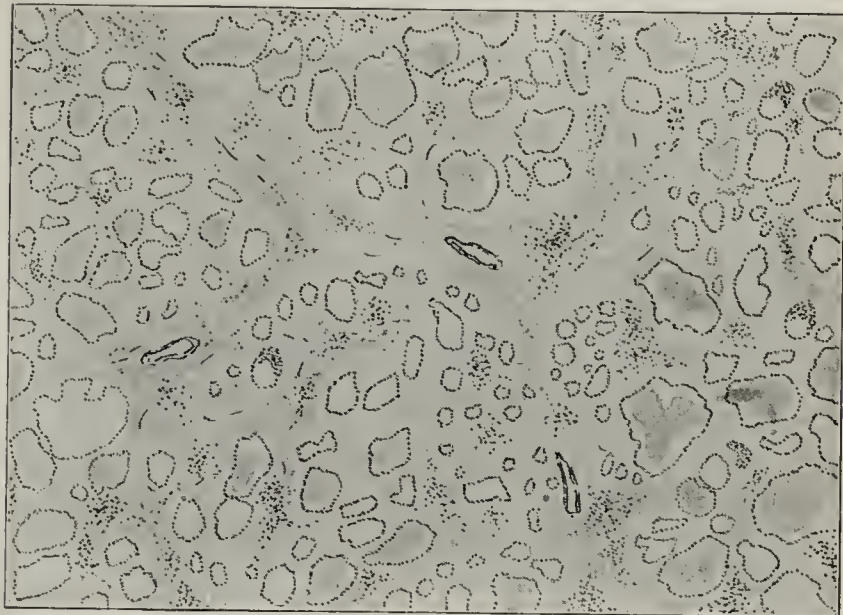


Fig. 6.—Section of a normal thyroid.

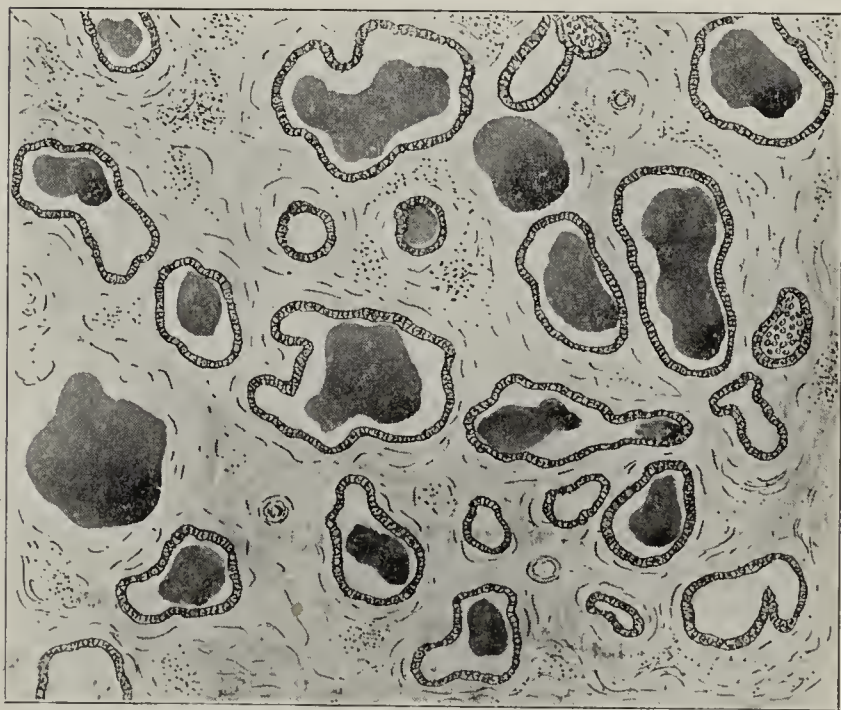


Fig. 7.—The section shows large glandular lumina, filled with colloid material. There is some hyperplasia of the connective tissue.

ascertain before the operation the presence or absence of the thyroid. That point is perhaps the most important one of this entire paper. The accessory thyroid may be the only one that the patient has, and of course all know what the natural result would be if such a precious organ were removed. Out of 39 cases recorded, 5 cases have developed myxedema within a longer or shorter time after the operation. If one is able to ascertain that the thyroid is present, and if such tumors cause a great deal of inconvenience or discomfort to the patient, surgical treatment is not only admissible but



advisable. On the other hand, it must be borne in mind that the thyroid may be present, but on account of some pathologic condition of the organ the accessory thyroid begins to enlarge, which is frequently a physiologic compensation, and in these cases the removal of an accessory thyroid, regardless of the absence of the normal thyroid, is justified only when the tumor is sufficiently large to press down the epiglottis and cause symptoms of asphyxia. Even in such cases the surgeon should be conservative; that is, he should endeavor to remove only a part of the accessory thyroid.

#### SURGICAL TREATMENT.

Surgeons, assuming that they have to deal with a cyst, insert the trocar or aspirating needle; the former may become dangerous if used as a means of treatment; the latter is harmless for diagnostic purposes and useless as a means of treatment. Tincture of iodine, chlorid of zinc and other drugs have been injected in the tumor, but without good results, and the injections are not free from danger. The sublingual tumor can be extirpated either through the mouth or through a submental incision. In some cases, especially where the tumor is small and immediately under the mucosa of the tongue, it can be advantageously extirpated through the mouth. There is seldom any difficulty in enucleation; it can be accomplished with the scalpel or by blunt dissection. The hemorrhage that accompanies such a tumor may be alarming in aspect, but it can be controlled. General anesthesia is usually employed; cocaine, however, has been used. If general anesthesia is employed, the mouth should be gagged, the head low and the tongue forcibly drawn forward. In several instances tracheotomy was resorted to in performing this operation.

#### SUPRAHYOIDAL OR SUBMENTAL ROUTE.

This is the route of election in all cases, and particularly if the tumor is large and protrudes beneath the chin. An incision is made from the symphysis menti down to the hyoid bone. The corresponding muscles are separated by retractors, and as soon as the tumor appears in the incision there is no difficulty of enucleating it either by the knife or the galvano-cautery. The presence of the thyroid in the normal position should be determined in every case before removing the sublingual growth, even though it necessitates a dissection of the neck.

#### RESULTS.

The prognosis is generally good if the normal thyroid is present. There is no death recorded after this operation.

Recurrence of the tumor has been noticed in 6 out of 39 cases. The most unpleasant experience recorded after extirpation of such tumors is the occurrence of myxedema; this occurred five times in the 39 cases, as seen in the tables.

In closing, I wish to express my appreciation to Dr. Victor L. Schrager for collecting the literature of this subject.

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Why a Country Doctor Should Dispense His Own Drugs.—You are certain to furnish a reliable article. You are certain that no "just as good" plays at cross purposes with you. You are certain that your formulas stay your own property. You get rid of refilling prescriptions without authority. You keep the privacy of your patient between yourself and him. You pocket a better fee, and your patient is better satisfied.—*Central States Medical Magazine.*

## THE ALBUMOSURIA OF PHTHISIS.

### A CLINICAL STUDY.\*

J. F. M'CONNELL, M.D.

COLORADO SPRINGS, COLO.

Some two years ago, while working up a series of urinalyses for the purpose of computing the prognostic value of Ehrlich's reaction in the tuberculous, my attention was directed to a large proportion of the specimens having a precipitate with the characteristics of an albumose. There was very little to be found in the literature concerning the significance of this adventitious content; to be more precise, many authorities denied that it portended anything. Hence, the investigation and conclusions here presented I believe to be original.

Albumosuria may be defined as the presence in the urine of a primary product of the digestion of a proteid, differing from albumin in not being coagulable by heat. The albumoses appearing in the urine have a wide nomenclature, which is of little clinical interest. Suffice it to state that it has been conclusively shown that such products are in no wise to be considered as peptones (in the sense of Kühne), which never appear in urine. The physiologists tell us that these bodies are excreted by the renal function when the intracellular disassimilation of proteids is perverted. With this and other theoretical observations I have little to do, as my purpose is to present a clinical deduction, which, if confirmed, should be of vast benefit, namely, the placing of the empiric therapeutic idea of rest on a rational basis.

The twenty-five cases studied during the first six months were patients presenting the ordinary evidences of tubercular invasion who were seeking amelioration through climato-therapy. In their symptoms they were fairly similar. The majority suffered from febrile disturbances, which varied only in degree. All such were subjected to the empirical idea of rest, and it was noticeable in these cases, as in many others preceding them, that some patients did not improve under rest, but did become better when allowed to exercise, such improvement being attributed to better elimination of the toxic products of the disease. But why? Fever denotes a dissolution of the body substances and increased absorption of fat and albumin. Exercise intensifies this; the reparative functions being below par, there is a continued absorption, not only of the tissues of the body, but of the proteins, the etiologic factors of more fever, and yet the experience above given is a common one.

Systematic urinalyses were undertaken and the following observations recorded. With a view to conciseness, these may be reviewed from a triple standpoint: First, those febrile patients giving a positive reaction whom I have designated albumosurics; second, febrile patients giving a negative reaction under rest and exercise designated non-albumosurics; third, non-febrile subjects giving a negative reaction despite the fact that overexertion, mental stress, hot baths, etc., cause a rise in temperature.

OBSERVATION 1.—A. B. C., male, aged 26, weight 145 pounds, normal weight 164 pounds, good family history, clinical and bacteriologic evidences of tubercular invasion of right superior lobe; morning temperature, 97 3/5° Fahrenheit; pulse, 80; slight chilliness at 11 a. m., afternoon rise varying from 101 3/5 to 102° Fahrenheit; pulse, 90 to 96; gradual loss of weight. Urinalysis, positive reaction to albumoses test.

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\* Read before the Colorado State Medical Society at its Annual Meeting, held in Colorado Springs, 1905.



Patient placed at rest on sleeping-out porch. Chill anticipated and usual disciplinary methods enforced. Temperature gradually declined to almost imperceptible afternoon rise. Albumoses disappeared some days later. Gain in weight. Patient allowed limited exercise without bad effect. After a week patient overstepped bounds, fever and albumosuria returned, with loss of weight as a resultant.

OBSERVATION 2.—J. K. L. is representative of the second class. Male, aged 22, weight 151, clinical and microscopic evidences of tubercular involvement of both apices; morning temperature, 98; pulse, 82; afternoon rise of 100 to 100  $\frac{3}{5}$ ; pulse, 88, which was persistent, though disciplinary rest treatment was enforced. Albumoses were at no time demonstrable in the urine.

During rest patient lost eight pounds in weight. Exercise, under supervision, was then permitted with the happiest results. At present time patient is playing golf each day, has gained fifteen pounds in weight, temperature is normal and pulse nearly so.

OBSERVATION 3.—X. Y. Z. is cited as a representative of class three. Male, aged 28, at one time tubercular fibrosed right apex. After fatiguing exercise, mental excitement, etc., there is an afternoon rise to 100. Test for albumoses negative.

In the 129 records at my disposal, of which the above serve as types, there is much of interest to be gleaned as to classification, but this I leave for more mature investigation. Briefly stated, it is evident that the albumosuric patients suffered from a rise of temperature, increased by exercise, which was febrile in character—contrariwise non-albumosurics presented a rise of temperature—which was not benefited by rest and in whom exercise under supervision was attended by the happiest results.

#### TESTS.

In all cases of albumosuria the amount of albumose that appears in the urine is relatively small, and as a rule can not be demonstrated by the biuret test when applied directly to the native urine; on the contrary, it is necessary to isolate the substances more or less definitely before deductions can be drawn as to its presence or absence.

*Test.*—Ten c.c. of urine are treated with 2 c.c. of a saturated salt solution in order to get rid of the common albumins, acidified with 5 drops of dilute acetic acid boiled and filtered while hot; coagulated albumins remain behind while albumoses go into the filtrate from which they separate on cooling. The filtrate should then give the biuret reaction, which is best brought about in the following manner:

The urine is heated with potassium or sodium hydrate solution and a 10 per cent. copper sulphate solution added, drop by drop. The positive reaction is a rose coloration.

If in a suspected specimen the reaction with the above test should become negative, it is often worth while to try the following method: 10 c.c. of urine are treated with 8 grammes of ammonium sulphate; the fluid is then boiled for a moment, placed in the centrifuge for one minute, and the sediment stirred with alcohol in an agate mortar. The alcohol is then poured off and the residue dissolved in a little water. This solution is boiled and filtered and the filtrate tested for the biuret reaction. By this method it is possible to demonstrate albumoses in a dilution of 1/5000.

708 North Tejon Street.

**Thoroughness.**—It is not good to be a bigot, and to give no credit for intelligence to our opponents, either in politics or in religion; but there is something worse than bigotry, and that is instability—to have no opinion except what is pumped into you by your neighbor, or to have one opinion to-day and another to-morrow, or never to rise above opinion, and to reach conviction. This . . . indecision may be due to a certain quality of mind which never can come to a conclusion, and never can take a side strongly, but the chances are that want of conviction means intellectual indolence. . . . Let us believe something with all our might, for the day will come when God will give to the honest thinker more light.—Jan Maclaren.

## THE ROENTGEN RAYS IN DENTISTRY.\*

MIHRAN K. KASSABIAN, M.D.

Director of the Roentgen Ray Laboratory of the Philadelphia Hospital.

PHILADELPHIA.

The discovery of the Roentgen rays in 1895 marked a new epoch in the domain of dental surgery. The first skiagraph of the teeth was presented to the Society of Physics of Frankfurt-on-the-Main, in February, 1896, by Prof. Koenig. In April, 1896, at the Congress of Erlangen, Walkhoff demonstrated many skiagraphs of the teeth in the living subject. Dr. W. J. Morton wrote an article which appeared in the *Dental Cosmos*, June 1896, on "The X-rays and Their Application in Dentistry."

Since then, many dentists and physicians in this country and abroad have endeavored to bring dental skiagraphy to a greater degree of perfection; yet the field is wide and requires many modifications and improvements.

#### TECHNIC.

Although the technic and principles of dental skiagraphy do not differ greatly from ordinary skiagraphy, I wish to describe it very briefly for the benefit of those who are interested, and are desirous of entering on this special subject.

The apparatus that I have recommended for the production of the x-rays is a small Ruhmkorff coil, 6-9 inch spark producing size, energized by a storage battery, or a 110 volt, placed on a shelf, etc. The Crookes tube should have such a vacuum so as to produce rays of good penetration. The direction of the rays in relation to the teeth and jaw is most important; the position of the tube and part must be so arranged as to skiagraph the part without superimposition of the different structures.

#### TECHNIC OF DENTAL SKIAGRAPHY.

Fluoroscopic examinations in dental work do not yield satisfactory results. The two methods of skiagraphing dental conditions at present most commonly employed are: A. The intraoral. B. The extraoral or buccal.

*A. The Intraoral Method.*—This consists in inserting a small piece of film (light and moisture proof) over the gum tissue where trouble is suspected, and in placing the tube in such a position that the rays will fall perpendicularly on the teeth and film. A small sensitive plate, being inflexible, cannot be made to adapt itself to the curvature of the part.

Price, of Cleveland, encloses the sensitive film in unvulcanized black dental rubber, using a sheet of sensitive bromid paper to protect the emulsion. Rollin, of Boston, encases the film in an aluminum cover. Ordinary kodak films can not be used for this purpose.

Personally, I prefer a specially prepared thick, double coated film. I cut it to the size required for the special condition, and enclose it in a layer of black paper, after which the paper is so folded as snugly to enclose the film; the whole is placed in a yellow envelope just large enough to accommodate the size of the paper and film; the smooth side corresponds to the sensitive side of the film.

Place the patient preferably in the dental chair and adjust the tube. In the latter procedure, see that rays

\* Read in the Section on Stomatology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



fall perpendicularly to the vertical apex of the teeth. If the adjustment of the tube be faulty the shadows of the teeth will be distorted.

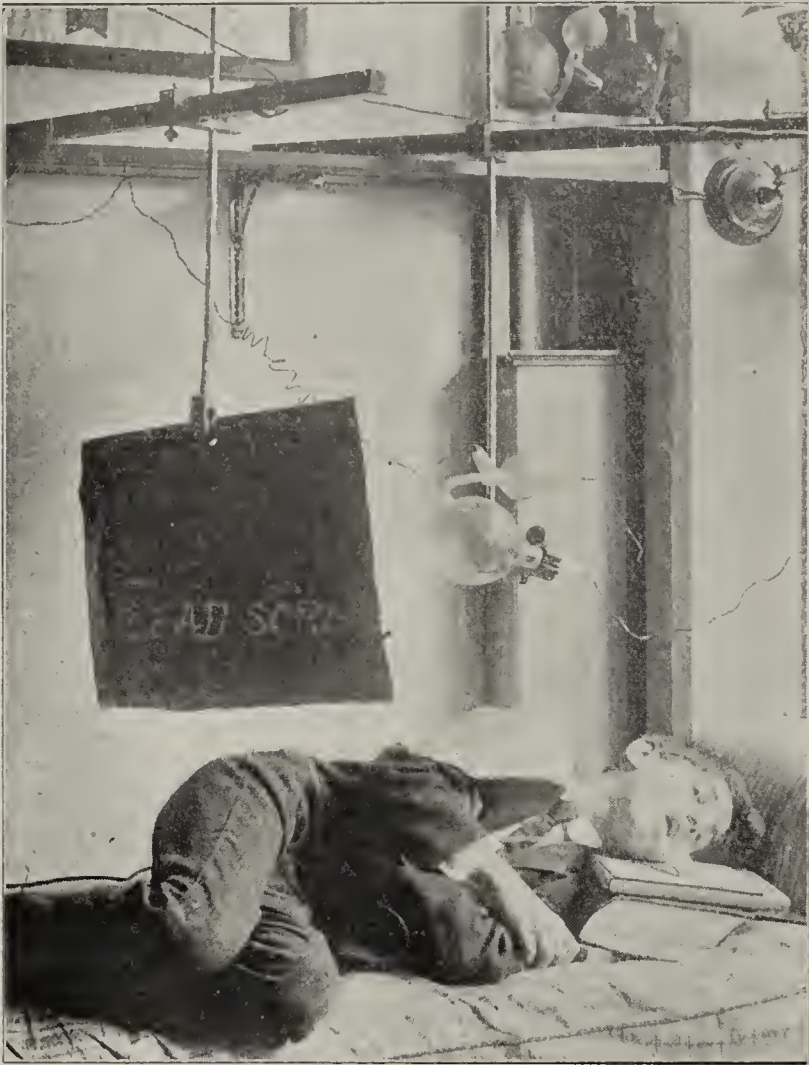


Fig. 1.—The extra-oral or buccal method, showing the positions of the patient and tube and the lead screen to protect the operator.

rubber bands. It must always be remembered that a skiagraph of the superior maxillary bone is less satisfactory than of the inferior maxillary, as the film cannot be placed in a line parallel with the teeth. Two films (superimposed) can be taken at one exposure.



Fig. 2.—Unerupted upper right cuspid (Dr. Dray's case).



Fig. 4.—Unerupted right and left second bicuspid of lower jaw (Drs. Cryer and Smith of Baltimore).



Care should be taken to place the film against the hard palate in order to include in the skiagraph the roots of the teeth. Before its introduction into the mouth, the enveloped film should be reinforced by two

As only one or two teeth can be taken at one time, the film should be pressed against the affected part; the exposure varying from two to ten seconds. The advantage of this method is to be found in the sharper



definitions on the negative, but it must be remembered that only a small area can be taken.

*B. The Extraoral or Buccal Method.*—This requires a plate 8x10 against the jaw at the suspected region.

A block of wood is wedged between the widely extended jaws, and the patient is directed to lie on the

der). The rays are sent obliquely at a distance of 20 inches from the face to avoid overlapping of the shadows of the jaws. The method produces a picture of greater area, and is intended for bicuspids and molars of both jaws. Exposure varies from one to three minutes (Fig. 1).



Fig. 3.—Unrupted upper left cuspid (Dr. M. H. Cryer's case).



Fig. 5.—Unrupted third molars on both sides of lower jaw and one on the upper right side (Dr. M. H. Cryer's case).



Fig. 6.—Pericemental and alveolar necrosis of the upper third molar on which was bridgework (Dr. W. Freeman's case).

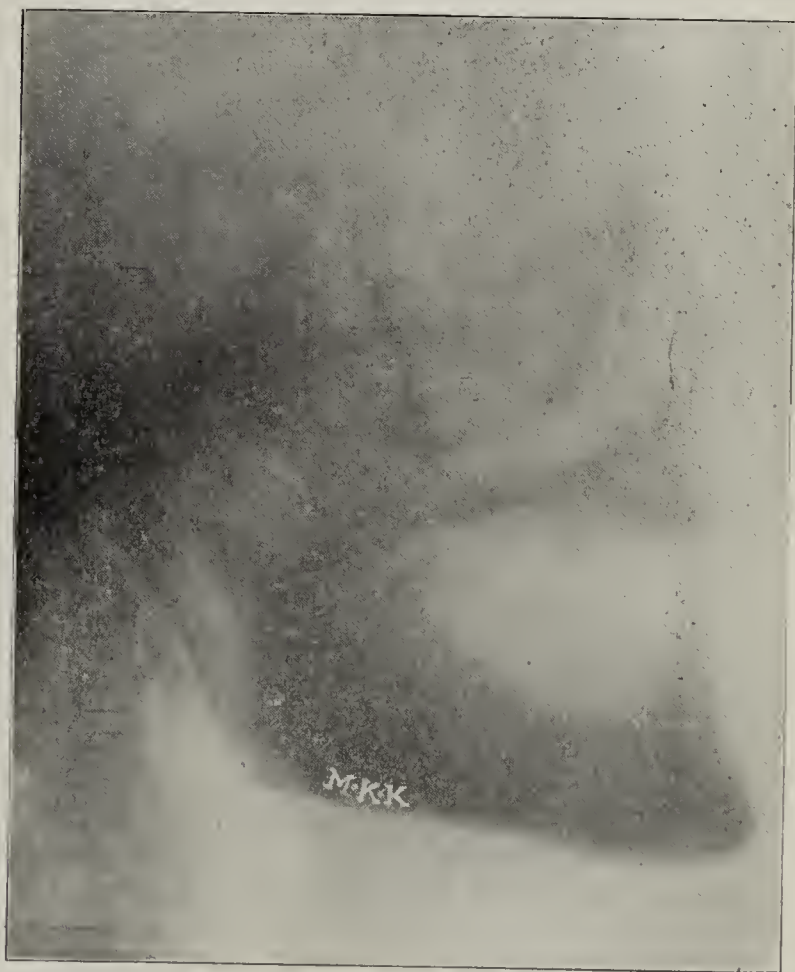


Fig. 7.—Dr. Jaco's case. Broken root of the right upper canine.

affected side and to incline the head and neck to an angle of about 45°. The tube is now placed over the opposite shoulder, the latter being protected by a sheet of lead (the tube being placed very close to the shoul-

#### THE CLINICAL APPLICATION.

This method will assist in studying the anatomy and physiology of the oral cavity, viz., the eruption and evolution of the teeth.



*Anatomy.*—The sinuses, dental canals and foramina, antrum of Highmore and many other conditions in normal or diseased states, can be studied most thoroughly.

The structures of the teeth can be studied; namely, enamel and dentine give different shadows, the former being a denser shadow than the latter. The pulp, dental canals, etc., are likewise visible.

*Evolution of the Teeth.*—The evolution can be studied from the second month of the embryonic life, and each month thereafter. Calcification, which begins at the crown of the tooth, can be studied in its different stages.

*Unerupted and Retained Teeth.*—An important condition coming under the dentist's care is the retention or non-eruption of a permanent tooth owing to the temporary tooth remaining in the alveolar socket beyond the age considered normal. If the skiagram reveals the unerupted tooth to be of normal shape, and so located as to permit of its eruption, the indication is to remove the temporary tooth.

Cases of odontalgia frequently reported are undoubtedly due to an unerupted tooth; in such cases the etiologic factor may be revealed by the *x*-rays.

The following are a few of the cases in which *x*-rays were utilized for this condition.

CASE 1.—Unerupted upper cuspid of the jaw; referred to me by Dr. Dray in 1900; patient a medical student complaining of facial neuralgia, etc. (Fig. 2.)

CASE 2.—Unerupted cuspid of upper jaw referred to me by Dr. Cryer. Patient had a swelling under the eye; he suffered pain; had eye symptoms, headache, etc. (Fig. 3.)

CASE 3.—Unerupted second bicuspid of the inferior maxillary bone in a girl of 12, on the right and left side, referred to me by Drs. Cryer and Smith of Baltimore. (Fig. 4.)

CASE 4.—Unerupted third molars on both sides of lower jaw, and one on the upper right side, referred to me by Dr. M. H. Cryer. (Fig. 5.)

Foreign bodies and broken instruments, defective root fillings, whether properly and completely filled or not. Fracture, etc., and metal splints can be studied.

Ankylosis of the inferior maxillary articulation, temporo-maxillary, whether it is bony or false, can be studied both fluoroscopically and skiagraphically. This ankylosis may be true or false, partial or complete, depending on the cause; both fluoroscopic and skiagraphic examination is necessary. The extraoral or buccal method should be employed. In early stages, the articular and cartilaginous joint presents an irregular surface, and in time ankylosis occurs, as when following a fracture involving the joint. The latter may be seen to be wholly obliterated, absence of movement being manifested clinically in false ankylosis. The joint is seen to be eroded, the fibrous adhesions not showing unless they have become partially infiltrated with inorganic salts. False ankylosis is often due to rheumatism or to syphilitic diathesis.

Dead pulp in a tooth is indicated by a break in the continuity of the pericemental membrane at the apex of the root, by more or less absorption of the adjacent osseous tissue, and occasionally of the roots in long standing cases. In the majority of instances, such an abscess is due to imperfect treatment, but in many cases the canal of the root is so narrow and irregular as to make it almost impossible to fill the canal or cavity to the apex.

When a case presents symptoms of a pericemental in-

flammation, and the history is uncertain, the most rational procedure is first to skiagraph the field, thus ascertaining the exact location and extent of the lesions, and often its cause.

CASE 5.—Dr. P., patient of Dr. W. Freeman, suffered intense neuralgia, with painful reflexes from the ear, nose and eye. He had a bridge on the third upper molar. The skiagraph showed a pericemental and alveolar necrosis; tooth was removed and alveolar process was cleaned, etc. (Fig. 6.)

CASE 6.—This was a patient of Dr. Cryer. The angle of the inferior maxillary bone was swollen and painful. A skiagram was taken while the probe was inserted. It showed a necrotic condition of the angle of the lower jaw, and the probe was inserted up in the canal. There was found an unsuspected necrosis. The patient was operated on and several months after the skiagram showed the regeneration of the bone.

CASE 7.—Dr. Gaylord's case, Mr. E., aged 65.

*History.*—Three years ago the third molar was removed, and an artificial plate was made. Three months after swelling around the first cuspid was noticed.

*Treatment and Result.*—On account of his age, the surgeons thought it malignant, and so operated and curetted the (abscess) bone, as shown in the skiagram.

After the operation (three years ago), there was a sinus, which gave him much discomfort and pain; every remedy and surgical treatment proved unavailing. A skiagram showed a broken root on the plate, and on the film it showed the root was 2 mm. under the gum tissue. The root could not be felt. Dr. Gaylord removed it, and with an injecting solution showed the sinus to communicate with the root of the tooth. The patient recovered in four weeks.

CASE 8.—A woman, aged 65, was referred to me by Dr. Jaco. The patient had suffered for fifteen years from neuralgia of the right side of the face. Dr. W. W. Keen removed the infraorbital and infradental nerve, but the neuralgic pain still persisted. A skiagraph revealed a small broken root of the right upper canine tooth. Prior to a careful study of the case thirteen sound teeth were uselessly extracted. Before making plates for artificial teeth, the dentist referred the case to me, to inquire if the rays would discover a retained root, which would cause a repetition of the former trouble. (Fig. 7.)

#### ABSCESS OF ANTRUM OF HIGHMORE AND FRONTAL SINUS.

A skiagram of a lateral view of the face and suspected side next to the plate will always show an abscess of the antrum, but the better way, and I always prefer it, is to have a skiagram of the occipito-frontal view, viz., the patient puts his head over the large plate and rays come from the occiput. This view will show the affected side, which can be compared with the normal side. Frontal sinuses can be shown by lateral view.

Recently I examined a retired physician, the case being referred to me by Dr. J. Solis-Cohen. A skiagram showed pus in the frontal sinus; two skiagrams were made, one before and one after evacuation. I have had the privilege of studying dental conditions and the anatomy of the face with Prof. M. H. Cryer, at the Philadelphia Hospital, whose dry specimens and cases offered most thorough study in the exposition of the methods of stereoskiagraphy.

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*Professional Ethics.*—A practitioner of medicine, to the best of his knowledge and ability, should strictly follow the code of etiquette accepted by the profession, for he may be assured that it has its root in a principle which works for the general good, while for his real success nothing in the end will prove more helpful than a faithful adherence to the spirit of the rule, "Do as you would be done by."—*British Medical Journal*.



## BEHRING'S NEW TUBERCULOSIS REMEDY.

ARNOLD C. KLEBS, M.D.

CHICAGO.

"I can assure you that rarely in my life have I felt greater joy than during those days, weeks and months when I recognized with ever-growing clearness the essential causal relation between inoculation and immunity." These enthusiastic words were uttered by von Behring at the closing session of the International Congress of Tuberculosis October 7, of this year, before an assembly of lay and medical members and their guests. They served as an introduction to the revelation of this remedy of tuberculosis, of which we, who were in Paris at the time, had seen the most wonderful accounts on the preceding days in the sensational press of the French metropolis. It seems to be the specialty of international congresses to bring forth some sensational revelations. In 1890 Koch's announcement of his tuberculin and later in 1901 of his unbelief in the identity of the human and bovine type of the tubercle bacillus are still well remembered. The sensational element in this, as it was the case in the others, will exert a regrettable influence on the public, and especially on its good opinion of things medical.

Anything uttered by the inventor of diphtheria antitoxin by a scientist of the first rank, however, must command attention, no matter how regrettable its mode of announcement may seem. The original text of Behring's address was translated by Letulle and Fuster. It may be presumed that this translation which was read at the congress in Behring's presence, was authorized by him. All the various English translations seem to have been made from this French translation. The only German text available so far is the one given in the *Münchener Medicinische Wochenschrift*, No. 43. There are some more or less important differences in the wording and actual text of these various articles. In quoting Behring I shall hold myself principally to the German text.

First of all, it may be suitable to examine what Behring promises to accomplish with his "new tuberculosis remedy." He says: "My method is destined, I believe, to protect men threatened with phthisis, against the damaging consequences of the infection." Ambiguous as these words are, we must take them to signify that the remedy is not expected to cure tuberculosis in all its stages, but to prevent in those infected the development of destructive processes, i. e., phthisis. Exactly where the efficiency of the remedy begins and ends is not indicated in the address.

This accepted, we may proceed to analyze his theory of a curative principle, the existence of which he says he has recognized with certainty during the last two years and which is entirely different from the antitoxic one. Here, again, is the same ambiguity of expression. He says "this new curative principle plays the essential rôle in the immunizing action of his 'bovo-vaccine.'" This latter method consists in the inoculation of cattle with human or other attenuated varieties of the tubercle bacillus in increasing doses until an immunity not only against these but also highly virulent bovine bacilli is obtained. The curative principle, he says, becomes active by the impregnation of the living body cells with a well-defined constituent of the tubercle bacillus. He has isolated this substance and calls it TC, as E. Klebs has done for long years to indicate the active curative principle contained in the cultures. Behring thinks his TC has formative, assimilating, absorbing qualities and thus constitutes the life principle of the bacillus. That

Behring thinks he has been able to isolate the "life principle" of the bacillus *in vitro*, must be taken as the most direct indication of his intention as I will show later. This TC has remarkable qualities; he finds it has fermentative catalytic powers, even within the impregnated animal cells. It is responsible for the hyper-sensibility to tuberculin and the curative cellular reaction against the virus. The healing action is exerted through a transformation of this TC within the cell into some hypothetical derivative, which Behring calls TX, because he does not know yet whether it is a ponderable body or not. A cellular immunity quite different from the antitoxic, humoral immunity is thus produced, and Behring says that he has arrived at the clear conception of this through his intimate acquaintance with Metchnikoff's work on phagocytosis. Experimental proofs for this view he does not give us, however. He promises them in a new book which is to appear soon.

The method of preparation of his remedy is then sketched, and the fact that Behring and his school have made in the Behring works at Marburg the most exhaustive chemical and experimental investigations of the various components of the tubercle bacillus renders this part of the address of particular interest. These works, which were established at the expense of a well-known chemical firm, are the most perfect to be found anywhere and offer every opportunity for these studies. Several hundred thousand liters of bouillon media have been used there for the growth and subsequent study of the tubercle bacillus only. One who sees the scanty cultures in ordinary laboratories would be astonished to find here crops of tubercle bacilli weighing pounds. Apart from the laboratory facilities, there is offered every opportunity for experimentation on large and small animals also on a scale not to be found elsewhere. A staff of very able assistants working under one of the foremost bacteriologists of the age, and utilizing these facilities must produce results which of necessity compel attention. In speaking of the method of preparation of his TC, Behring considers three groups of substances which hinder its therapeutic action. We may note here that Behring, Römer and Ruppel have previously isolated and studied twenty-five separate substances derived from the bacillus by various methods. The three groups Behring refers to are: (1) One substance soluble in water and corresponding to Koch's tuberculin. By certain procedures he was able to increase its toxicity so that 1 gram of the substance is more powerful than 1 liter of the old tuberculin. (2) A proteid substance soluble only in neutral salts (NaCl). It is toxic like tuberculin. (3) A group of non-toxic substances soluble in alcohol, ether, chloroform, etc. The body of the bacillus, freed from these three groups of substances, Behring calls the rest-bacillus. He reduces it probably through grinding to an amorphous mass, and this is, although he does not state it directly, the TC. Introduced into the subcutaneous tissue of certain animals which are not immune to tuberculosis, he finds it is taken up by the cells which originate from the lymphatic germ centers. These cells transform the TC and become oxyphile and eosinophile simultaneously with the manifestation of bodily immunity. Behring considers it of fundamental importance for the comprehension of the therapeutic TC action, that although it is not itself capable of reproduction, tubercles can be produced by it, tubercles which never caseify or soften, but heal spontaneously without leaving traces (Laennec's granulations tuberculeuses).



These are about all the facts given in Behring's address. As to the method of applying his remedy (which he considers capable of improvement), no direct information is given. He only says that it can perhaps be modified with advantage.

Therefore, in order to get a conception of his theory of the new curative principle, of the nature of his remedy and its application, we must resort to speculation, and this is possible only with a due consideration of Behring's other recent work on immunization. Although Behring's language in his address is vague and ambiguous, there are certain essential principles which can not be misinterpreted. First of all among these is the fact that Behring finds the curative principle pre-existent within the body of the tubercle bacillus. This means an entirely new departure and radical change in Behring's opinion. In his introduction<sup>1</sup> to the work on cattle immunization against tuberculosis, we find this very positive statement: "We must for once and ever discard the teaching of the co-existence of curative and damaging agents within an infective substance (Bouchard's *matières vaccinantes* and *matieres nuisibles*).<sup>2</sup>" In whatever way he may explain the action of his TC, we can consider it nothing else but a "*matière vaccinante*" extracted from the bacillary body.

He has been able to produce immunity against tuberculosis by the introduction into the circulation of living and self-producing tubercle-bacilli, but he has the "most serious objections" to the application of such a method in man. In TC he has found a substance which is not living and self-reproducing, but nevertheless "can be made far superior to the living bacillus in regard to its protective and curative action." There is certainly nothing very new in this discovery, and should it prove to be true it would be a brilliant vindication of E. Klebs' investigations which allowed him to adhere persistently to his theory of a curative element pre-existent in the tuberculous virus. Even before 1894, when this author published *in extenso* the results of his biochemical investigations of the tubercle bacillus, he defended his theory of the presence of a curative principle in the virus, which he then called, as Behring does now, TC. He has through all these years substantiated his theory by numerous tests on animals and in men. E. Klebs sees the mechanism of the immunizing process by his TC in its bactericidal action, and it can not be stated clearly from the works of Behring, how much he differs from him in this respect.

Behring speaks of a cellular immunity altogether different from the humoral antitoxic immunity, but the mechanism of this is by no means clear. In his work with Much,<sup>2</sup> the relations of cell life to certain (anthrax) infective organisms were studied with very interesting results. The conclusions then drawn were that not only cells suspended in body fluids are carriers of antibodies, but also fixed tissue cells can carry and produce them. Also that various infective substances show elective qualities for certain definite cell groups. In the case of tuberculosis, as we have seen, Behring has paid special attention to the germinative cell centers of lymphatic tissue. He has evidently studied these cells by similar methods, as was some time ago done by Donath and Landsteiner. There he came to the following hypothetical conclusions: The cells, leucocytes, endo- and epithelial cells in this case, during a course of a sub-acute or chronic infective process become victim to

"oxyphile" degeneration (the less virulent the infection the more the oxyphilia, intense coloration by eosin), they are finally reduced to a colloidal solution which gives to the blood fluid the agglutinating properties against that variety of bacteria which has produced the infection. We have seen that Behring in his address says that the metamorphosis of the TC within the cells is accompanied by their oxyphile and eosinophile degeneration, and that this marks the manifestation of immunity. He does not state there what further changes take place in the cells and what part they play in the immunizing process. In the above-cited case (anthrax) he suspected that the modified cell substance acted through agglutination. It is very doubtful if this theory is applicable in the case of tuberculosis. But there is no doubt that these processes merit the great attention which they have received in very recent times. We know that Wright and Douglas have found in the blood plasma certain substances which they call opsonins. These substances, by becoming attached to the bacteria, make them (opsono: prepare as food) susceptible to phagocytosis. Whatever the mechanism of immunization in Behring's method may be, it appears very probable from the foregoing that he imagines a more or less direct bactericidal action to take place.

These considerations may throw some light on one of the darkest passages of Behring's address. It is: "I have transformed active into passive immunization." In Ehrlich's terminology we know that "active immunization" pre-supposes cell activity for the production of antibodies; in "passive immunization" the latter are artificially introduced into the body through a foreign serum rich in receptors. It may be that the "passive action" of the cell substance, as we have seen above, has given rise to this expression of Behring's. It certainly does not seem probable that Behring's method of application is based on what Ehrlich calls passive immunization. Behring, it is known, has substituted for Ehrlich's terms active and passive, "isopathic" and "antitoxic."

Since Behring expressly states that the new, by him discovered, curative principle plays the essential rôle in his immunization method of cattle, it is most probable that this latter has been followed by him here with some modification. We have seen that he objects to introducing into the human organism living tubercle bacilli. But since he has found that he can make these latter perfectly harmless, by extracting from them the TC, a substance of much greater protective and curative powers and which, he emphasizes, contains the life principle of the bacillus, we are forced therefrom to conclude that his method consists essentially, not as in cattle immunization in the introduction of living tubercle bacilli, but in that of the life principle, the TC. With this theory of the bacillary life principle he covers up another change of opinion, because only this year we find him saying: "My bovo-vaccine consists of living germs. If it is heated so that the germs are killed it ceases to be a vaccine. It may contain a poison, but it is not any more self-reproducing and the poison is not capable of exerting a protective action."<sup>3</sup>

The hypothesis that Behring intends to use the bacillary product TC directly for immunization purposes, I believe, is strengthened by his most recent contribution to the subject in a letter to the November number of the *Revue Internationale de la Tuberculose*. He speaks there of his intention to use the unstable remedy TX in man, while the mother substance, the TC, which is

1. "Beiträge," No. 5, p. 6.

2. Deutsch. Med. Woch., 1904, No. 1.

3. "Beiträge," No. 10, p. 2.



more preservable, is to be used in animals, but he adds: "It is not impossible that later TC will be employed advantageously in man." He says, also, that he has extracted the TX from the animal body and compares it to an explosive substance, probably indicating thereby its instability. From what has been said before it seems quite likely that he has used for extracting purposes the lymphatic tissue, possibly the bone-marrow of cattle. The fact, however, of his extracting the TX for experimental purposes does not at all detract from the significant fact expressed by him that he thinks it possible that ultimately the TC can be used directly for curative purposes.

With a knowledge of Behring's ideas of cattle immunization we are allowed to presume that in human immunization with TC or TX he will introduce this substance by the same way. He has chosen the quickest and shortest routes to the points of attack of the tubercle virus, which he believes to be the leucocytes and the non-striated muscle-fibres, i. e., through the blood-current. He finds by this method the elective attraction between polynuclear leucocytes and the tubercle bacilli brought about very rapidly and especially in animals which previously have been under the influence of the tubercle virus. We see here again how much importance he ascribes to the cellular conditions.

The results of recent clinical studies of leucocytosis and phagocytosis have a direct bearing on these questions. Arneft's investigations<sup>4</sup> of series of neutrophile blood pictures, made on a very extensive scale, have allowed him to come to certain definite conclusions in regard to tuberculosis immunity. He is led to believe that the injected quantities of toxins (tuberculin in this case) according to their dose destroy a larger or smaller quantity of neutrophile leucocytes or what he considers the same, that for the production of antibodies a corresponding number of cells is needed and used up. To replace the loss created by this increased consumption of cells a more or less stormy production of cells (leucocytosis) follows. This increase of functional fitness is shown by an ever-increasing production of antibodies which with the consumption of the cells enter the blood in corresponding quantities, thus enabling the organism to overcome increasing doses of toxins without reaction, i. e., to become immune. This seems to be supporting Behring's theory of a cellular or histogenetic immunity, or better, it revives the interest in Metchnikoff's theory of phagocytosis. Metchnikoff has persistently adhered to the fact demonstrated by him, of a phagocytic derivation of antibodies. In this respect the careful studies of phagocytosis inaugurated by the Belgian investigators, Denys and Leclef, will also have to receive renewed attention.

There is, however, a large group of careful investigators who adhere to the humorigenic origin of the antibodies, whether they be antitoxins, lysins, agglutinins, precipitins or opsonins. The results of the recent experiments of Wright and Douglas, which were confirmed by Bulloch and Atkin, Hektoen and Ruediger and others, are certainly more in favor of the humorigenic theory of immunization, and the practical results of the "vaccination" method based thereon can perhaps be regarded as further supporting it.

We have seen that Behring considers it of importance in his method of cattle immunization that the attenuated virus is brought rapidly to those preferred points of attack of the virus, and that he had to utilize the blood

current for the purpose. Whether he believes this sufficient for curative purposes in man must remain problematical until we hear more from him in this respect. Locwenstein's very recent studies<sup>5</sup> of experimental iris tuberculosis give suggestions in this direction, which to some extent have been already elaborated by Koch and his school. He finds that purely local infections do not bring about a formation of agglutinins, and from that he concludes that neither acute local or chronic infections (the latter being always local) can bring about an immunity, which is so easily produced in acute general infections. To treat chronic infections successfully he thinks it necessary that "other organs than those especially sensitive to the infection must be forced to absorb the specific infective bodies."

Considering once more Behring's announcement in the light of his own and other experimental studies, we are allowed to conclude that he has entered on a new line of work and that his further reports will merit great attention. On the whole, it seems that his method is based on principles, elaborated before him by others, especially Metchnikoff and E. Klebs. How much ultimately suffering mankind is to profit can not be predicted, nor can Behring's expressed, though carefully and ambiguously worded expectations, mean anything but a plausible, by him yet unproved hypothesis of a curative principle, applicable in human tuberculosis.

## *Special Article*

### THE PHARMACOPEIA AND PHYSICIANS.

#### CHAPTER I.

##### INTRODUCTION.

The Pharmacopeia of the United States of America has been the generally accepted authority and the professed guide of American medical men, in matters therapeutic and pharmaceutical, for over eighty-five years. Since the publication of the first edition, in 1820, the book has undergone eight decennial revisions and to-day it is universally accepted as being the peer of authoritative books of its kind, for its scientific accuracy as well as for the general excellence of the descriptions and directions that it contains.

This recognized superiority of the Pharmacopeia of the United States of America, in its own particular field, and its generally accepted authority, as a guide, in all matters relating to the strength and purity of the medicinal articles enumerated in its pages, is all the more remarkable in that during its long and varied career it has never been granted a general recognition by statutory enactment. This lack of legal recognition has undoubtedly been a disadvantage to the book in so far, that, in the past two decades at least, the contents and even the very existence of such an authoritative book has been largely lost sight of by American physicians, and official remedies, to a very marked degree, have been eclipsed or overshadowed by the innumerable patented and proprietary remedies that are constantly brought to the attention of medical men in the advertising material with which their offices are regularly deluged.

With a view of bringing the Pharmacopeia itself, its scope and its contents, and particularly the extensiveness as well as the comprehensiveness of the included material, more prominently before the medical profession, it is proposed to present, in a series of articles, a collection of facts and suggestions bearing on the number and the variety of therapeutic indications that may be fully met with official drugs and preparations.

It is also proposed to call attention to the unreasonable claims and the extraordinary statements that are frequently

4. Leube's Clinic.

5. Moeller's laboratory at Belgig.



made in connection with some of the arbitrary combinations of drugs that are offered as proprietary remedies or "patent" medicines, and to compare the probable limitations of these self-styled panaceas with the possible application and the varied uses of the more simple and, therefore, more generally reliable, official remedies, the composition as well as the purity of which can readily be determined by well known and easily applied methods.

That even the most recent, the eighth decennial, revision of the Pharmacopeia can not be said to be free from possible errors of commission and omission must be admitted, but many of the shortcomings that are usually attributed to the book are really due to the general lack of interest that has been displayed by physicians; and many, if not all, of these shortcomings should be corrected in future revisions, if members of the medical profession would but make their needs and wishes known at the proper time and place.

It has been repeatedly asserted that the Pharmacopeia of the United States, as such, is designed primarily for pharmacists and for the manufacturers of pharmaceutical galenicals, and that it contains little or nothing of direct interest to the physician. One of the prime objects of this series of articles will be to demonstrate that this assertion embodies only a half truth and that the present edition of our national Pharmacopeia really contains much that does, or at least should, interest every medical practitioner in the land.

In this connection it should also be remembered that the technical descriptions and tests for which the average physician may think he has little or no use, are in reality essentially important in securing for him, and through him for his patients, remedies that are not only reliable, but which are also uniformly active.

As an introductory to this proposed series of articles, it may be permissible to give a brief review of the history of our national Pharmacopeia and incidentally to call attention to at least some of the various causes that have led up to the present widespread use of proprietary medicines and nostrums. To do this it will be necessary to call attention to some of the shortcomings of our Pharmacopeia, from a medical point of view, and to refer to at least several of the attempts that have been made to correct these shortcomings by offering either a substitute book or by introducing more or less radical changes in the book itself.

During the colonial period, and even during the first three decades of the independence of the United States, the pharmacopeias, or the dispensaries that were based on the pharmacopeias of Edinburgh, London and Dublin, in the order given, were practically the only authoritative books on *materia medica* known in this country.

A rather notable exception is to be found in the small pamphlet, of 32 duodecimo pages, containing 100 titles, that was published as "A Pharmacopeia for the use of the Military Hospital belonging to the Army of the United States," during the Revolutionary period. The first edition of this little book was published in 1778 and a second edition, bearing the name of Dr. William Brown as editor, was printed in 1781.

The earliest known attempt to produce a distinctly representative American Pharmacopeia was made by the members of the College of Physicians, who, June 1, 1788, appointed a committee of eight members to form a pharmacopeia for the use of the college. The members of this committee, being desirous "that the work should be accommodated to the practice of medicine throughout the United States," continued the preliminary work and correspondence for over ten years, but finally allowed the project to languish.

Recognizing the need for a more distinctly American book, Dr. J. Redman Coxe, of the University of Pennsylvania, in 1806, published what was practically a reprint of Duncan's Edinburgh Dispensatory, under the title of "The American Dispensatory." The next American publication, in point of time, was the Pharmacopeia of the Massachusetts Medical Society, published in 1808, and this was followed in 1810 by Dr. James Thacher's American New Dispensatory, also published in Boston. These books supplied two of the then existing medical centers, and the territory more or less dependent on them, with reference books on *materia medica*, of Ameri-

can origin. The territory more directly dependent on New York City was in a measure supplied by the publication of "The Pharmacopeia of the New York Hospital," in 1816, and the subsequent publication, in 1818, of an American reprint of the Edinburgh New Dispensatory. This rapid multiplication of authoritative books appears to have been unsatisfactory and no doubt led to the revival of the project, proposed many years before, of forming a truly national pharmacopeia.

American physicians, and particularly the leaders in American medicine, have contributed so little to the evolution or advancement of the Pharmacopeia of the United States of America, during recent decades, that, no doubt, it will be interesting, if not surprising, to many, to be reminded of the fact that the inception as well as the inauguration of the Pharmacopeia is to be accredited to the leading minds in the medical profession of this country, eighty or more years ago. It was at a meeting of the New York County Medical Society, in January, 1817, that Lyman Spalding suggested the first practicable plan for securing a national pharmacopeia. At the annual meeting of the Medical Society of the State of New York, held at Albany, in February, 1817, the same plan was discussed and a committee was appointed to consider the necessary details and to report at the next annual meeting. The report of this committee being in favor of the proposed plan, the society, in 1818, appointed delegates to meet in district convention, for the purpose of forming a pharmacopeia. Of the members of the New York State Medical Society who took an active part in forming this first national pharmacopeia it may be well to mention the names of Lyman Spalding, Samuel L. Mitchill, David Hosack, Valentine Mott, T. Romeyn Beck, Wright Post and Alexander H. Stevens. Other members of the profession were hardly less enthusiastic. In Boston the proposed plan received the earnest support of John C. Warren, Jacob Bigelow, James Thacher and George C. Shattuck. In New Haven it was endorsed by Eli Ives, William Tully and Nathan Smith; in Baltimore by Elisha DeButts, Samuel Baker and Nathaniel Potter, while in Philadelphia, Thomas T. Hewson, Samuel P. Griffiths, Thomas C. James, Edwin A. Atlee and Joseph Parrish, all of them active and influential members of the College of Physicians, gave the plan their unqualified support and endorsement.

On Jan. 1, 1820, the first General Medical Convention was convened at the Capitol, in the City of Washington, for the purpose of preparing and publishing a national pharmacopeia. The convention was organized by electing Samuel L. Mitchill, New York, president, and Thomas T. Hewson, Philadelphia, secretary. The necessary details connected with the preparing, publishing and editing of the proposed pharmacopeia were entrusted to a committee composed of Drs. Lyman Spalding, Thomas T. Hewson, Eli Ives, Elisha DeButts and Jacob Bigelow. The copyright of "The Pharmacopeia of the United States of America" was subsequently sold to Charles Ewer, of Boston, "for a large sum" and the book was finally published under date of "Dec., 1820."

This completed pharmacopeia, although prepared and edited by a committee of the most prominent medical men of the day, and printed in Latin, as well as in English, was soon found to be "in its nature too circumscribed and technical" for the use of physicians.

To overcome this necessarily objectionable feature and to popularize the book and its contents with medical practitioners, Dr. Jacob Bigelow, a well-known medical writer and one of the editors of this first national pharmacopeia, in 1822, published what he was pleased to term "A Treatise on the *Materia Medica*, Intended as a Sequel to the Pharmacopeia of the United States, Being an Account of the Origin, Qualities and Medical Uses of the Articles and Compounds which Constitute that Work, with Their Modes of Prescription and Administration." This book, practically a pharmacopeia for physicians, appears to have met with considerable popularity, and the well-worn pages of the still existing copies of the book certainly appear to bear evidence to the fact that they were frequently consulted.

That a pharmacopeia, consisting largely of a simple enumeration of drugs with detailed directions for the several medicinal preparations, could not be expected to appeal to the



medical profession, and that, unless such a book was well known to the individual members of that profession, it would have little or no reasonable excuse for its existence, appears to have been clearly appreciated by the members of the medical convention that met in the city of New York in January, 1830, for the purpose of revising the pharmacopeia.

The members of this convention decided to, and subsequently did, introduce several really novel features into this first revision that are only now, three-quarters of a century after the publication of the book, being revived and discussed. In addition to having short descriptions of the physical properties of drugs, both whole and powdered, this Pharmacopeia also included doses, and, what is even more, also included short, suggestive remarks on the "Medicinal Operations" or therapeutic properties of the several drugs that were included in the text.

For some unknown, certainly unforeseen, reason there appears to have been a misunderstanding in regard to the method of electing delegates to attend the General Medical Convention, and at least a portion of the delegates from the Middle States did not attend the convention in New York, but decided to hold a convention of their own in the city of Washington. As a direct outcome of this opposition convention we have another, "first" revision of the national Pharmacopeia, published in Philadelphia in 1831.

This 1830, Philadelphia revision of the national Pharmacopeia, as it is generally known, was continued along practically the same lines as the original pharmacopeia published in Boston in 1820 and did not appear to meet with the use and sale among physicians that its authors might reasonably have expected or desired.

To popularize this edition of the pharmacopeia, and also to furnish American medical practitioners with a convenient handbook on therapeutics, two of the younger members of the committee on revision, Drs. George B. Wood and Franklin Bache, decided to prepare and to publish a commentary on the national Pharmacopeia. This book, known as the "Dispensatory of the United States of America," first published in 1833, met with instantaneous and really phenomenal success. Three editions were sent to press within as many years and the book rapidly displaced the Pharmacopeia itself with both physicians and apothecaries, and led to the rather anomalous condition of having a commentary that was generally accepted as being more popular and, therefore, more important than the Pharmacopeia itself.

For more than fifty years the Pharmacopeia occupied such a secondary and comparatively unimportant position to the Dispensatory that it was generally asserted that it would be practically impossible to have the Pharmacopeia published apart from the Dispensatory. Fortunately the authors of the Dispensatory were men of exceptionally high ideals and for over fifty years were the leading contributors to the advance and progress of the Pharmacopeia itself.

That the unrelenting hand of time brings changes that stay progress was evidenced in 1876, when Dr. E. R. Squibb, of Brooklyn called the attention of the members of the American Medical Association to the fact that the then official Pharmacopeia could not be said to represent the existing status of the practice of medicine and pharmacy. Dr. Squibb also pointed out that, owing no doubt to the death of one of the editors of the United States Dispensatory, Dr. Franklin Bache, and the very advanced age and practical retirement of Dr. George B. Wood, that book had not been carefully revised, or brought up to date, and, therefore, that the medical profession was entirely devoid of any authoritative work on *materia medica* and pharmacy.

To overcome the evident stagnation that had crept into the revision of the national Pharmacopeia, at that time, Dr. Squibb proposed that future revisions be undertaken by and conducted under the supervision of the American Medical Association. This latter proposition met with such active and bitter opposition, however, that in 1877 future consideration of this project was indefinitely postponed.

During the decade immediately following this discussion, there arose a number of additional factors to detract from the popularity and from the general use of the national Pharmacopeia. Not the least of these is to be found in the innovations that were included in the 1880, sixth decennial, revision of the

Pharmacopeia itself. This is a subject that is more of pharmacutic than therapeutic interest, however, and its further consideration may be omitted at this time.

One other factor, and not by any means an unimportant one, from an economic point of view, was the introduction of German synthetic chemicals, and the accompanying scramble for publicity by ambitious, professedly up-to-date medical practitioners in the reading pages of our medical journals.

Kairin, the first of these synthetic products to reach us, was introduced in 1883, and soon proved to be not only unreliable, but positively dangerous. It was followed, in 1884, by antipyrin, which met with phenomenal use and added untold wealth to the coffers of the manufacturer. The commercial success of this substance stimulated others to renewed activity, and in the succeeding years American physicians were deluged by an immense number of really useful, as well as positively dangerous, true and fictitious, synthetic remedies, to say nothing of the untold hundreds of elegant pharmaceuticals, all of them lauded and exploited as new remedies.

This rapid accumulation of true, as well as of pseudo, new, remedies appears to have had a stimulating effect on the editors of the several dispensatories and text-books on *materia medica* and therapeutics. These books rapidly grew in size and weight and also in the variety of the contained material until the official or pharmacopeial portion was lost in the superabundance of wonderful cures and remedies that were offered for the alleviation of the ills and ailments of the human family. Added to all this plethora of new remedies, there appeared a growing feeling in favor of therapeutic nihilism until it was quite proper for a physician to disclaim all knowledge of the use of drugs and boldly to assert that he was entirely independent of the necessity for such really antiquated measures as drug therapy.

The publication of the 1890, or seventh decennial revision, of the national Pharmacopeia offered or suggested but little change in the then existing conditions other than to reintroduce the long-established English practice of measuring liquids and weighing solids. Even this concession did not appear to have the desired effect of popularizing the Pharmacopeia. This no doubt was due largely to the fact that pharmacists are proverbially slow in adopting new ideas, and physicians are even slower, or are loth to insist on rational innovations being adopted wherever practicable.

With the advent of the new century, there appears to have been a re-awakening on the part of the members of the medical profession, at least, and the interest that has been manifested in the work of the Council on Pharmacy and Chemistry of the American Medical Association, the articles that have appeared in lay journals on the abuse of nostrums by the laity and, last but by no means least, the comments that have appeared in medical journals on the contents of, and the changes that have been made in, the recently issued eighth decennial revision of the Pharmacopeia of the United States of America all bear evidence to the existence of a healthy spirit of inquiry among medical practitioners in this country.

As noted before, it is to foster and to aid this spirit of inquiry and to present what, at times perhaps, may be seemingly elementary information on a well-known subject, that this series of articles has been designed. If they but tend to make the members of the medical profession more familiar with at least some of the numerous drugs and preparations that are included in the pages of our national Pharmacopeia the time that has been devoted to their preparation will not have been spent in vain, or the space in these columns wasted.

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**The Local Use of Tetanus Antitoxin.**—An employé of the Behring Institute at Marburg, who had had tetanus twice, was accidentally inoculated in the right hand with a virulent culture of tetanus. Kuster of Marburg reports in the *Wiener klin. therap. Wochschr.* that the wound was washed and treated with antitoxin, but marked tetanus of the right arm soon ensued. The axilla was then laid open and all the nerve stems thoroughly injected with tetanus antitoxin. In twelve hours the stiffness of the arm musculature had disappeared and only a slight temporary trismus remained, due perhaps to a small amount of the toxin having been carried to the spinal cord before the blocking off in the nerve trunks.



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## THE PHYSICIAN AND THE PHARMACOPEIA.

It is easy to pull down, but difficult to build up.

A fool can destroy; it usually requires a genius to create.

Destructive criticism accomplishes little, often re-acts and does an injury to whatever the cause may be.

Calling attention to a harmful condition of affairs, without exaggeration, and at the same time suggesting a means whereby the harmful conditions may be improved, usually brings about a better state of affairs; it never makes them worse.

For some months we have been calling attention to the nostrum evil, occasionally specifying, by name, articles that are for one reason or another fraudulent and mentioning individual firms who are deliberately deluding members of our profession by exploiting through them articles that are nostrums in the worst meaning of the word. This we shall continue to do.

We have also been calling attention to the deplorable condition that has developed by allowing unprincipled promoters—the larger number of whom know little of medicine, pharmacy or chemistry—to blight our therapeutic literature by polluting it with false or misleading statements, extravagant claims, and by publishing valueless testimonials obtained from credulous and ignorant or unthinking physicians. This, also, we shall continue to do.

All this might be called destructive criticism, and probably if we stopped at this we should accomplish little of permanent value. Construction as regards the good, as well as destruction of the bad, must be the aim. A general condemnation of all proprietary medicines is not wise and is liable to produce a species of therapeutic nihilism in a few and to have the opposite effect on the many. (However, we are not in this country suffering from too much therapeutic nihilism; the proprietary medicine men—even those who have honest, non-secret, commendable products must be included—have generously supplied us with literature so overly colored with hopefulness that it has developed a therapeutic optimism that is much more baneful than any therapeutic nihilism could be.)

Proprietary medicines,<sup>1</sup> as such, are not to be condemned. Some are valuable additions to our materia

medica and represent advanced knowledge in chemistry, as well as in pharmacy. Those preparations, whether patented or not, which accord with the principles contained in the ten rules adopted by the Council on Pharmacy and Chemistry of the American Medical Association will be described and the description published to the profession in due time.

But something more must be done than simply to condemn the bad and to recognize the good if the present conditions are to be changed. It is repeatedly stated—and there is no doubt of the truth of the statement—that medical practitioners are incompletely prepared either to see the fallacies of the promoter's optimism or to prescribe easily for every condition without leaning on the crutches of ready-made mixtures. There is need of education here, and this education must reach both those who are about to enter our profession and those now in active practice. The young men who are now in medical colleges must at least be taught how to write prescriptions, and they should be warned of the wiles of the nostrum vendor before they are given the privilege to practice medicine, even though pathology and bacteriology have to be neglected. Then, too, something must be done to counteract on those now in active practice the influence of the too-often erroneous literature of the nostrum exploiter, as well as that of the smooth-voiced, oily-tongued, well-trained "detail man," who knows so well how to bamboozle and cajole the unwary and uninformed doctor. Further, we must recognize the fact that most of us need educating over again as regards our method of prescribing. If we are to give up using nostrums, and if we are to refuse to accept our therapeutic literature from those who are making fortunes from our acting as unpaid peddlers of such articles, we must learn what we can substitute for them and must obtain our therapeutic hints from other sources.

With the object of helping to solve one phase of the problem, THE JOURNAL proposes to present to its readers a series of articles on the relation of the physician to the Pharmacopcia. The character of these articles is outlined in the introduction which appears this week. We feel sure that they will enlighten us regarding official remedies, which have been sadly neglected by our medical schools, by medical journals, and even by authors of text-books. They will show that in the Pharmacopcia we have such a wealth of therapeutic agents that there is no real necessity for using anything not official; at least that there is no necessity for using nostrums. The basis of these articles is the Pharmacopcia, and, except incidentally, only official drugs will be discussed. In the near future the proprietary preparations which have been indorsed by the Council on Pharmacy and Chemistry will be published, probably first in THE JOURNAL, in a series of articles to follow those now begun on the official preparations.

1. See page 1889.



## THE NEW ORLEANS IMBROGLIO.

The entire state board of health of Louisiana has resigned, including the president, Dr. Edmond Souchon. Following the submission to Governor Blanchard of their report on the epidemic of yellow fever, it is said that the governor announced that he wanted an investigation of the circumstances responsible for the entrance of yellow-fever infection. He expressed the intention to ask a grand jury to determine who, if any one, had failed to do his duty. Thereon the board resigned. In its report the board concludes that it is not possible to decide the source of the original infection, but it presents probable hypotheses. It points out that in July a physician at Gulfport, Miss., was fined for reporting a doubtful case of yellow fever, though many cases subsequently developed in Gulfport, and though Governor Vardaman later severely scored physicians who did not promptly report cases. "Ship Island [quarantine station] is close to Gulfport; so is New Orleans, and the inference is obvious." Colon and Havana are suggested as possible sources of infection, as are Bocas del Toro, Belize and Port Cortez. The board suggests that the officers of our Public Health and Marine-Hospital Service stationed at Belize and Cortez did not learn of yellow fever at those ports until several weeks after the early cases occurred. Complaint is made that the Surgeon General of the Public Health and Marine-Hospital Service did not order the fumigation of empty vessel holds at infected Colon until requested to do so in June by President Souchon. It is pretty squarely charged that Havana concealed cases for months, and Cuba's quarantine system is declared to be a farce. It is also alleged that early in the summer one man twice came from infected Vera Cruz and entered Texas at Laredo without any difficulty. It is recommended that the quarantine season be advanced to begin on March 1, and that the detention period be made six days instead of five.

"The State Board of Health positively denies the statement of Dr. Kohnke in his official report" that he informed the board of suspicious cases early in July. Dr. Souchon says he received the first news of cases from physicians and notified Dr. Kohnke, and Dr. Kohnke, in his report as published, makes the same statement. In justification of its course the board makes one plea that carries weight. From the day when the first suspicious case was reported several days had to elapse before a positive diagnosis could be made, and to announce prior to demonstration that yellow fever existed would have thrown business into useless turmoil.

In our issue of two weeks ago it was noted that the chief count in the indictment brought against the Louisiana health officials by the public, and especially by the Mississippi authorities, was the fact that reduced-fare railroad excursions into New Orleans from neighboring towns and states on July 19 were permitted without warning of danger to bring great crowds into

an infected city. This is based on the fact recorded by Dr. Souchon and Dr. Kohnke that the first suspicious cases were reported on July 12 and again on July 15. Dr. Souchon reports that he saw two cases on July 18 at the Hotel Dieu "presenting symptoms of yellow fever." He called a meeting of the state board of health for July 19 (the very day the excursionists were in the city), at which meeting a resolution was passed "instructing President Souchon to write to Dr. Wyman, Dr. Tabor of Texas, Dr. Hunter of Mississippi, and Dr. Sanders of Alabama that there were cases here presenting symptoms of yellow fever, and also to wire them to expect a letter by to-day's mail." The first positive diagnosis confirmed by autopsy findings was made on July 22.

So far as present information goes, therefore, it is impossible fairly to charge the Louisiana authorities with deliberate concealment. Of course, it was the very acme of unfortunate mischance that a popular excursion to New Orleans should have been run during the very days when the diagnosis necessarily was in doubt. Mere suspicion of infection would not have justified the alarm aroused by canceling the excursions, nor is there the least evidence that the authorities knew that the infection was sufficiently widespread to endanger the excursionists of a day. Of course, it is also only too evident that the real early cases, those during May and June, were not reported to the authorities nor found by inspection. In part this was due to the misleading mildness of the atypical first cases and to the consequent and wholly excusable failure of diagnosis, but, it is to be feared, in further part to concealment of cases by a few physicians practicing among the Italians.

In New Orleans, as elsewhere in this country, the public and the authorities have not secured effective sanitary organization, with all its requirements and restrictions. From this defect in preparation as the fundamental factor arise such controversies as the present one in New Orleans. This one could have been avoided had the community heeded the pleadings of Dr. Kohnke, three years previously, that scientific preparations be made to meet a possible yellow-fever infection.

## PHYSICIANS IN RELATION TO PUBLIC HEALTH WORK.

Dr. Westbrook<sup>1</sup> emphasizes the difficulties in the way of securing adequate care for the public health, and suggests certain remedies for the difficulties in regard to the value of which there is little or no room for difference of opinion. We wish to lay special stress on the service that medical men in general may render public health by at all times upholding the need of special training and expert knowledge in this branch of public work, not only on part of laboratory men, but also on the part of health officials, state and municipal. Most of these officers are appointive, and many no doubt often conscientious executives appear to believe that any reputable

1. See page 1835.



physician is fully competent to be commissioner of health of a city or secretary of a state board of health. This is a dangerous tendency that frequently robs the public of the full benefits of modern public health science. It is self-evident that the person who is to direct the sanitary activities, with their numerous ramifications in different directions, of a great city or of a whole state can not do so properly if he has been largely out of touch with the recent development of public health science, as necessarily must be the case with the physician whose time and energy are devoted to medical practice in the usual sense. Indeed, we doubt whether physicians thoroughly appreciate the great growth of this science in recent years. Dr. Wesbrook's address gives us some idea of this growth, with its corresponding specialization. We observe that it is quite impossible for one man to be expert in all the branches of science concerned with public health; the most that can be expected is that he has a broad basis of general knowledge on which he has specialized in some particular direction. Now our appointing powers must be thoroughly informed of this new order of things in the hope that specialization in public health science may be better appreciated and the public welfare promoted.

While physicians advance public health through their advice, their rules and their example, it is very important indeed that they should fully recognize the tremendous importance to the prevention of acute communicable diseases that outbreaks of these diseases be recognized early. This means an early and correct diagnosis. In scarlet fever and smallpox it is doubtful whether laboratory methods as yet can aid in diagnosis except by way of exclusion, but in several other infectious diseases, notably typhoid fever, cholera, dysentery, these methods may be the means of settling the diagnosis before the clinical picture has become so characteristic as to remove all doubt. Hence physicians should not hesitate in doubtful cases of probable infection to call on the municipal or state laboratories for help. It is to be feared that in many cases apathy, and neglect to utilize the means at hand, lead to delay in the diagnosis of infectious and communicable diseases. Increased knowledge and increased facilities for prompt work lead to increased responsibility on part of the physician who now no longer can afford to take any chances with the mild case of suspicious throat diseases or of possible typhoid.

Of course, Dr. Wesbrook's suggestion in regard to a traveling laboratory is an excellent one, but we believe that there is and always will be great need for fully equipped local laboratories arranged to meet the needs of larger and smaller districts. Certainly every city of 10,000 and upward should have its own laboratory, just as well as its own hospital. While the practical management of these local laboratories remains to be worked out, there is no question but that one of the great needs of practical medicine and public health now is to bring modern means of exact diagnosis as near to the door of the private practitioner as possible.

#### MULTIPLE PRIMARY MALIGNANT TUMORS.

Among the striking characteristics of tumor growth that are of importance in considering the various theories of tumor causation is its specific unity. A tumor begins to grow in one place at one time with so few exceptions that this unity may be considered as a rule of growth. A tumor may grow in an organ containing several types of tissue, but only one of these types assumes malignancy, and this one alone persists malignant until the end. A tumor in the breast may start from the epithelium and form a carcinoma, or it may start in the connective tissue and form a sarcoma, but as yet no one has described a tumor of the breast that started from both structures and was a mixed "sarco-carcinoma." The carcinoma may produce secondary growths in a strictly connective-tissue structure, for example a vertebra, but the secondary growth will still, without a single known exception, be a carcinoma. If the sarcoma produces secondary growths in an epithelial organ, say the liver, the secondary growths will invariably be sarcomas. The cause of sarcoma must, then, be looked on as having a specific nature, so specific that it can not produce a carcinoma even when in a place where the epithelial elements vastly predominate; the cause of carcinoma must be equally specific.

Of such significance is this rule of growth that the question of its exceptions becomes of great importance. How often and under what conditions do primary tumors occur simultaneously in different places in the same individual, and how often do primary tumors of different natures occur in the same place at the same time, forming a tumor composed of two sorts of malignant tissue at once? Occasionally reports have been made of cases of multiple primary tumor formation in which the individual has had distinct primary growths arising in different places either at one time or at different periods of time. Usually both tumors are of the same character, and generally they are carcinomas. One of the most commonly observed of these is the formation of independent skin carcinomas on different portions of the body, particularly in the aged. Nehr Korn has even observed three such independent primary growths in different portions of the intestinal tract in which the histologic structure was so distinct as to guarantee the independence of the growth—for example, a squamous cell carcinoma of the esophagus and a cylindrical cell carcinoma of the stomach. Van Hanse-mann was able to collect but twenty-two cases in the literature in which patients had had a carcinoma in one part of the gastrointestinal tract and another in some other part of the body at the same time, and in none were more than two primary growths observed. In spite of their close functional relation, however, and the frequency of primary tumors in each organ, only two or three cases have been reported in which a patient suffered with carcinoma in the uterus and in the mammary gland at the same time. There are more instances of simultaneous growths in the uterus and ovaries, but



the ease of extension and metastasis from one to the other makes these cases more uncertain. The same difficulty exists in the cases of apparent primary carcinoma and sarcoma of both ovaries, of which many have been reported.

The simultaneous occurrence of carcinomas and sarcomas is even less frequent, particularly if we exclude a number of the cases of such tumors in the uterus or ovaries, in which the observers have evidently been misled by the peculiar sarcoma-like character of the cells of the stroma of the ovary and submucosa of the uterus. The most valuable of these cases are those in which separate metastases of sarcoma and of carcinoma have been found, and of these there are less than half a dozen. Such a case is that reported by Grawitz, the patient being a woman of 67 years, who, in addition to several benign myomas of the uterus, had a sarcoma of the uterus and a carcinoma of the small intestine, each of which had produced metastases of its own kind in other organs.

Most interesting of all are the tumors which contain both sarcomatous and carcinomatous elements in the same primary growth. If we consider the relation of prolonged irritation to the production of malignant proliferation of cells, we might reasonably expect, from this cause alone, that the rapidly-growing, irritated and inflamed stroma of a carcinoma might take on proliferation of a malignant type. Or if we consider Cohnheim's theory that tumors arise from misplaced nests of embryonal tissue, and that most of such nests (e. g., adrenal nests in the kidney) contain both epithelial and connective tissue structures, we might expect that both types would take on malignant proliferation at the same time. In spite of both of these possibilities, however, such primary mixed tumors are among the rarest of occurrences—there are scarcely a dozen cases reported. For some unknown reason they are most frequently present in the thyroid, and hence have usually been secured as surgical specimens by operation. Perhaps on this account in but one of these cases has the final conclusive evidence of dual nature been shown; that is, the production of metastases containing both types of cells. This was a "sarco-carcinoma" of the thyroid of a dog, reported by Wells,<sup>1</sup> which produced metastases of pure carcinoma, pure sarcoma, and of the mixed sarco-carcinomatous tissue. Other cases of sarco-carcinoma have been reported in this country—in the white rat by Leo Loeb<sup>2</sup> and in the human thyroid by Wooley.<sup>3</sup>

If we try to secure light on the theories of tumor etiology from these observations, we do not find the illumination a very clear one. Only the distinctly specific nature of carcinoma and sarcoma stand forward; that so few mixed or multiple growths have been examined shows that the cause of carcinoma is probably quite

distinct from that of a sarcoma. This fact might be interpreted equally well in favor of the idea of a specific parasite, or of the theory of an inherent, fundamental change in the process of cell multiplication—the two prevailing theories. That multiple primary tumors are so rare surely controverts the theory of a "tumor diathesis" and also, to some extent, speaks against the idea of hereditary influence; the laws of chance would account for the small number of cases that have been reported. Grawitz considers that the infrequency of multiplicity speaks against an infectious origin, an idea with which we can scarcely agree, for how often do we have primary simultaneous infections of different organs by pathogenic bacteria?

In considering unusual pathologic conditions, such as these mixed tumors, a point of regret to the pathologist is that the great majority of such cases do not get into the literature. It would probably be safe to estimate that there occur a score of cases of multiple primary malignant tumors for every one that is reported. They are recognized by physicians frequently enough, and perhaps talked over among colleagues, but, not being recorded in the literature, their chief value is lost. No one man can have a large enough acquaintance with the rarities of pathology to draw safe conclusions from them. It is necessary to collect a large number of individual experiences to make deductions, which in many instances are of great importance in matters that are not uncommon. It is, therefore, a very real duty of every physician to make his own observations on unusual matters available to others. A careful report of any of the unusual conditions personally observed has a more permanent worth than a score of articles which contain merely reflections resulting from considering the writings of others, no matter how well presented and how instructive they may be. The man who has a case of acromegaly, or of acute yellow atrophy, or carotid gland tumor, or of blastomyeosis, or of any of the other important but rare diseases, and does not make the facts available to others, is committing a sin of omission.

#### BEHRING'S NEW REMEDY FOR TUBERCULOSIS.

The summary by Dr. Klebs, in this issue, of Behring's address at the International Congress for Tuberculosis gives us as clear an idea as at present attainable of the real gist of this matter. Shorn of bewildering detail and ambiguities, Behring's method consists in the use, for protective and curative purposes, of certain otherwise harmless constituents of the tubercle bacillus. The method appears to be a natural outgrowth of the successful immunization of cattle against bovine tuberculosis by means of injections of human and other varieties of tubercle bacilli. The introduction of living tubercle bacilli into human beings is not practicable and consequently it became necessary to try to secure the immunizing and possibly also curative substance or

1. Jour. of Pathol. and Bacteriol., June, 1901.

2. Amer. Jour. Med. Sci., February, 1903.

3. American Medicine, 1902, Aug. 30, p. 331.



substances in sterile form, and this it is that Behring indicates that he believes he has succeeded in doing.

In this work Behring follows paths already broken in the efforts to obtain protective and curative substances from tubercle bacilli, as well as from other bacteria. E. Klebs has maintained for years that tubercle bacilli contain a curative element. Some of the earliest successful immunizations against tuberculosis were accomplished by Trudeau, de Schweinitz and others in this country. In recent years much effort has been given also to obtain in as pure form as possible the substances of cholera, pest, typhoid and other bacteria that give rise to immunity in susceptible animals in order to develop practical methods of preventive inoculation, and considerable progress has been made in this respect.

Translated into the terms of present-day immunology, the various ideas expressed as to the mode of action of "the curative element" of the tubercle bacillus, one would say that tubercle bacilli, like pathogenic microbes in general, contain certain elements or antigens which, when introduced into suitable animals, may give rise to cellular reactions, leading to the formation of specific antibodies of various kinds and possibly to the development of a kind of cellular immunity, the nature of which we do not now understand. Concerning these antibodies little is yet actually known, but there is some reason to believe that bodies concerned in phagocytosis are of particular importance.

With the scanty information now at hand it is easier to understand the protective than the curative action of Behring's "TC" or tubercle antigens. One may conceive, however, that the injection in the infected organism, at a favorable period, of considerable quantities of antigens would stimulate and hasten the reactions that tend to natural healing, which we know occurs in a large per cent. of infected persons after a certain age. But at this juncture the advice given by Hunter to Jenner seems peculiarly applicable: "Don't think, but work!"

#### RATIONAL SANITATION.

In a very readable article in *Leslie's Weekly* for November 23, Surgeon J. H. White, United States Public Health and Marine-Hospital Service, who was in charge of the victorious fight against yellow fever at New Orleans, outlines the lessons of the epidemic. The chief one is in his title: "No more shotgun quarantines for yellow fever." The task faced in New Orleans this year was much more formidable than that at Havana in 1901. In the matter of sewers, water supply and dwellings New Orleans was in worse condition, while Havana had a docile population accustomed to military rule. A sane and rational quarantine admits any one from any where after six days' observation, and freely admits persons in good health who can prove that they have not been in an infected locality. Many persons from infected towns were openly admitted to New Orleans, but none of them gave rise to further cases. All that is necessary, in fact, is to know just where each entrant

resides, so that surveillance can provide for prompt isolation, screening and fumigation. "A case of yellow fever known is a case of yellow fever extinguished." Dr. White thinks "that train infection is a myth." About 100 Mississippi guardsmen for sixty days traveled back and forth from New Orleans to the Alabama-Mississippi line in the same cars with New Orleans passengers, but not one guardsman was infected. He believes "that the infector, the *Stegomyia fasciata*, remains very close to the point where it receives its infection, and that for all practical purposes the disinfection of the houses themselves will result in the elimination of the infection in nine hundred and ninety-nine cases out of a thousand."

#### A UNITED PROFESSION IN NEW YORK.

According to a telegram received as we go to press, at a special term of the Supreme Court, held in Rochester, December 9, Judge Davy signed the order consolidating the Medical Society of the State of New York and the New York State Medical Association. This, as we understand it, removes the last technical obstruction to the uniting of the two state bodies. The members of the county societies become members of the district branches and of the state society, and thus the new body contains a membership of over 6,000. As we understand it, the new constitution and by-laws of the old state society become effective immediately, but until the county societies have elected delegates to the house of delegates to the state society the management will be carried on by the state officers and the chairmen of standing committees. Thus the movement that was started nearly four years ago has finally accomplished the object for which it was started. Since January, 1902, the committees representing the two bodies have been constantly at work arranging details and overcoming legal and other obstructions. The committees are certainly to be congratulated on the result of their work, and should have the thanks of the profession not only of New York, but of the whole country. A reunited profession will celebrate the hundredth anniversary of the organization of the Medical Society of the State of New York at the annual meeting to be held next month in Albany.

#### FOOD-STORAGE REFORM.

A bill which was introduced at the last session of the New York Legislature, but which failed to pass, is to be again introduced at the coming session. It provides for the prohibition of the storage of poultry or game in an undrawn condition and the sale of such to the public. Attention has been called to the many cases of toxin infection from eating game and poultry which has been stored in an undrawn state. Naturally, the bill will be resisted by powerful interests, but it ought to pass. The idea of eating fowls which have been hung up in storage for indefinite periods with decomposing viscera unremoved, is not esthetically attractive, and public opinion and requirements ought to be easily molded against such practice, even if the very evident sanitary conditions have less weight.



## THE "DRUMMER" EVIL AT HOT SPRINGS.

It appears to be a fact that, in spite of the United States control of the Hot Springs reservation, the old evils there still exist. It has become one of the great health resorts of the country, but for some reason, perhaps for the lack of sufficient legislation by Congress or the state legislature, or lack of sufficient power on the part of the authorities to enforce existing enactments, the drummers and quack doctors are still in evidence and the commercialism and graft that were before notorious are still in full sway. The leasing of the privileges by the government under present regulations is held by some to be responsible for this. As far as the general government is responsible for matters at Hot Springs, it is its duty to make and to enforce such rules as will bring about a better state of affairs. If legislation by Congress is necessary it should be attended to at once. If the cession of state control is not sufficiently complete the people of Arkansas have also a duty in the matter. The continuance of the old state of affairs, as alleged, is a credit to no one.

## TREATMENT OF ARTERIOSCLEROSIS.

While it can not be denied that heredity is a not unimportant factor in the development of arteriosclerosis, still it must be admitted that not less significance is to be attached to the exciting factors, namely, strain, infection and intoxication. The effects of the former are not readily averted, although something can be done in this direction, while numerous prophylactic measures may be instituted to exclude the latter. The disease of the vessels must be looked on as a response of the tissues to various irritants, and in its prevention effort must be directed to strengthening resistance and to avoidance and removal of undue stimulation. Even when developed the disorder is not wholly unamenable to therapeutic intervention. At least its effects can be ameliorated in part and its further progress retarded. Great usefulness in this direction is claimed by Dr. E. Hirschfeld<sup>1</sup> for the systematic employment of hot baths, from which he has obtained favorable results during a period of two and a half years. Precision in application is essential to success. The reactivity of the individual patient must first be determined. If the patient be a male not above 55 or 60 years of age, the bath may be begun at a temperature of 102 degrees. The immersion should not, as a rule, be continued for less than ten minutes. On the other hand, the treatment should not be undertaken unless the left heart be sound and the vascular pressure good. In general, though not without qualification, it may be said that the hot bath is likely to do good when digitalis is contraindicated, and conversely. The good effects of the hot bath in the treatment of arteriosclerosis are to be attributed (1) to a reduction in blood pressure by unloading the internal organs and increasing the supply of blood to the skin; (2) to increased combustion, as indicated by elevation of bodily temperature; (3) to increased elimination of waste products superinduced by the resulting perspiration.

1. Australasian Med. Gaz., vol. xxiv, No. 7, p. 319.

*Medical News*

## CALIFORNIA.

**Physician Twice Fined.**—Dr. Francis J. Todd, Oakland, on November 16 was fined on one count \$2 and on another count \$5 for exceeding the automobile speed limit.

**Sent to Prison.**—Dr. Herbert T. Thornburgh, San Francisco, an employé of a patent medicine manufacturer, was sentenced on November 18 to serve two and one-half years in the state penitentiary at San Quentin for forgery.

**Midwife Not Guilty.**—Emelie Sutler Simon, a midwife, of San Francisco, charged with causing the death of Mrs. Angela Venezia by a criminal operation, was discharged November 11, the judge stating that he found no proof of guilt.

**Inmates in State Institutions.**—The State Board of Charities reports the following number of inmates in the various institutions of the state: State Hospital at Stockton, 1,099; at Napa, 1,491; at Agnews, 1,063; at Mendocino, 667; and in southern California, 833.

**October Vital Statistics.**—Reports from 53 of the 57 counties in the state show 1,873 births, equivalent to an annual rate of 13.1 per 1,000; 2,117 deaths, equivalent to an annual rate of 14.9 per 1,000; and 1,464 marriages. Tuberculosis led the death causes, with 299, followed by heart disease with 184, pneumonia with 127, injuries (including suicide) with 127, cancer with 119, diarrhœa with 112 and Bright's disease with 106 deaths.

**Hospital News.**—Mrs. Millicent Olmstead, San Gabriel, has executed a deed setting aside a residence and business property in Los Angeles and a ranch in Elmonte, to be sold after her death and the proceeds devoted to the establishment and maintenance of a free hospital. The property deeded is valued at more than \$200,000.—The Oceano Outdoor Sanatorium for Consumptives, Santa Monica, netted \$1,374.89 from the garden fête recently given by Miss Georgiana Jones at Miramar.—The new detention hospital for Los Angeles at Chavez Revine will be completed in about three months.—Pasadena Hospital is to have a handsome addition 124x75 feet, to cost about \$30,000, accommodating 30 patients and given by O. S. A. Sprague as a memorial to his late wife.

## COLORADO.

**New Hospital.**—A new hospital is to be erected at Boulder Hot Springs at a cost of \$9,000.—A non-sectarian hospital, under the auspices of the Colorado Conference of Deaconesses, will be erected in Colorado Springs at an expense of \$100,000.

**Additions to Sanatorium.**—The new St. Anthony addition to the Glockner Sanatorium, Colorado Springs, has been erected and equipped at a cost of about \$40,000, and 29 tents or cottages have been located on the grounds of the institution, at a cost of about \$23,000.

**The Old Trick.**—Forty well-to-do farmers of Weld and Morgan counties are protesting against the payment of promissory notes of \$42 each, which they gave to an itinerant alleged physician a year ago on the condition that they should be cured of rheumatism. As none of the victims received benefit they naturally object to paying the notes.

## CONNECTICUT.

**Hospital News.**—The by-laws of Norwalk Hospital have been so amended as to increase the maximum hospital staff from eight to ten.—Dr. Kenneth E. Kellogg, a member of the consulting staff of New Britain Hospital, has been placed on the attending staff and Dr. Katherine H. Travis has been appointed pathologist and bacteriologist, and Dr. Roger M. Griswold, Berlin, consulting physician.—The Danbury Hospital Association has filed articles of incorporation.—The cornerstone of St. Francis Hospital, Hartford, was laid with appropriate ceremonies October 29.

## DISTRICT OF COLUMBIA.

**Hospital Plans Approved.**—The plans for the United States Army General Hospital, Washington, have been approved by the Secretary of War and the committee in charge, consisting of Majors Borden, McCaw and Stevens. Congress has appropriated \$300,000 to complete the building.

**Health Report.**—The report of the health officer for the week ended December 2 shows that 101 deaths occurred and 114 births. At the close of the week the following cases of contagious diseases were under treatment: Diphtheria, 89; scarlet fever, 20; typhoid fever, 140, and smallpox, 5. The health department is investigating a number of the sources of milk supply to determine, if possible, the source of infection.



**Inspection of Government Buildings and Offices.**—An order has been issued for the President creating a commission consisting of Surgeon-general Robert M. O'Reilly, U. S. Army; Surgeon-general Presley M. Rixey, U. S. Navy, and Surgeon-general Walter Wyman, U. S. P. H. and M.-H. Service, to prepare and submit to the President for approval a plan for instituting an inquiry through the proper officers of the government as to the sanitary conditions existing in all government offices and workshops where a large number of persons are employed, especially with a view of recommending, if necessary, measures for prevention of tuberculosis therein, and furthermore, to detail one or more persons from each of the public services named, to assist in the formation of a plan for investigation and action.

### ILLINOIS.

**Diphtheria.**—Owing to the prevalence of diphtheria the schools at Metcalf have been closed.—Shelbyville schools are closed on account of diphtheria.—The village of Washburn, Woodford County, is under quarantine and schools have been closed on account of the prevalence of diphtheria.

**Oak Park Hospital.**—At a meeting of the Oak Park Business Men's Association, December 8, Dr. John W. Topc announced that he had purchased a site for a hospital and that the Sisters of Misericordia of Montreal would build a hospital on this site next year. He declined, however, to give the location of the hospital site.

**Civil Service Board.**—The civil service commission has selected Drs. Hugh T. Patrick, Frank Billings, John B. Murphy and Harold N. Moyer, Chicago, and Dr. Frank P. Norbury, Jacksonville, as a board to prepare the questions and grade the papers in examinations for assistant physicians in the state hospitals for the insane.

**Northern Illinois Physicians Meet.**—The North Central Illinois Medical Association held its thirty-second annual meeting in Streator, December 4. The following officers were elected: President, Dr. James J. Pearson, Pontiac; vice-presidents, Drs. Edgar P. Cook, Mendota, and Edward S. Murphy, Dixon; secretary and treasurer, Dr. George A. Dieus, Streator, and censors, Drs. Franklin A. Turner, Sandwich; John M. Kaiser, Somonauk; James A. Marshall, Pontiac; Roy Sexton, Streator, and Joseph I. Knoblauch, Metamora.

**Personal.**—Dr. David W. Magee, Peoria, fell November 24, sustaining a compound fracture of the left hip.—Dr. Lemuel Tibbets, Rockford, will move to California after the holidays.—Dr. John B. Miller, Gilson, has decided to move to New Mexico.—Dr. James C. Stewart, Anna, has been appointed local surgeon for the Illinois Central Railroad, vice Dr. Samuel Dodds, removed.—Dr. and Mrs. George F. Heidemann, Elmhurst, have gone to Alabama for the winter.—Drs. Robert J. Christie, Jr., and Otis Johnston, Quincy, have been appointed local surgeons for the Burlington System.—Dr. Frank H. Lord, Plano, has gone to New Mexico.

**Itinerant Vendor Brings Suit.**—James Ferdon, an itinerant vendor of medicines, who advertises himself as "Brother Paul," and who has already been noticed in THE JOURNAL, has brought suit in Cook County against the State Board of Health to recover \$100 held by the board. Ferdon made application for an itinerant vendor's license and tendered the fee of \$100, which was accepted by the secretary of the board. The application was referred to the board and declined. In the meantime "Brother Paul" began operations in Freeport, using the receipt of the State Board of Health as his evidence of authority. Suit was brought against him by the board and fines of \$1,800 and costs found against him. Ferdon left the state and went to Iowa where, on information given by the Illinois board, action was taken against him by the Iowa Board of Medical Examiners. Ferdon now brings action to recover the fee of \$100, which the State Board of Health holds as a partial offset of the fines assessed against him.

**Litigation in Enforcement of Medical Practice Act.**—E. M. Harrison, who holds a diploma issued in 1903 by the now defunct Dunham Medical College, has begun action against the State Board of Health in the Circuit Court of Cook County, to compel the board to issue him a certificate without examination. The action is based on section 2 of the Medical Practice act, which provides that the board may issue certificates to graduates of Illinois medical colleges in good standing without examination. The attorney-general in 1899 held that "may" in this instance must be construed as "shall." On December 12 Judge Chytraus denied the writ of mandamus and held that it is discretionary with the board whether certificates be issued under this provision.—Several years ago the State Board of Health brought suit against Dr. Peter R. Langdon, who had practiced in Kankakee for many years, but who holds

no certificate from the state board. Dr. Langdon contended in his defense that the law does not apply to him, inasmuch as the law states that "no person shall hereafter begin the practice of medicine, etc.," while he contends that he did not begin practice after the passage of the law. He was sustained in this position by the Circuit Court of Kankakee County and, on appeal by the State Board of Health, the Appellate Court affirmed the decision of the lower court. This case is now pending in the Supreme Court, and the board is hopeful that the decision of the Appellate Court will be reversed.

### Chicago.

**Head Eligible List.**—Of the 68 applicants who took the examination for the civil service examination for medical inspectors in the health department, Dr. Edward W. Quick received the highest mark; Dr. Paul F. Morf was second; Dr. Joseph T. Friedman, third, and Dr. Kellogg Speed, fourth.

**A Patient's Ingratitude.**—In the case of Abraham Bernstein, who sued Dr. George F. Suker for \$10,000, alleging that he had been made blind through an operation performed by the defendant two years ago, the court instructed the jury that there was no case against Dr. Suker who, the evidence showed, had treated the plaintiff gratuitously for two years as a result of which the man's sight had slightly improved.

**Personal.**—Dr. Maurice M. Doty has been appointed traction expert, which includes the duty of enforcing the ordinances tending to ensure satisfactory street car service.—Dr. Edwin Janss reached Los Angeles after a trip around the world.—Dr. Alonzo M. Wheeler has been elected president of the Chicago Association of Kalamazoo College Alumni.—Dr. Garrett J. Hagens met with a serious accident in a runaway three weeks ago in which his right hip was injured. He is now able to be about.

**Deaths of the Week.**—Although there were 71 deaths more reported for the week ended December 9 than for the previous week, and 42 more than for the corresponding week of last year, the health conditions are considered fairly satisfactory. The 554 deaths reported are equivalent to an annual death rate of 14.50 per 1,000, and this is nearly 4 per cent. lower than the average December rate of the previous decade. The increases in the chief causes of death are: Bright's disease, 11; tuberculosis, 12; heart diseases, 7; pneumonia, 21, and violence, 20. The number of deaths from these causes was as follows: Pneumonia, 83; consumption, 79; Bright's disease, 51; heart diseases and violence, including suicide, each 47.

### INDIANA.

**Sick and Afflicted.**—Dr. John C. F. Thorne, Kokomo, was committed to a private sanatorium at Kenilworth, Ill., November 29.—Dr. Christopher C. Cronkhite, Marion, has entered a sanatorium at Hartford City to take treatment for the drug habit.

**Laboratory of Hygiene Opened.**—The State Board of Health announces that the State Laboratory of Hygiene, Indianapolis, is now open and ready to serve the public without cost. The department has two divisions—one of bacteriology and one of chemistry. On application physicians are supplied with outfits for the culture of diphtheria and for collecting sputum and blood for examination.

**Personal.**—Drs. Edmund D. Clark, Thomas B. Noble and Frank A. Morrison have been selected as a board of health for Indianapolis.—Dr. Morton J. Compton, Evansville, has been appointed secretary of the Vanderburg County Board of Health, vice Dr. Willis S. Pritchett.—Dr. John M. Fouts, Centerville, has been reappointed physician for the Wayne County Infirmary, and Dr. George H. Grant, Richmond, secretary of the Wayne County Board of Health.

**Allen County Society.**—At the annual meeting of this society resolutions were adopted approving the Council on Pharmacy and Chemistry, which appear elsewhere in this issue of THE JOURNAL. The following officers were elected: President, Dr. Maurice I. Rosenthal; vice-president, Dr. Eric A. Crull; secretary, Dr. J. Clifford Wallace; treasurer, Dr. William P. Whery, and censor, Dr. Samuel H. Havice, all of Fort Wayne. The society now has a membership of 84.

### LOUISIANA.

**Children's Sanatorium.**—A sanatorium exclusively for children is to be located at 850 Carondelet Street, New Orleans, to be presided over by Dr. Erastus D. Fenner, lecturer on diseases of children in the medical department of Tulane University.

**Want School of Tropical Medicine.**—The administrators of Tulane University have asked the faculty of the medical department of that institution for an expression of opinion regarding the establishment of a school of tropical medicine in connection therewith.



**Colored Medical Association.**—At a meeting of the colored physicians of Louisiana at Alexandria, November 15, a state medical organization was organized, with the following officers: Dr. Green A. Cain, Shreveport, president; Dr. L. M. Coleman, Lake Charles, vice-president; Dr. Isaac W. Young, Alexandria, secretary, and Dr. James P. Jones, Alexandria, treasurer.

**A Yellow Fever Martyr.**—Garnett Barnette, a medical student of Bonami, who, when the outbreak of yellow fever occurred, offered his services to the State Board of Health, and who worked hard in Bonami in the effort to stay the ravages of the disease, died from yellow fever October 20, after an illness of eight days, aged 28. Young Barnette was a brilliant student and a young man of fine promise, and in his death exemplified the love than which none is greater, "that a man lay down his life for his friends."

#### MARYLAND.

**Deaths.**—The deaths in Baltimore last week were 201, as compared with 214 for the corresponding weeks the last two years.

**Left Large Estate.**—The late Dr. Charles Carroll Shippen, Baltimore, who died November 6, left a personal estate appraised at \$140,488.

**Seat May be Contested.**—The seat of Dr. Richard S. Hill, Upper Marlboro, Prince Georges County, who was announced to have been elected to the House of Delegates by 65 majority, will be contested.

**Inducements of Naval Medical Service.**—Medical Director R. A. Marmion, United States Navy, delivered an address in Anatomical Hall, Baltimore, December 9, on "Inducements which the Naval Medical Service Offers to Capable Medical Men."

**Bequests.**—The late Mr. William Ferguson, Baltimore, by will, left residuary bequests of \$5,000 to the Presbyterian Eye, Ear and Throat Hospital to aid aged mechanics or members of their families unable to pay, and \$10,000 to the Hospital for Consumptives for the benefit of impecunious consumptive mechanics.

**City Society Meeting.**—The Baltimore City Medical Society, the city branch of the Medical and Chirurgical Faculty of Maryland, held its annual meeting December 6. Dr. W. S. Thayer was elected president, and Dr. W. Edward Magruder was re-elected secretary. A resolution was adopted endorsing the Anti-Smoke League movement.

#### MASSACHUSETTS.

**Fire at Hospital.**—A fire at the Springfield Hospital November 21 damaged an old building and a laundry annex to the extent of \$3,000, fully covered by insurance.

**Centennial of Society.**—The Essex South District Medical Society held its centennial anniversary in Salem November 21. The papers read were chiefly of an historical nature, dealing with the early days of the society and its early members.

**Bequests.**—By the will of Samuel Ivers of New Bedford, \$500 is left to St. Luke's Hospital, \$250 to the Instructive District Nursing Association, \$500 to the North Day Nursery, \$500 to the South Day Nursery, besides similar amounts to many other charities.

**Poison in Lunch.**—Dr. Herbert J. Keenan, chairman of the committee on mechanic arts, High School, Boston, from which most of the cases of ptomain or formaldehyd poisoning have been reported, has made a careful study of the cases of illness which originated in that school, and declares that in almost every case the symptoms were those of formaldehyd poisoning.

**New Boat for Floating Hospital.**—The board of managers of the Boston Floating Hospital have decided to build a new boat. It is to be 170 feet long and 46 feet wide, with wards to contain not more than 16 sick babies each. Accommodations will thus be provided for 100 patients, besides another 150 who can be taken out on the upper deck for the day. This will practically double the capacity of the hospital, which for several years now has turned away, for lack of room, nearly or quite as many as have been admitted. The cost of the new boat will be about \$60,000, and earnest efforts are being made to raise this entire amount.

**Personal.**—Dr. Arthur G. Minshall is in charge of the medical department of the Dickinson Hospital, Northampton, for the coming quarter; Dr. Alfred H. Hoadley of the surgical department; Dr. Clarence R. Gardner of the eye and ear department, and Dr. Justus G. Hanson of the pathologic department.—Bert R. Rickards has been appointed head bacteriologist of the Boston Board of Health.—Dr. Clarence P. Curley, Province-

town, has been appointed medical examiner for the third Barnstable district, vice Dr. Samuel T. Davis, Orleans.—Dr. Philip Kilroy has been appointed dermatologist and neurologist on the staff of the Springfield Hospital.—Dr. Frank D. Stafford, North Adams, who has been seriously ill with septicemia due to an operation wound, is improving.—Dr. George L. Perry, Athol, has been elected a member of the board of health, vice Dr. Garrett B. B. Larkeque, resigned.—Dr. C. E. Street has been made a member of the staff of the Isolation Hospital, Springfield, vice Dr. T. S. Bacon, resigned.—Dr. Percy C. Procter, Gloucester, retired from practice December 1 and was succeeded by Dr. Philip F. Moore.—Dr. and Mrs. Albert C. Cobb, Marion, arrived in New York November 27 from Vienna.—Dr. Edward O. Otis, Boston, has been appointed visiting physician at the State Sanatorium for Tuberculous Patients, Rutland, vice Dr. Vincent Y. Bowditch, Boston.—Dr. Robert W. Lovett has been elected attending surgeon and Dr. Henry R. Hitchcock attending physician of the New England Peabody Home for Crippled Children.—Dr. Timothy J. Reardon, for several years assistant laryngologist at Carney Hospital, Boston, has been appointed trustee of the Boston City Hospital, replacing Henry H. Sprague.

#### MICHIGAN.

**Smallpox.**—Four cases of smallpox are reported at Hudson's logging camp near Menominee.

**Money for Hospital.**—The bazaar at Kalamazoo for the benefit of Borgess Hospital netted about \$6,000 for the institution.

**Personal.**—Dr. William J. Stapleton has been appointed physician of Wayne County to succeed Dr. S. L. Polozker, resigned.—Dr. John E. Clark has been appointed chemist and Dr. E. B. Forbes, a physician of Wayne County.

**Physician Gets Damages.**—Dr. Eugene Smith, Detroit, was awarded \$1,500 damages in the United States Court at Trenton, N. J., November 29, for injuries received by being thrown from a berth on board the steamer *Vaderland*, belonging to the International Mercantile Marine Company.

**Women's Efforts Erect Hospital.**—The new \$40,000 hospital building erected at the Michigan Insane Asylum, Kalamazoo, at a cost of \$40,000, was formally dedicated November 5. This building is the result of three years' earnest work by the women of Kalamazoo, who formed a women's auxiliary for this purpose. The building is fireproof, four stories in height, thoroughly equipped and will accommodate 50 patients.

#### MINNESOTA.

**Personal.**—Dr. and Mrs. C. M. Kistler, Minneapolis, have gone to Europe.

**An Unhealthy November.**—November was an unhealthy month at Minneapolis. More than 30 deaths were caused by pneumonia and typhoid fever, and the deaths from all causes numbered 225, equivalent to an annual rate of 10.3 per 1,000.

**Lift Debt of Hospital.**—Messrs. D. C. and F. B. Shepherd, St. Peter, gave \$35,000 at a thanksgiving offering to St. Luke's Hospital Association to pay the mortgage indebtedness of that institution. The gift is made in memory of Mrs. D. C. Shepherd, who died three years ago.

**Minnesota Valley Physicians Meet.**—At the twenty-sixth annual meeting of the Minnesota Valley Medical Association, held in Mankato December 5, resolutions of condolence were adopted on the death of the late secretary, Dr. Edwin D. Steel, Mankato. The following officers were elected: Dr. Michael Sullivan, Adrian, president; Drs. George R. Curran, Mankato, and Fred P. Strathern, St. Peter, vice-presidents; Dr. Adolph G. Leidloff, Mankato, secretary, and Dr. George F. Merritt, St. Peter, treasurer.

**Hospital News.**—The George B. Wright Memorial Hospital, Fergus Falls, was opened for patients November 15. The board of trustees of the City and County Hospital Association of Albert Lea has leased the hospital property of Dr. Hamilton H. Wilcox in that city and the building will be converted into a general hospital.—The committee on streets has ordered an unfavorable report on the application of Miss Helen G. Hill for a license to operate a hospital for crippled children in St. Paul.

#### MISSOURI.

**Taken to State Hospital.**—Dr. James T. Johnson, Shell City, has been committed to the State Hospital for the Insane No. 3, Nevada.

**Hospital Sunday.**—It is estimated that the receipts from the Hospital Saturday and Sunday Association, St. Louis, December 2 and 3, will reach \$35,000.



**Examination of School Children.**—The medical examination of children in the Kansas City public schools was inaugurated November 20 by a corps of 50 medical inspectors.

**Personal.**—Dr. Charles A. Snodgrass, acting health commissioner since the removal of Dr. John H. Simon in July last, was formally elected health officer of St. Louis, November 17. —Dr. A. J. Detweiler, Columbia, has resigned as bacteriologist of the State Board of Health and expects to locate in Hannibal. —Dr. and Mrs. Joseph W. Howard, Kansas City, have returned from a visit to the East.

#### MONTANA.

**New Hospital.**—It is announced that John Manning will soon erect a hospital building to cost \$9,000 at Boulder Hot Springs.

**Diphtheria.**—There are no new diphtheria cases reported in Anaconda, and only about 20 cases have been reported since the disease made its appearance in the city a few weeks ago. Strict quarantine and disinfection have been observed.

**Personal.**—Dr. George H. Putney, Missoula, has received an appointment from the Panama commission and has left for his post of duty at Colon. —Dr. Gowan Ferguson, Great Falls, was operated on for abscess of the liver at Rochester, Minn., recently.

**Physician Loses Suit.**—In the case of William Barbour vs. Dr. James L. Jones, Dillon, for \$300 damages alleged to have been suffered by reason of the loss of his wife's services for six months caused by her inability to attend to household duties, the jury returned a verdict in favor of the plaintiff for \$50.

#### NEBRASKA.

**Hospital Rebuilt.**—The work of reconstruction of the old west wing at the Nebraska State Hospital, Norfolk, into a cottage for the accommodation of more patients has commenced, and the work will be completed early in the summer. The new cottage will cost about \$21,000 and will accommodate 50 patients.

**Personal.**—Dr. Emma C. Robbins, third assistant physician at the Hastings State Asylum, has resigned. —Dr. Robley C. Harris, Sidney, has resigned as receiver of the United States Land Office. —Dr. and Mrs. J. C. Agee, Valley, have moved to Nevada. —Dr. G. W. Strough, Barneston, has been appointed division surgeon of the Union Pacific Railroad. —Dr. Philip H. Metz, Humphrey, has been appointed district surgeon and physician for the Union Pacific Railroad.

**Diphtheria.**—The South Ward school, Aurora, was closed recently and fumigated on account of diphtheria. —Dr. H. Winnett Orr, Lincoln, who has studied the progress of diphtheria in that city and the use of quarantine methods and antitoxin, asserts that the use of antitoxin has reduced the death rate from 40 per cent. to 2 per cent. or less. He estimates the total number of cases during the fall months at 150 and states that 33 cases were quarantined during October. —In Benson 12 cases have been reported and the public schools have been closed. —The board of health and school board of Beatrice have decided to close the South school for fumigation on account of diphtheria.

#### NEW HAMPSHIRE.

**Epidemic of Scabies.**—An epidemic of what is called the old-fashioned "army itch" is prevalent in Nashua. It is estimated that there are 500 cases in the city.

**Hospital Notes.**—The Elliot Hospital, Manchester, is to receive \$5,000 by the will of Mrs. Angeline B. Cilley to support a free bed. —It is suggested that the new hospital now in process of construction in Exeter, to cost \$25,000, be named after Edward Tuck of Paris, who gave \$11,000 toward the building fund.

**Oppose Contract Medicine.**—The Nashua Medical Association on November 27 voted unanimously to stand by the resolution passed some time ago against contract medicine. By the terms of this resolution the members of the association agree not to enter into contracts with lodges, societies, organizations or corporations.

**Personal.**—Dr. George Cook, Concord, president of the Alpha-Kappa-Kappa fraternity, was given a banquet at Nashville, Tenn., October 26. —Dr. Frank W. Grafton has been elected president of the Concord District Nursing Association. —Dr. Napoleon Matte, Keene, fell while leaving the house of a patient and fractured a bone in the left foot.

#### NEW JERSEY.

**Charitable Bequest.**—By the adjudication of the estate of the late Maria T. Wirgman the Cooper Hospital, Camden, receives \$124,689.50.

**New Hospital.**—Mayor Fagan, Jersey City, who broke ground for the new City Hospital September 8, laid the cornerstone of the institution November 1.

**Diphtheria.**—Diphtheria has again broken out in Millville and it is feared that the schools will have to be closed. —One school in Cranford has been closed on account of diphtheria.

**Personal.**—Dr. Sylvan G. Bushey, Camden, sustained severe contusions in a fall from a trolley car November 18. —Dr. Joseph B. Shaw, Trenton, has returned after six months' stay in Germany. —Dr. William H. Kensinger, Camden, has been elected a member of the city council.

#### NEW MEXICO.

**Personal.**—Dr. William J. Hammer, who has been for the past five years first assistant physician at the Loomis Sanitarium, Liberty, N. Y., has been appointed resident medical director at St. Joseph's Sanatorium, Silver City. He will assume the duties of his new position at once. —Dr. Carl Hagen, Silver City, has returned after an absence of four months in Europe.

**Albuquerque Protests Against Influx of Incurables.**—At a meeting of the associated charities of Albuquerque, November 2, the following resolution was adopted:

*Resolved*, That the physicians and authorities in other sections be strongly censured for sending health seekers to Albuquerque and New Mexico when they have reached the stage where they are beyond help from climatical advantages or are without sufficient funds to support themselves for a period of at least six months, and that the press be urgently requested to give this resolution the greatest publicity.

#### NEW YORK.

**Hospital Incorporated.**—The certificate of incorporation of the City Hospital for Women, Buffalo, has been issued. The concern is capitalized at \$1,000.

**Bequests.**—By the will of the late Dr. DeVille W. Harrington, Buffalo, \$3,000 is added to the \$2,000 heretofore given for the endowment of the Dr. Harrington lectureship. About \$125,000 was also left to the Buffalo General Hospital to endow the Dr. Harrington Hospital for Children.

**Gift to Infirmary.**—The Ballston Infirmary, situated at Spa, has been presented with \$5,000 in 4 per cent. railroad bonds by Harriet N. Carpenter. The interest from these bonds is to be used for the support of this institution, which was presented to the county about three years ago by Horace W. Carpenter of New York City.

**State Charity Work.**—The third annual meeting of the State Charities Aid Association was held in the United Charities Building, New York City, December 6. George F. Canfield, president of the association, in his report as chairman of the committee on the insane, said that there was a decrease in the number of new cases this year, as compared with last year, and that the increase in the number of committed insane during the year was less than in any year since 1890, the total number being 547, as compared with 927 last year, and an average of 758 a year for the past ten years. The total number of committed insane in state hospitals and private asylums on October 1 was 27,408, of whom all except 985 were in state hospitals. The legislature of last year made provision for increased accommodations at the Institution for the Feeble-minded and Epileptic. The Craig Colony for Epileptics was allowed a new building for 200 inmates; the Newark State Custodial Asylum for Women, two cottages, each for 60 inmates, and the Rome State Custodial Asylum, a dormitory building for 100 inmates, and sufficient money to purchase 150 acres of farm land. Dr. Charles Hitchcock was re-elected as one of the members of the board of managers.

#### New York City.

**Tuberculosis Exhibition Moves.**—This exhibition, which has been open for two weeks at the American Museum of Natural History, will be moved to Boston, to Philadelphia, and to other larger cities.

**Low Death Rate.**—The death rate figures for the week ending December 2 were 17.82 per 1,000. This is unusually low for this season of the year. The only increase in mortality was from measles.

**Personal.**—Dr. George Montgomery Tuttle sailed for Genoa on the *Cretic* December 7. —Dr. Armand L. F. Dufloo was assaulted and robbed while returning from a night call. He lost \$70 in money, a gold watch and some valuable papers.

**Long Island Open-air Sanitarium.**—The trustees of this institution have appealed for funds. The institution will be for the use of Brooklyn and Long Island. In Brooklyn alone it is estimated that there are more than 10,000 consumptives, most



of whom are unable to provide proper treatment. The estimated cost of land, building and equipment is \$50,000. It is hoped that it will be self-supporting.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended December 2, 421 cases of tuberculosis, with 174 deaths; 438 cases of measles, with 11 deaths; 285 cases of diphtheria, with 34 deaths; 157 cases of scarlet fever, with 6 deaths; 71 cases of typhoid, with 10 deaths; 15 cases of cerebrospinal meningitis, with 15 deaths; 154 cases of varicella and 1 case of smallpox.

**Hospital Anniversary.**—The thirty-seventh anniversary of the Presbyterian Hospital has just been celebrated. The annual report shows that during the fiscal year ended September 30 last, 47,933 patients were treated in all departments, an average of 606 per day. This was 13 per cent. more than were cared for during the previous year. Only a very small proportion were able to pay the actual cost of their care. The receipts from donations were \$60,439, compared with \$42,059 for the previous year. The receipts from legacies were \$187,249. The actual cost to the hospital for free treatment during the year was \$168,814, and the cost per day per patient was \$2.81.

**Work of the City Hospitals.**—The report of the trustees of Bellevue Hospital and Allied Institutions for the first quarter of this year has been made public. The four hospitals under the management of the trustees admitted 9,173 patients, of whom 6,179 were men and 2,994 were women. Of these patients 4,022 were natives of the United States, 1,854 were born in Ireland, 699 were of Russian birth, and 686 were Germans. Bellevue received 7,210 of these patients; Gouverneur admitted 1,073, of whom more than one-third were Russians; Harlem Hospital admitted 621, and Fordham 269. In the outpatient department of Bellevue 5,581 new cases were treated, there being a total of 18,875 visits and 22,155 prescriptions. Gouverneur had 6,306 new patients, 15,450 visits and 11,930 prescriptions. Harlem's record was 6,591 new patients, 15,450 visits and 15,858 prescriptions, while the figures for Fordham were 659 new patients, 1,395 visits and 1,494 prescriptions. In the psychopathic wards of Bellevue 642 patients were received, of whom 340 were men and 302 women. The record for acute alcoholism shows 7 women and 6 men.

**Reform in Hospitals.**—A movement to put the hospitals of this city on a business basis, to bring about co-operation, to curtail expenses, and thus greatly to enlarge their powers of usefulness, was inaugurated in March of this year by the Society for the Improvement of the Condition of the Poor. An association of hospital superintendents has been formed, the first of its kind in the city, and at the next meeting it will discuss a list of rules that has been drawn up for the purpose of preventing the waste of hospital supplies. It is claimed that if all the hospitals would co-operate in the matter of business management, \$1,000,000 could be saved annually. Among the questions to be discussed are: What plan is best fitted to increase the financial support, individually or jointly? What opportunities are there for decreasing hospital expense? Is a uniform method of accounting desirable among the several hospitals? The sub-committee on economy suggests several means of lessening expense. For example, the use of ether of a cheaper grade, but just as safe; the closed method of inhalation of ether; dressings and bandages to be washed, re-sterilized and used over in some cases. Much saving can be effected in the use of alcohol. Coal and other commodities could be purchased in cargo by co-operation of several hospitals. There should be one executive officer in an institution who would have authority to enforce the methods to secure a minimum of expenditure. Methods which are demonstrated to have the advantage of simplicity and economy in certain institutions should be adopted in others.

#### NEVADA.

**Damage by Fire.**—The offices of Drs. Dunham and Wedelstaedt, Goldfield, were damaged to the extent of \$2,500 by fire, November 7.

**Census Shows No Hospital.**—Nevada is not credited with possessing a single hospital in the special census bureau report on benevolent institutions of the United States for 1904.

**Must Have License.**—The Supreme Court of the state has upheld the act requiring physicians to take out licenses before they can practice. The case came up on appeal from Nye County, where Dr. Wyrhoist was fined for violation of law and appealed.

**Paupers Declared Insane.**—Dr. Samuel C. Gibson, superintendent of the Nevada Hospital for Mental Diseases, Reno, makes the charge that many counties of the state, in order to rid themselves of the care of the pauper sick, are declaring

these unfortunates to be insane and committing them to the state asylum.

**State Board of Health.**—The new State Board of Health assembled for organization at Carson City, October 27. The new appointees, Drs. Simeon L. Lee and Berry of Carson City, and Dr. Samuel C. Gibson, Reno, were sworn in. Dr. Berry was elected president; Dr. Gibson, vice-president, and Dr. Lee, secretary. Dr. Gibson was also appointed health officer of Washoe County.

#### OHIO.

**Hospital Staff Reappointed.**—The entire staff of the City and Branch hospitals, Cincinnati, was reappointed December 4.

**Physicians Ill.**—Dr. I. A. Myers, Shelby, is seriously ill with heart disease.—Dr. L. M. Brumbaugh, Dayton, who has been ill with typhoid fever in Salt Lake City, is reported to be improving.—Dr. James B. King, Wyoming, is seriously ill with erysipelas at his home.

**New State Hospital Site.**—It is stated on reliable authority that the new State Hospital for Tuberculosis will be located about two miles east of Zanesville, on a tract of about 450 acres. The main building will be situated on a hill 1,500 feet above sea level. The land itself will cost about \$30,000.

**Hospital Opened.**—The Memorial Hospital, presented to the city of Piqua by Mrs. Julia Ball Thayer of Keene, N. H., in memory of her brother, the late D. L. C. Ball, is completed, and a short dedicatory service was held November 30. On December 7 the hospital was opened with appropriate ceremonies.

**Hirst in Cincinnati.**—Dr. Barton Cook Hirst, Philadelphia, addressed the Cincinnati Academy of Medicine December 11 on "The Diagnosis and Treatment of Puerperal Infection." During his stay in Cincinnati Dr. Hirst was the guest of Dr. Magnus A. Tate, and on the afternoon of December 11 Dr. Tate gave a reception.

**Epileptics Incurable.**—In the annual report of the superintendent of the State Hospital for Epileptics in Gallipolis, he says: "Our experiments more and more confirm the opinion that true epilepsy is essentially incurable." During the history of the institution only six persons have been discharged as recovered. The trustees ask \$196,000 for current expenses for the next two years and \$129,750 for new buildings, land and other objects.

**Liquor License for Patent Medicines.**—The internal revenue commissioner has stated that the special stamp tax stamp of retail liquor dealers taken out by any person for the sale of alcoholic compounds labeled as medicines must be issued to him for a fixed place of business and that he can not travel from place to place, selling such compounds in the manner of a peddler and be protected by any special tax stamp. He further says that the revenue laws do not contemplate the peddling of alcoholic liquors, and every person found doing business in that manner becomes involved in a special tax liability at every distinct and separate place at which there is evidence of his having made such sales.

**Personal.**—Dr. Frank B. Cross, Cincinnati, has arrived in London.—Dr. Edgar Dimond, Cincinnati, sailed for Europe December 9 for a year's study in Vienna.—Dr. Albert F. McVety has been appointed head of the medical department of the Y. M. C. A. of Toledo.—Dr. H. C. Rutter, formerly superintendent of the State Hospital for Epileptics, Gallipolis, has accepted the medical directorship of the department of nervous and mental diseases of the Ohio Sanatorium Company, operating the sanatorium in Columbus and also one in Marion. Dr. Mark A. Brown, editor of the *Lancet-Clinic*, Cincinnati, has had a severe sprain of the ankle.—Dr. Oliver P. Holt is convalescing from appendicitis.—Dr. George Holt has just finished his term of service as resident physician to Christ's Hospital, Cincinnati.

**State Association of Medical Teachers.**—A meeting has been called to organize a state association of medical teachers at the Great Southern Hotel, Columbus, December 26, at 2 o'clock. The program, which is already prepared, takes up the following subjects: "The Advantages and Purposes of an Organization of the Medical College Teachers of the State," "The Medical College Curriculum—the First Two Years," "The Medical College Curriculum—the Last Two Years," "The Relation of the Literary and Medical College," "Should Advanced Standing as Regards Medical Residence be Given to Graduates of Literary Colleges, or Should Four Years of Medical Residence be Invariably Required?" "What Subjects and How Much Work in Each Should be Required of a Graduate of a Literary College to Gain a Year's Advanced Standing in the Medical Colleges of This State?" "The Cultural Value of the Fundamental Medical Studies," "What Medical Subjects Can be and What Can Not



be Properly and Efficiently Taught in the Literary College," "What Science Work Will be Held by the Board as Satisfying the Requirements of This Resolution? Will the Board Issue Certificates to Students Whose Literary Course Fulfills This Requirement?" and "The Administrative Side of the Question from the Standpoint of the Literary College."

**Second District Society Meets.**—The second annual meeting of the Second District Medical Society was held in Dayton, November 21. After the transaction of routine business, resolutions were passed urging the incoming governor to appoint medical men on the various boards, who should be as non-partisan as possible, that the medical profession rather than the politicians might be consulted in matters of state, and that the appointments might be based on personal integrity, professional learning and scientific attainment rather than on political influence. The society also adopted the following resolutions:

*Resolved*, That the Second Councillor District of the Ohio State Medical Association do hereby heartily endorse the series of articles now being published in *Collier's Weekly* under the title, "The Great American Fraud," exposing the machinations and conspiracies of the patent medicine curse.

*Resolved*, That we urge on the representatives of the various county societies of this district the advisability of presenting the matter before their respective societies and of devising some active and systematic method of calling the attention of the people, especially that great mass of people who are not reached by a paper like *Collier's*, to this remarkable series of articles and that especial efforts be made to secure the co-operation of the clergy, school teachers, college professors and every person who in any way has to do with public instruction in this campaign against these human vultures, the patent medicine vendors.

The election of officers resulted as follows: President, Dr. John M. Buckingham, Springfield; secretary, Dr. Daniel B. Conklin, Dayton, and treasurer, Dr. Charles L. Minor, Springfield. It was decided to hold the next meeting at Springfield.

#### PENNSYLVANIA.

**Communicable Disease in the State.**—During the month of November there were reported to the State Department of Health 4,508 cases of communicable diseases. Many cases were reported from the rural districts on cards provided for this purpose by the department of health.

**Bucks County Society Election.**—At the meeting of the Bucks County Medical Society, November 1, the following officers were elected for the ensuing year: President, Dr. Richard C. Foulke, New Hope; vice-presidents, Drs. Howard Purcell, Bristol, and Julius T. Vissell, Perkasie; secretary-treasurer and reporter, Dr. Anthony F. Myers, Blooming Glen; censors, Drs. George M. Grim, Ottsville; Alfred E. Fretz, Sellersville, and William R. Cooper, Point Pleasant.

**Convicted of Abortion.**—Mrs. Minnie Yochim-Salow, Erie, convicted of abortion and manslaughter on November 25, was sentenced to pay a fine of \$50 and the costs of prosecution and to undergo imprisonment by separate or solitary confinement at labor in the Western Penitentiary for a period of three years. In the manslaughter case she was sentenced to pay a fine of \$100, the costs of prosecution and to undergo imprisonment in the Western Penitentiary by separate or solitary confinement at labor for a period of six years. Judge Walling concluded the penalty by remarking that "abortion can not be tolerated in any form by this court; it is next to murder, and often results in murder."

**Vaccination.**—Since the State Department of Health was established in May last by the appointment of Commissioner Dixon, 400,000 vaccination certificates have been sent out, and blanks are still being issued through the mails at the average rate of 1,500 per day.—According to the information prepared by Attorney-General H. L. Carson for Nathan C. Schaeffer, state superintendent of public instruction, fines can not be imposed on parents or guardians for the non-attendance of pupils who have been excluded from the public schools on the ground that they did not present a certificate of successful vaccination. Concerning the attorney-general's opinion, Dr. Brooks, superintendent of the Philadelphia public schools, said that he did not expect much trouble with the schools there, because of the refusal of parents to have their children vaccinated. Most of the parents, he said, believe in the efficacy of vaccination. In his experience he does not recall half a dozen instances in which the parents refused or even strongly objected to the vaccination of their children.

**Beaver County Society Meeting.**—The Beaver County Medical Society held its semi-centennial meeting December 7 at the Beaver Valley Country Club. Dr. Paul G. McConnel, New Sheffield, presided, and Dr. Jefferson H. Wilson, Beaver, acted as toastmaster at the banquet. Dr. George Y. Boal, Baden, gave a brief history of the society and detailed the early struggles and trials of the old-time practitioner. The guest of the

evening, Dr. James Tyson, Philadelphia, read an interesting paper on the "Ideal General Practitioner." The one essential which he emphasized was that thorough medical education should be founded on a broad and liberal preliminary education. After graduating, the ideal physician should be punctual, careful and painstaking; each case should be made a careful study, thus making his experience more useful to him from time to time. The physician should not neglect the study of general literature, though it should, of course, be subordinate to his medical studies and duties. Dr. Tyson also emphasized the importance of all recent graduates connecting themselves with the local medical societies. Dr. Thomas D. Davis, Pittsburg, made reminiscent remarks of the last half-century and Dr. J. Chris. Lange, Pittsburg, dean of the Western Pennsylvania Medical College, dwelt on the importance of practitioners joining their local medical societies whether they belong to other societies or not.

#### Philadelphia.

**Hospital Acquires Property.**—The trustees of the Samaritan Hospital have purchased property on Ontario Street, 69x100 feet, adjoining the hospital, for \$3,500.

**Donations.**—The donations received in cash by the German Hospital on its annual donation day, November 30, amounted to \$8,030.75.—The Jefferson Maternity Hospital at its annual donation day, November 30, received \$300 in cash.

**Free Beds for Consumptives.**—At the regular monthly meeting of the board of managers of the Free Hospital for Consumptives, held in Philadelphia November 24, it was decided to increase the free beds at the White Haven Sanitarium to 100.

**Hospital Reports.**—In the Charity Hospital 280 medical and 191 surgical cases were treated during November.—There were 63 patients under treatment in the Kensington Hospital; 60 operations were performed, and 42 new and 148 old patients were treated in the dispensary.

**Maternity Home Dedicated.**—The new maternity building of the Presbyterian Hospital was dedicated with appropriate ceremonies November 28. The building is a four-story brick structure and was built with \$42,670 received from an anonymous friend of the hospital in 1902.

**Blockley Banquet.**—The organization of ex-resident physicians of the Philadelphia Hospital held its annual banquet December 7, Dr. Alfred Stengel acting as toastmaster. The following officers were elected for the ensuing year: President, Dr. Edward L. Duer; vice-presidents, Drs. Horatio C. Wood and Roland G. Curtin; secretary, Dr. Edward R. Stone, and chairman of executive committee, Dr. Edward E. Montgomery, all of Philadelphia.

**Money for Hospitals.**—It is stated that \$1,500 was realized from a concert given in the Hotel Walton for the benefit of the Oncologic Hospital, November 21.—By the will of the late Mary Lockery the Philadelphia Home for Incurables receives \$5,000.—The executive committee of the annual charity ball, at a meeting November 17, selected the following four institutions as this year's beneficiaries: The University Hospital, Jefferson Hospital, Howard Hospital, and St. Timothy's Hospital.

**Dr. Coplin's Advisory Board.**—On December 7 Mayor Weaver announced the appointment of the following advisory board of physicians to assist Dr. Coplin in the execution of his plans: Drs. S. Weir Mitchell, John H. Musser, John M. Anders, Hobart A. Hare, J. William White and Henry Leffmann. In addition the mayor, after consultation with Dr. Coplin, appointed the following men a committee to investigate the insane department of the Philadelphia Hospital: Drs. Charles D. Mills, Francis X. Dereum, and William Pickett.

**Personal.**—Dr. J. William White was summoned to Washington to discuss with President Roosevelt certain phases of football.—Dr. John Marshall was a guest at the second annual banquet of the alumni of the University of Pennsylvania of Northumberland district, held in Sunbury, November 15.—Dr. Samuel S. Stryker was presented with a loving cup at the thirty-fourth anniversary of the West Philadelphia Medical Book Club, December 4.—Dr. Richard C. Norris, president of the Philadelphia County Obstetrical Society, entertained at dinner on December 7, as guest of honor, Dr. Robert L. Dickinson of Brooklyn.

**Medical Boat for the Soudan.**—Through the efforts of Rev. William M. Anderson a boat has been secured for Dr. Hugh Magill for his medical missionary work in the Egyptian Soudan. The boat is 60 feet long and 15 feet wide and is provided with quarters for the crew at one end and an operating room and physician's quarters at the opposite end. The head-



quarters of the boat will be at "Doliob Hill" station on the Sobat River, a tributary of the White Nile. The boat will leave this station every two months for its first Abyssinian station, 289 miles up the Sobat. Dr. Magill will establish clinics at the different villages and the more serious cases will be brought back to Doliob Hill.

**Health Report.**—The total number of deaths for the week ended December 9 reached 479, as compared with 463 reported last week, and 453 reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 13; measles, 4; diphtheria, 14; tuberculosis, 52; cancer, 29; apoplexy, 22; heart disease, 43; acute respiratory disease, 91; gastritis, 6; enteritis, 25; Bright's disease, 37; suicide, 3; accident, 14, and marasmus, 8. There were 291 new cases of contagious disease reported, with 29 deaths, as compared with 194 cases and 31 deaths for the preceding week. Typhoid fever is on the increase. There were 152 new cases, with 13 deaths, as compared with 109 cases and 12 deaths for the previous seven days. The sections of the city supplied with filtered water are practically free from the disease, while the major portion of the cases are reported from localities supplied with "raw" water.

**Conditions at Blockley.**—Since the appointment of Dr. W. M. Late Coplin as director of the Department of Health and Charities a general investigation of the condition of the Philadelphia Hospital has been inaugurated. An advisory board appointed by the mayor found the hospital in a state of confusion. The report presented by Drs. Dercum, Mills and Pickett shows that the insane department contains over 1,800 patients and the space allotted to this number, if conducted under modern methods, should not accommodate more than 700 or 800. The report further states that the buildings are wholly unhygienic and unsafe. The supplies received are entirely inadequate for the demands made. The supplies are about the same now for 1,800 patients as when the number was only 1,400. The committee further found that the patients were not provided with sufficient clothing. Another very undesirable condition was the intermingling of patients suffering from various diseased conditions, particularly the tuberculous patients. The number of paid medical attendants was also said to be entirely insufficient. It may be stated, the report says, that the number of both physicians and attendants is about one-half or less than one-half the number employed in other institutions of this country where large numbers of the insane are collected. Dr. Coplin in his investigation has learned that the cost (34 cents) of keeping a patient at Blockley a day is less than at any other institution in this country.

#### TENNESSEE.

**Smallpox.**—Many cases of smallpox have appeared in Claiborne County.

**Personal.**—Dr. W. Frank Glenn has been made a member of the Board of Health at Nashville.—Dr. William A. Applegate, Chattanooga, chief surgeon of the Southern Railway, has moved to Washington, D. C.—Dr. Elizabeth C. Kane, Memphis, has returned from the East.

**Progress of New College.**—A stockholders' meeting of the College of Physicians and Surgeons, Memphis, was held November 26, at which organization was partially effected. Dr. Heber Jones was elected president, and Dr. Edward C. Ellett, vice-president. The trustees of the institution are: Drs. Heber Jones, Edward C. Ellett, John M. Maury, Maximillian Goltman, George G. Buford, Richmond McKinney, and William Krauss.

**Wins Damage Suit.**—The Supreme Court has decided in favor of the appellant in the damage suit brought by J. M. Burd against Drs. C. G. Gates and J. P. Milbanks, Chattanooga, for alleged malpractice. In the lower court a verdict was returned for the plaintiff in the sum of \$500, but this verdict was reversed by the Supreme Court on the ground that "from the evidence of plaintiff himself and plaintiff's witnesses, this court is of the opinion that there is no evidence to sustain the verdict of this case, and the same is therefore reversed."

**Annual Meeting of Society.**—At the annual meeting of the Rutherford County Medical Society, held in Murfreesboro, December 6, the following officers were elected: Dr. James B. Murfree, Sr., Murfreesboro, president; Dr. James J. Rucker, Overall, vice-president; Dr. Rufus Pitts, Murfreesboro, secretary and treasurer; Dr. Enoch H. Jones, Murfreesboro, censor (re-elected); Dr. V. K. Earthman, Murfreesboro, delegate to the Tennessee State Medical Association, and Dr. Harry C. Rees, Murfreesboro, alternate. Drs. James B. Murfree, Sr., James J. Rucker and Rufus Pitts were appointed a committee to formulate a program for the ensuing year.

#### TEXAS.

**Epidemic of Rabies.**—It is said that ten persons in Nacogdoches have been bitten by rabid dogs in the last few days.

**Clinic Opened.**—The San Antonio Medical and Surgical Clinic has been incorporated without capital stock, with the purpose of "free treatment of the indigent poor and promulgation of medical knowledge to doctors." A building has been secured on Third Avenue and the dispensary was opened for the reception of patients on November 27.

**Non-paying Patients.**—Many of the county medical associations of the state are now adopting the following resolution:

"We further agree to refuse to give service to any delinquent, who will not pay or make an effort to pay his former physician, without the cash or such security as will insure payment, or the cash at each and every visit for a reasonable length of time; then the physician that is favored must insist that the former physician must be settled with in some manner satisfactory; if the patron refuses to do so, his physician must set him aside by refusing him further service. We do not mean by delinquent to include the poor and needy and invalids who come under the head of charity."

The attorney-general was asked to determine whether or not this agreement was a violation of the trust statute of the state and held that it is not a violation.

#### UTAH.

**In Peril of Fire.**—The burning of the public school building at Sunnyside, November 11, placed the adjacent Utah Fuel Company's Hospital in grave jeopardy, but the building was saved by prompt action of the company's fire department.

**Personal.**—Dr. George W. Middleton, Parowan, has been appointed deputy quarantine physician for Iron County, vice Dr. Donald A. McGregor, on leave of absence.—Dr. Samuel H. Pinkerton, Salt Lake City, is confined to his room from injuries received in a runaway accident.

**Epidemic Diseases.**—The district schools in Iron County, which were closed about five weeks ago on account of an epidemic of scarlatina, have not been reopened on account of the persistence of the disease. The local board of health has prohibited all children under 15 years of age from attending public gatherings.—It is reported that there are 20 cases of diphtheria at Fountain Green.

#### VERMONT.

**Epidemic in Orphanage.**—Seventeen girls in St. Joseph's Orphan Asylum, Burlington, were taken suddenly ill October 26, and three died. At the autopsy it was decided that the death was due to poison, the nature of which has not yet been determined.

**Medical Monthly Sold.**—The *Vermont Medical Monthly* has been transferred by Dr. H. Edwin Lewis to Drs. Henry C. Tinkham, dean of the medical department of the University of Vermont; Bingham H. Stone, director of the State Laboratory of Hygiene; Charles F. Dalton and H. L. White, secretary of the medical faculty of the University.

**Personal.**—Dr. Herbert B. Hanson, Barre, arrived at Alexandria, Egypt, November 21 on his way to his station on the Upper Nile.—Dr. Patrick J. McKenzie, Burlington, has been appointed a member of the staff of the Danvers (Mass.) Hospital.—Dr. W. R. Blossom, Rutland, was fined \$100 and costs at Rutland, October 9, for killing a deer out of season.

**Medical College Opens.**—The opening lecture of the medical department of the University of Vermont, Burlington, was given by Dr. Don D. Grout, Waterbury, December 2. Dr. J. H. Lockart, Montreal, has been elected professor of gynecology in place of Dr. A. Laphorn Smith, Montreal, resigned, and Dr. Samuel E. Maynard has been chosen adjunct professor of gynecology.

#### VIRGINIA.

**Northern Neck Medical Association.**—This association met at Warsaw, with Dr. James W. Tankard, Lillian, Northumberland County, president, and Dr. R. O. Long, secretary. Fourteen other physicians, representing every section of the counties of Richmond, Lancaster, Westmoreland and Northumberland, were present.

**Students Barred from Hospital.**—The committee on relief of the poor has adopted a resolution that the professors and students of the medical colleges of Richmond should be barred from the hospital in the future. It was alleged by the chairman of the committee that the colleges of the city were sending professors and students to the hospital to hold clinics, using the inmates for purposes of demonstration, and that many of these patients objected to the practice.

**Personal.**—The board of visitors of the University of Virginia has elected Dr. William Mann Randolph, Charlottesville,



clinical instructor in surgery and adjunct professor of surgery, vice Dr. William G. Christian, Charlottesville, resigned.—Dr. Ernest C. Levy, Richmond, has been elected city bacteriologist for a term of two years.—Dr. J. C. Witten, Richmond, has been appointed instructor in minor surgery at the Medical College of Virginia.—Dr. Charles L. Culpepper, Portsmouth, has been appointed local surgeon for the Norfolk, Portsmouth & Newport News Company's system.

#### WASHINGTON.

**Postgraduate Work in Spokane.**—The members of the Spokane Medical Society are preparing for a course of lectures and laying out a plan to give to the physicians of the Northern Pacific slope the benefits ordinarily derived from attendance on a postgraduate course in a medical institution.

**Personal.**—Dr. Yancey G. Blalock, Walla Walla, has been removed from the position of physician to the state penitentiary.—Dr. H. Wellard Howard, Spokane, is ill with typhoid fever.—Dr. William E. Fifield, Tacoma, is critically ill.—Dr. B. H. Yount, formerly of Wilbur, has been released from the State Hospital for the Insane, Medical Lake.

**New Antivaccination Tactics.**—After making a thorough investigation of the statutes in various states concerning the vaccination of school children the Antivaccination Society of Bellingham ascertained that the cause of questioning the validity of the law would be of no avail, and it is now endeavoring to compel the board of health and the school board to make a literal enforcement of the law.

**Hospital News.**—A contract has been awarded by the trustees of St. Luke's Hospital, Spokane, for the construction of a maternity wing which will accommodate 50 patients and will represent an outlay of about \$50,000.—Dr. Watanabe will open a hospital in Seattle for the exclusive use of Japanese patients.—St. Joseph's Hospital, Aberdeen, is so overcrowded that it has been necessary to convert the dining-room into a ward.—It is proposed to erect a hospital building to accommodate 30 patients in Wenatchee.—A permit has been granted for the erection of one wing to the Deaconess Hospital, Seattle, to cost \$16,000 and to accommodate 45 patients.

**Medical Men Must Have License.**—The Supreme Court of Washington has sustained the conviction of O. V. Lawson of the notorious State Electro-Medical Institute, Seattle, charged with practicing medicine without a license. In its decision the court declares that the unamended sections of the medical act of 1890 and the three sections of that act as amended in 1901 are in full force and constitute the law. The defendant's contention was that, because the amended act had failed to set out in full the old law, if changed, it was unconstitutional. This the Supreme Court declares was once accepted by the court, but is no longer approved. By virtue of this decision the court affirms the ruling of the law of the lower court and declares that the \$384 unlawfully obtained from the complainant, Calvin C. Deaton, must be refunded.

#### WEST VIRGINIA.

**Personal.**—Dr. Abraham S. Warder, Grafton, is seriously ill with rheumatism.—Dr. Horace M. Brown has been appointed a member of the local board of health of Union.

**Smallpox.**—The smallpox situation in Wellsburg is now believed to be under control. At present there are 14 cases in the city and under strict quarantine. The disease has appeared in a very mild form and the board of health has done good work in controlling the conditions.

**Diphtheria.**—More than 20 cases of diphtheria have been reported from Bergholz, Jefferson County. The delay in acknowledging the presence of the disease was due to a difference in opinion between two physicians as to whether or not the condition was diphtheria.—At Byron, where 16 cases were alleged, 5 cases only exist.

#### WISCONSIN.

**Diphtheria.**—Diphtheria is reported to be epidemic in the Tenth Ward of La Crosse.—In Kenosha 60 cases of the disease have been reported.—The schools at Iron River have been closed on account of the prevalence of diphtheria.

**District Meeting.**—The annual meeting of the North Wisconsin District Medical Society was held in Eau Claire, November 22. Dr. Edward H. Grannis, Menominee, was elected president; Dr. Frank W. Epley, New Richmond, vice-president, and Dr. Hiram A. Fulton, Eau Claire, secretary. It was decided to hold the next meeting in Eau Claire, Nov. 3, 1906.

**Hospital News.**—The late Mrs. Mary C. Stuart, Madison, devised \$3,000 in her will for the benefit of the Madison Hospital building fund.—By the will of Julia Gertner, Milwaukee,

\$500 is bequeathed to the Milwaukee Hospital.—Dr. Edward A. Miller, Clintonville, will open a private hospital in that city.—The new Milwaukee Deaconess Mother House, Milwaukee, was dedicated November 23.

**Smallpox.**—The public schools and churches in Seymour have been closed and all public meetings have been postponed on account of smallpox, of which 15 cases have been reported.—A hospital ward has been established at the State School for the Blind, Janesville, where 15 cases of smallpox have been reported. The school is still quarantined. Janesville is said to have at least 100 cases of smallpox; 70 houses have been quarantined.

**Personal.**—Dr. and Mrs. Herman F. Oshwaldt, Oconto Falls, while driving near that village, were injured in a runaway accident. Mrs. Oshwaldt sustained severe injuries about the head and spine and broke three ribs, and Dr. Oshwaldt received some bruises about the head, but was not seriously injured.—Dr. William F. Beutler, Wauwatosa, has been reappointed superintendent of the Asylum for the Chronic Insane, Wauwatosa.—Dr. Hayes, Stanley, has been re-elected physician of Chippewa County.—Dr. and Mrs. M. E. Corbett, Oshkosh, have returned from an eight months' trip abroad.—Dr. William W. Reed, Jefferson, has been elected physician of Jefferson County for the fifteenth time.—Lieutenant Otto B. Bock, assistant surgeon W. N. G., Sheboygan, has resigned.—Dr. William O. St. Sure, Sheboygan, has been re-elected physician of Sheboygan County.—Dr. Gustav A. Kletzsch, Milwaukee, has resigned as president of the Milwaukee County Hospital staff.—The following physicians have been appointed for Milwaukee County: Drs. Albert F. Young, William Lochemes, Louis F. Klemm, J. H. Rohr, Charles A. Faber, A. E. Schmitz and A. C. Sidler.—Dr. John W. Coon has been appointed superintendent of the Milwaukee County Hospital, vice Dr. Ernest C. Grosskopf.

#### WYOMING.

**License Revoked.**—The State Board of Medical Examiners has revoked the medical certificate granted Dr. W. R. Wilson, who left Caspar in August last. The cause of the revocation was that Dr. Wilson obtained the certificate through false representations and also on account of unprofessional conduct.

**Fire at Hospital.**—A barrel of alcohol which was stored in the basement of the Sheridan Branch of the Wyoming General Hospital exploded October 20, fatally burning an employe and setting fire to the hospital. The 19 patients in the institution were removed in safety. The damage to the hospital amounted to about \$800.

**Personal.**—Drs. Harry S. Finney, Rawlins, is ill in Omaha with typhoid fever.—Drs. Henry Stevens and Herman E. McCallam, Laramie, have been appointed local physicians for the Union Pacific System.—Dr. Charles E. Downey, Evanston, has been appointed physician for the Utah Construction Company, and will have charge of all camps operated along the line of the Western Pacific Railroad in Utah and Nevada.

**Removed from Office.**—At a meeting of the Sheridan County Medical Society, held in Sheridan November 6, Dr. C. R. Halley, president of the society, was, by a unanimous vote of the members present, removed from office for conduct unbecoming an officer of the society. The specific complaint preferred against Dr. Halley was violation of a written agreement signed by several members of the society not to assist nor to consult with the medical director of the Sheridan General Hospital.

**State Society Meeting.**—The annual meeting of the Wyoming State Medical Society, postponed from September 27-29, was held in Cheyenne, December 7. The following officers were elected: President, Dr. William A. Wyman, Cheyenne; vice-presidents, Drs. Fred Horton, Newcastle, and Ernest A. Crokery, Wheatland; secretary, Dr. George L. Strader, Cheyenne; treasurer, Dr. A. Francis Hoff, Casper; delegate to the American Medical Association, Dr. Henry L. Stevens, Laramie, and alternate, Dr. Alfred C. Godfrey, Lander. The next annual meeting of the society will be held at Casper. The date of the meeting has not yet been set. The entire session was well attended and a large number of Wyoming physicians were elected to membership.

#### GENERAL.

**Yellow Fever in Cuba.**—According to *Public Health Reports*, no new cases of yellow fever have been reported since November 26.

**Superior and Duluth Society Election.**—The Interurban Academy of Medicine, composed of physicians of Superior, Wis., and Duluth, Minn., held its annual meeting November



15. Dr. Luther A. Potter, Superior, was elected president, Dr. Charles F. McComb, Duluth, vice-president, Dr. Lewis Moody, Superior, secretary and treasurer, and Dr. Louis T. Pare, Duluth, censor.

**Big Four Surgeons Meet.**—The Association of Big Four Railroad Surgeons held its eleventh annual meeting in Cincinnati November 2. The following officers were elected: Dr. E. Memmen, Bloomington, Ill., president; Dr. F. D. Bain, Kenton, Ohio, vice-president; and Dr. T. C. Kennedy, Shelbyville, Ill., secretary and treasurer. Indianapolis was chosen as the next place of meeting.

**Literature on Study of Alcohol Problem.**—Dr. T. D. Crothers, Hartford, Conn., desires the names and addresses of medical men who would be pleased to receive from time to time literature on the scientific study of spirit and drug neuroses and the alcoholic problems generally. The objects are to enable authors to reach appreciative readers and to promote co-operative interest in the study.

**Epilepsy Prize.**—The National Association for the Study of Epilepsy offers a prize of \$300 for the best essay on the "Etiology of Epilepsy." Physicians in any country may compete. The award will be made in November, 1906, but all essays submitted must be sent in by Sept. 1, 1906. Details as to conditions governing the award may be obtained from Dr. W. P. Spratling, superintendent of the Craig Colony for Epileptics, Sonoma, N. Y.

**Seaboard Medical Association.**—The annual meeting of this society just closed resulted in the election of the following officers: Dr. John C. Rodman, Washington, N. C., president; Drs. Benjamin R. Gary, Newport News, Va., first, E. C. Hathaway, Bloxom, N. C., and J. W. Bowden, Accomac, Va., vice-presidents; Dr. W. D. Hassell, Griseom, N. C., treasurer; Dr. Israel Brown, Norfolk, Va., secretary. This society is composed of physicians of Virginia and North Carolina living along the Atlantic seaboard.

**Fix Standards for Food Purity.**—The committee on food standards of the Association of Official Agricultural Chemists, commissioned by Congress to collaborate with the Secretary of Agriculture in fixing standards for purity for foods, finished its sessions in Boston. It consists of Dr. William Frear of Pennsylvania, Dr. E. H. Jenkins of Connecticut, Dr. M. A. Seorell of Kentucky, Dr. A. H. Weber of Ohio and Dr. H. W. Wiley of Washington. They discussed meat extracts, peptones, fruits, vegetables, flavoring extracts, edible vegetable oils, salts, teas, coffee, fresh fruit juices, meat, root beer, malt liquors, spirituous liquors, carbonated water, preservatives and colors. Already some standards have been fixed and adopted by many states.

**National Association for the Study of Epilepsy.**—The following officers were elected for the ensuing year: President, Dr. Max Mailhouse, New Haven, Conn.; vice-presidents, Dr. Everett Flood, Palmer, Mass., and Dr. William F. Drewry, Petersburg, Va.; secretary and treasurer, Dr. James W. Wherry, Dansville, N. Y. Very interesting reports were given of the progress in securing the treatment of epileptics separate from the insane. Many instances in which colonies for epileptics had been put on a self-supporting basis were cited and the general outlook was said to be distinctly encouraging. Emphasis was laid on the emancipation from the idea that the only treatment for epilepsy was confinement and the use of bromids. To-day over 20 per cent. of patients are cured.

**Cholera in the Philippines.**—Chief Quarantine Officer Heiser reports that the total number of cases of cholera in Manila since the beginning of the outbreak is 210, with 183 deaths; the total number in the provinces is 437, with 236 deaths. In regard to the interisland quarantine, he states that in view of the urgent necessity for more frequent communication with the provinces on account of the conditions which were brought about by the recent typhoon, and the fact that the quarantine had been in operation for nearly two months with only 1 case of cholera making its appearance on a vessel undergoing quarantine detention; and, furthermore, since experience with cholera during the past three years has demonstrated that for practical purposes the incubation period of cholera is less than three days, it was decided to reduce the period of quarantine on outgoing interisland vessels from five to three days.

**Yellow Fever in Panama.**—A case of yellow fever was reported in Panama, November 20. The patient was a Colombian who lived in the San Tomas Hospital, the charity hospital in the city of Panama. According to the official report he was taken sick in that institution, admitted to the ward as a patient on November 11, and died on November 20. This is the third case of yellow fever reported on the Isthmus since No-

vember 1, one of which, as previously reported, occurred in Colon. Acting Assistant Surgeon Mohr states that as no steps have been taken by the Panama authorities to stamp out the infection in Bocas del Toro, a quarantine has been enforced against that place by the sanitary department. All non-immunes arriving from Bocas will be placed in detention for five days and the small sailing craft bringing such passengers will be fumigated before being allowed to come alongside the docks.

**The End of the Yellow Fever Epidemic.**—During the last week of November both New Orleans and Vicksburg reported three new cases.—The Louisiana Board of Health gave Governor Blanchard a report of the epidemic and then the members tendered their resignations. Dr. Charles Chassaing is mentioned for Dr. Souchon's post as president of the new board. It is recalled that at the close of former epidemics the State Board of Health always has resigned with more or less popular satisfaction. It is reliably reported that the Orleans Parish Medical Society will officially investigate the charges brought by Dr. Joseph Holt against Health Officer Quitman Kohnke of New Orleans.—The Pensacola quarantine was finally abandoned on November 19, and on the same day the city council voted a present of \$250 to Dr. F. D. Miller, the city health officer, for his work during the epidemic.—In Texas the Jefferson County Medical Society at Beaumont adopted resolutions of confidence in State Health Officer George R. Tabor. The Texas quarantine was finally raised on November 25. Texas spent \$22,000 on its quarantine, of which sum \$10,000 stands as a deficiency and \$12,000 as the entire appropriation for the state health office for the year Sept. 1, 1905, to Aug. 31, 1906. In consequence, an additional deficiency of \$15,000 is to be created to carry on the work of the office until the end of the fiscal year.—In Alabama the Jefferson County Medical Society at Birmingham officially thanks State Health Officer Sanders for his work during the epidemic period.—Dr. John Callon of New Orleans received a silver service as a testimonial from friends and neighbors for his work during the epidemic.—Dr. Heber Jones, health officer at Memphis, has received a subscription of \$10,000 for his hard work during the period of the epidemic.—At Havana there seems to be a steady increase in the number of new cases of yellow fever.

**American Tuberculosis Exhibition.**—This exhibition, of which a report was given last week, page 1820, was a great success; over 10,000 people attended the first week and the educational work has had a great opportunity. The offer of the American Federation of Labor has been met and an arrangement for co-operation by the labor unions is probable. On Friday evening, December 8, with Dr. John H. Huddleston of the Board of Health of New York City in the chair, Dr. S. A. Knopf of New York City told how the teacher can assist in fighting tuberculosis. To a large audience of teachers he related the history of this disease and explained at length how the disease is spread by inhalation, ingestion, inoculation and drop infection. The consumptive should hold his hand before his mouth while coughing, as a consumptive who raises no sputum expels 100,000,000 bacilli in twenty-four hours. The symptoms of consumption were outlined, as it is essential that teachers should be acquainted with them. The predisposition to tuberculosis may be inherited or acquired; alcohol plays a large part in causing a predisposition. Aside from beer, more alcohol is sold in patent medicines than over the bar. There is no less than \$200,000,000 worth of patent medicine sold in this country every year. The percentage of alcohol in the more popular patent medicines was shown to range from 15 to 35 or even 40 per cent. A fearful responsibility consequently rests on those who recommend these concoctions to their friends or lend their names for the purpose of advertising, yet even ministers of the Gospel and statesmen are guilty of this offense. It must be understood that while tuberculosis is curable, it is not curable by patent medicines, but by good food, fresh air, rest, and a little medicine, judiciously prescribed by a physician. It is the duty of the teacher to prevent consumption among children, and as a consequence among the next generation. Cleanliness in regard to hands, face and finger nails should be insisted on. In France a few lines giving instruction on these matters are on the outside of public school books. The teacher should always remember not to overtax the mind to the detriment of the physical development. A variety of breathing exercises should be taught, also outdoor singing and where possible swimming lessons. Child labor should be abolished. Neither the tuberculous teacher nor the tuberculous child should be permitted in the schools, but provision should be made for both. Sanatoria should be established. Carnegie recognized the need of the college pro-



fessor in his old age, and some philanthropist might well establish a fund for tuberculous teachers which would pension them or enable them to rest until cured.

#### CANADA.

**Medical Reciprocity with the United Kingdom.**—The president of the general medical council, at a meeting recently held in London, England, stated that the effect of the General Laurie amendment (1905) to the British medical act would allow of the provinces of Canada applying for the privilege of medical reciprocity with the United Kingdom. It is expected in England that some, if not all, of the provinces of Canada will extend the same privileges to graduates of the United Kingdom.

**Consumption Clinic at the Toronto General Hospital.**—Consumptive patients who come to the outdoor department of the Toronto General Hospital will hereafter have the benefits of a special clinic. One of the trustees and another public-spirited citizen have contributed funds to carry on this work. A special nurse has been detailed to visit these patients at their homes and to teach their families how to care for and attend cases of tuberculosis. The clinic will be under the supervision of Professor McPhedran, the chief of the medical staff of the medical faculty of Toronto University.

**Toronto Free Hospital for Consumptives.**—It is just a little over a year ago that the Toronto Free Hospital for Consumptives, superintended by the National Sanitarium Association, which also conducts the Muskoka hospitals at Gravenhurst, commenced operations. That great interest has been taken in the institution is apparent from the fact that within the space of a year 5,000 persons have registered at the institution, brought there through the illness of friends or from a personal motive. A large addition is now rapidly nearing completion at a cost of \$20,000, which will increase the accommodation to between 60 and 70 patients. When this addition is finished accommodation will be provided for a ward for children ranging from 6 to 12 years of age. A citizen of Toronto has recently placed \$10,000 at the disposal of the trustees of the institution, and the treasurer, Mr. H. C. Hammond, will erect a cottage at his own expense, at a cost of \$5,000.

**Hospital News.**—A by-law will be submitted to the rate-payers of Hamilton, Ont., in January for the purpose of raising \$35,000 to complete the new wing to the general hospital of that city.—The governor-general and Lady Grey visited Montreal December 1 and took part in the opening ceremonies of the new Maternity Hospital of that city.—An additional \$5,000 was subscribed to the funds of the Toronto General Hospital during the week ending December 2.—The county council of the County of York, in which the city of Toronto is situated, has been asked by the trustees of the Toronto General Hospital to make a grant to the new hospital, which they will probably do in the near future, seeing that the Toronto General Hospital receives many county patients throughout the year.—In connection with the establishment of the new Alexandra Hospital, Montreal, on a firm financial basis, the committee in charge of finance report that they selected 150 firms of Montreal to whom first to appeal for funds, and that 149 have responded favorably. This is very encouraging to the promoters of the institution, and a new and added zest to the prosecution of the work of collection will most likely result in the accomplishment of the desired end, namely, the raising of \$250,000. Of this amount only \$130,000 has been collected. The Alexandra Hospital has been erected by arrangement with the city council of Montreal, to accommodate Protestant patients who may be the subject of infectious and contagious diseases.—At the recent regular monthly meeting of the board of trustees of the Winnipeg General Hospital the statistical report for the month of October was presented. It showed that the number of patients treated during that month was 640. The total number of days' stay was 9,507. The number of patients treated from January 1 to November 1 was 3,635. The number of patients in the outdoor departments numbered 440.—Dr. Augusta Stowe-Gullen has been re-elected president of the ladies' board of the Western Hospital, Toronto. This board collected \$3,456.80 for the hospital this year up to December 1.

**The British Medical Association in Toronto.**—The seventy-fourth annual meeting of the British Medical Association will be held at Toronto, Canada, Aug. 21-25, 1906, under the direction of the following officers:

President, Mr. George C. Franklin, Leicester, England; president-elect, Dr. Richard A. Reeve, Toronto; treasurer, Dr. H. Radcliffe Crocker, London, England; orator on medicine, Dr. James Barr; orator on surgery, Sir Victor Horsley.

#### SECTIONS.

**Anatomy and Physiology.**—President, Prof. Bertram C. A. Windle, Cork, Ireland. Secretary, Dr. C. B. Shuttleworth, Toronto.  
**Dermatology.**—President, Dr. Norman Walker, Edinburgh, Scotland. Secretary, Dr. D. King Smith, Toronto.  
**Laryngology and Otolology.**—President, Dr. J. Dundas Grant, London, England. Secretary, Dr. David J. G. Wilsart, Toronto.  
**Medicine.**—President, Sir Thomas Barlow, London, England. Secretary, Dr. Robert D. Rudolf, Toronto.  
**Obstetrics and Gynecology.**—President, Dr. A. H. Freeland, Edinburgh, Scotland. Secretary, Dr. Frederick Fenton, Toronto.  
**Ophthalmology.**—President, Mr. Robert M. Gunn, London, England. Secretary, Dr. James M. Maccallum, Toronto.  
**Pediatrics.**—President, Dr. George A. Sutherland, London, England. Secretary, Dr. E. Stanley Ryerson, Toronto.  
**Pathology and Bacteriology.**—President, Prof. J. G. Adami, Montreal. Secretary, Dr. Gideon Silverthorn, Toronto.  
**Psychology.**—President, Dr. William J. Mickle, London, England. Secretary, Dr. A. T. Hobbs, Guelph.  
**State Medicine.**—President, Dr. F. Montizambert, Ottawa. Secretary, Dr. J. Langrill, Hamilton.  
**Surgery.**—President, Prof. Irving H. Cameron, Toronto. Secretary, Dr. H. A. Beatty, Toronto.  
**Therapeutics.**—President, Prof. David W. Finlay, Aberdeen. Secretary, Dr. V. Henderson, Toronto.

#### ARRANGEMENT COMMITTEES.

**Honorary Local Secretaries.**—Dr. F. N. G. Starr, Toronto; Prof. J. J. MacKenzie, Toronto; Dr. J. Gibb Wishart, Toronto.  
**Committee Pathologic Museum.**—Chairman, Prof. J. J. MacKenzie, Toronto. Secretary, Dr. Maud Abbott, Toronto.  
**Exhibition Committee.**—Chairman, Dr. Arthur J. Johnson, Toronto. Secretary, Dr. T. D. Archibald, Toronto.  
**Local Treasurer.**—Prof. J. F. W. Ross, Toronto.  
**Toronto Arrangement Committee.**—Dr. George A. Bingham, Toronto; Dr. C. J. C. Hastings, Dr. A. A. Macdonald, Dr. J. J. MacKenzie, Dr. Alex. McPhedran, Dr. R. B. Nevitt, Dr. R. A. Reeve, president-elect; Dr. P. N. C. Starr, Dr. J. A. Temple, Dr. D. J. Gibb Wishart.  
**Reception Subcommittee.**—Chairman, Dr. I. H. Cameron. Secretary, Dr. A. Primrose.  
**Finance Subcommittee.**—Chairman, Hon. Dr. R. A. Pyne. Secretary, Dr. William Goldie.  
**Excursion Subcommittee.**—Chairman, Dr. N. A. Powell. Secretary, Dr. C. P. Lusk.  
**Transportation Subcommittee.**—Chairman, Dr. B. L. Riordan. Secretary, Dr. H. A. Beatty.  
**Dinner Subcommittee.**—Chairman, Dr. F. LeM. Grasset. Secretary, Dr. H. A. Parsons.  
**Subcommittee in Charge of Exhibits.**—Chairman, Dr. A. J. Johnson. Secretary, Dr. W. A. Young.  
**Printing and Publishing Subcommittee.**—Chairman, Dr. A. H. Wright. Secretary, Dr. J. N. E. Brown.  
**Local Entertainments Subcommittee.**—Chairman, Dr. H. Crawford Scadding. Secretary, Dr. H. S. Hutchison.  
**Hotels and Lodgings Subcommittee.**—Chairman, Dr. H. T. Machell. Secretary, Mr. F. A. Clarkson.  
**Membership Subcommittee.**—Chairman, Dr. R. W. Bruce Smith. Secretary, Dr. W. H. Cronyn (Rosedale).

#### FOREIGN.

**Plague in Africa.**—Consul Hollis of Lourenzo Marquez reports an outbreak of plague at Chinde, with several deaths.

**Yellow Fever in Peru.**—December 7 the steamer *Loa* arrived at Callas from Panama with eleven cases of yellow fever on board.

**Berlin Postgraduate Lectures.**—The Berlin Docent-Verein announces the next cycle of postgraduate lectures to commence March 1 and continue to March 28, 1906. The list of subjects and other details can be learned by applying to Melzer, Ziegelstrasse 10, Berlin, Germany.

**International Congress for Prehistoric Anthropology and Archeology.**—The thirteenth international congress devoted to these subjects will convene at Monaco April 16 to 26, 1906. Further information can be obtained on application to M. Henri Hubert, 74, rue Claude-Bernard, Paris, France.

**Exhibition for Tropical Medicine.**—During the German "Colonial Congress," held at Berlin, in October, an exhibition of tropical medicine attracted much attention. One of the most interesting exhibits was that of the Woman's League for Care of the Sick in the Colonies. It included a model sick room and kitchen for the tropics.

**Less Medical Students in Prussia.**—During the fiscal year 1903-4 only 426 degrees were conferred on medical students, and only 363 new medical students were enrolled. The increase in the population and the losses in the profession by death or incapacity require an increase of 550 physicians every year to meet the demand, according to the statisticians. The decrease in the number of medical students is making itself felt in a lack of assistants and substitutes, the supply being much below the demand. The ranks of the practicing physicians still show no gaps, owing to the former overcrowding. The lack is in the younger set.

**Darmstadt Police Regulation of Quack Ads.**—The city of Darmstadt, Germany, has issued orders that impose a minimal penalty of 30 marks (\$7.50) for publishing or advertising articles, remedies or methods of treating or preventing disease in human beings which are liable to injure the health, or in regard to which erroneous or misleading statements are made or



deception practiced. The same penalty is imposed also for treatment by letter without personal examination, and also on those who recommend a *Heilgewerbetreibenden*, that is, a person making a business of the healing art outside of professional circles, by false or misleading statements in regard to his preliminary training, capability or successes.

**Plague in China.**—Consul-General Sammons, Niuchwang, reports that at a meeting of the consular body, held at the American consulate-general, in that port, immediately after the notice of the existence of the plague there, it was agreed to co-operate in the enforcement of every necessary precaution in stamping out the disease. Steps have been taken to isolate the infected locality and to conduct a careful medical inspection of the inhabitants within the isolated limits. All passes authorizing the owners to take passage on the military train at Niuchwang for the interior have been nullified. No vessels are to be allowed to go up to Liao until further notice. Traffic between Yingkow and Niuchwang is suspended.

**Centennial of Paris Medical Society.**—The Société Médico-Chirurgicale celebrated, November 20, the hundredth anniversary of its foundation. It was organized in 1805 by Dr. Duchateau and was called at first the "Confraternelle Médico-Chirurgicale." Membership has always been limited to a certain number, and Desnos, the president, in his address remarked that the society has always been true to its traditions of "work, warm friendship between truly congenial spirits, and solidarity." A banquet followed the anniversary meeting, with a theatrical entertainment and the presentation to each member of an artistic souvenir plaque. An illustration of this souvenir is given, with the description of the celebration, in the *Archives Gén. de Médecine* for November 28.

**Study Leave for Officers of the Indian Medical Service.**—New regulations have been issued recently with regard to "study leave" for officers of the Indian Medical Service. Extra furlough for study may be granted to officers of the Indian Medical Service on the recommendation of the director general. The period of such leave will be calculated at the rate of one month for each year of service up to a total of twelve months in all during an officer's service. The leave may be taken at any time, but will not be granted more than twice in an officer's service. The minimum period for this leave will be two months and this leave can be combined with any other kind of leave. A sum will be allowed for expenses, the amount depending on the rank of the officer. Study leave will count as service for promotion and pension.

**"Leipziger Verband" Engages in Campaign Against Quackery.**—The latest news from the German Leipziger Verband ("to promote the economic interests of physicians") is that it has now 18,000 members and rates at more than 8,000,000 marks, about \$2,000,000, the increase in the amounts paid by the sickness insurance societies (Krankenkassen) to their medical officers during the last year. This has been accomplished by the direct or indirect backing of the profession organized in this Verband, founded only five years ago. It now announces that a committee has been formed to take up the matter of quackery, and unite with medical and local authorities and local societies to inaugurate extensive and systematic concerted action in a campaign against irregulars. There is already an association for this purpose in Germany, and it is proposed to work in harmony with this organization.

**Maternity Work in India.**—The Dufferin Fund and Victoria Memorial Scholarship Fund have been presided over by Lady Curzon for nearly seven years, and the work has progressed most satisfactorily. The number of patients attended to at the various women's hospitals has increased considerably and a large number of midwives are under training. The hospitals are being used as training centers and there are now ten more qualified women physicians, seven more assistant surgeons, and 337 more hospital assistants than in 1898. At present 476 women are under medical training apart from dhais and nurses. A fully equipped operating room has been provided in all the hospitals. Under the Victoria Fund, some 286 dhais have been trained and 160 more are undergoing instruction. Only those who know the mortality of childbed in India and the fearful "massacre of the innocents" which is continually going on will recognize to the full the good work which is being done by these two funds.

**English-Speaking Meetings in Japanese Medical School.**—The *Sei-I-Kwai*, No. 5, contains the address delivered by Dr. L. L. Seaman, before he left Japan, at a meeting of Japanese medical students, at which only English was spoken. Five addresses were read by students, the subjects being "Why We Breathe"; "Use of Stomach"; "What Our Skin Does," and similar themes. Seaman qualified the meeting as "unprecedented

in the records of professional instruction—a meeting of the entire body of students in a great professional school, in which all of the proceedings were conducted in a foreign tongue, and these exercises were part of the regular curriculum." These English meetings are held at stated intervals at the Tokio University. Seaman commented on the addresses delivered by the students that they revealed the secret of the absence of disease among the Japanese soldiers, especially the address on the stomach. "Your army and navy management," said he, "did not load the stomachs of your soldiers with food that was unsuited to the climate, and that caused fermentation and irritation in the intestinal tract as was the case in our war with Spain."

**Practice of Medicine in Buenos Ayres.**—A bill to regulate the practice of medicine in the province of Buenos Ayres has been before the parliament of the Argentine Republic for some time, and has been passed in part with only slight modifications. By this measure medical consultations in pharmacies are forbidden. Advertisements in which a cure of all or certain specified diseases, whether at a stated price or otherwise, is promised, are declared to constitute illegal practice. In the same category will fall statements that a therapeutic agent is of infallible efficacy in one or more diseases. The bill provides that a fine shall be imposed on whomsoever shall, directly or indirectly, contribute to the publication of such advertisement. The obligation of professional secrecy is remitted in special cases in which its observance would be attended with danger to the public health or interfere with the penal laws. Special permission is required for the sale of prophylactic or curative serums, modified toxins or organic liquids intended for the cure of diseases; it is also provided that the preparation of these substances shall be subjected to special supervision.

**Prophylaxis of Cholera.**—The Prussian authorities have announced that in the recent epidemic of cholera in Germany it was found that a number of cases occurred in workmen engaged in haying or working along the shore without any personal contact with the cases of cholera that had occurred along the infected rivers. This fact suggests that the workmen must have become infected by drinking water from the river at points where the water had become infected by contamination from a fresh case of cholera. It is a question whether the cholera germs can be transported by the river to any distance from the point of contamination. The presumption is that they linger in stagnant bays and backwater nooks along the river banks, where they possibly proliferate. To determine this question the authorities have decreed that whenever a new case suspicious of cholera is discovered on a river boat, a number of quart bottles are to be filled with water drawn from the river above and below the spot where the vessel is lying at the time. The bottles must be packed in ice and dispatched in charge of a responsible person to the nearest "investigation station," after previously informing the station by telegraph of the attending circumstances. The decree is given in full in the *Allg. med. Ct.-Ztg.* for November 25.

**The Milk Supply of Calcutta.**—The Indian correspondent of the *Lancet* states that a committee of the corporation of Calcutta has recently submitted a report on the milk supply of that city which discloses a horrible state of things. In the majority of cases "the cattle were in a filthy condition and were standing in the offensive-smelling filth, inches deep; their udders were covered with muck; the cattle were packed together so closely that there was no room for them to lie down; the sheds were ill-ventilated, the entrances being blocked by platforms on which the gowalas (cow-men) slept, all the air-holes being closed up with mud bricks. This condition of the cow houses has been existent for years. The health officer suggested that certificates should be granted to those dairymen who conduct their business along proper sanitary lines, but the utter inadequacy of such a proposal is evident from the continued failure of the prosecutions instituted, and the committee has ignored the suggestion and has made recommendations of a drastic character. The most important proposal is to establish municipal cattle sheds provided with every convenience and to rent them at a reasonable sum. The difficulties connected with enforcement of the provisions of the municipal act are so great that the corporation will have to do a great deal in supplying filtered water, filling up insanitary tanks, prosecuting more vigorously, and arranging for more thorough and constant inspection. A large quantity of milk is taken into Calcutta from the suburban areas and examinations of this supply have shown very extensive adulteration. The danger of this is that the gowalas will use any dirty water and do not confine themselves to the filtered town supply.



**Koch's Report on His Expedition to Eastern Africa.**—The preliminary report published by R. Koch in regard to his scientific researches during his year's stay in German East Africa is published in the *Deutsche med. Wochft.* for November 23. He devoted considerable attention to the prevailing relapsing fever, leprosy and sleeping sickness in man and to coast fever and Texas fever in cattle. In an expedition on the main caravan route none of the three Europeans in the party was affected with the endemic relapsing fever. None of them slept in the shelters provided for the caravans, but sought places to sleep where no one had laid before. This was done to avoid the ticks which harbor the spirochetes causing relapsing fever. He found it impossible to infect cattle, dogs or other animals with the disease by inoculating them with blood from cases of relapsing fever. The only exception was monkeys; all his experimental inoculations of monkeys resulted positively. The tick communicating the disease is the *Ornithodoros moubata* Murray. It lives in the soil in the floor of the native huts and shelters, wherever the ground is not exposed to the rain. The spirochetes are found mostly on the ovaries and in the eggs of the tick. The natives are probably infected during youth and acquire immunity later. None of his 60 native porters contracted the disease, although they slept in the shelters, while 4 out of the 5 servants accompanying the party had the fever. They slept also in the shelters. Koch illustrates the cycle of development of the parasite of Texas fever as he traced it in three different varieties of ticks. Also of the parasite of coast fever, which he found only in adult ticks of a certain variety—*Rhipicephalus australis*. He encountered 4 varieties of tsetse flies, and established that the tsetse disease is communicated by the intermediation of 3 of them, the *Glossina morsitans*, *pallidipes* and *fusca*, especially the latter. Both males and females bite and can become infected, but the female does not lay eggs. It deposits a single whitish larva which assumes the pupa form in a few hours. From ten to twenty days elapse between the birth of these larvæ, so that the female produces only two or three young in the course of a month. This fact may prove important in prophylaxis of the trypanosoma affections. He established further that not all trypanosomata are capable of infecting the glossina, only those which are in a certain condition. Possibly this condition is encountered in the parasites in wild, not domestic, animals.

**Yellow Fever in Central America.**—Acting Assistant Surgeon Peters, of the Public Health and Marine-Hospital Service, gives an interesting account in *Public Health Reports* of the yellow-fever situation in Central America. The disease made its appearance in Zacapa during the latter part of June. The infection was introduced from Livingston through natives who were permitted to return to their homes in Zacapa after the outbreak of the fever in Livingston, but was not recognized as yellow fever until August, by which time the infection was thoroughly disseminated throughout the town, there being hardly a house in the place which has not had a case of yellow fever. Dr. Peters was unable to obtain any reliable information as to the number of cases or deaths, but well-informed and reliable residents estimate the number of deaths at about 700. At the time of his visit the public health was fairly good. Only a few cases of yellow fever existed, as the force of the epidemic had spent itself and the available material was practically exhausted. At the time of the outbreak of yellow fever a great number of people left and went to the mountains, leaving only about 3,500 in the place during the height of the fever, and it is these returning and others from the adjoining places who come into Zacapa who are furnishing the material for keeping up the infection. This is the first time yellow fever has ever appeared in Zacapa. Sulphur has been burned on the street corners with the idea of purifying the atmosphere. No attempt has been made to destroy the infection in the place used as a lazaretto during the epidemic. It was simply a thatched shed with the sides inclosed, and was used for treating the poor. It could easily have been burned, as it would be impossible properly to fumigate it. Gualan is situated on a hill, and is about 500 feet above sea level. It has a population of about 1,500. It is on the railroad, 80 miles from Puerto Barrios and 21 miles from Zacapa. The first cases of yellow fever came under observation in August. The yellow-fever patients in the railroad hospital were kept under bars, and every precaution was used to prevent the spread of the infection, no standing water being allowed around the buildings; but in the town itself nothing has been done. Dr. Peters states that one of the foci is in the barracks itself, in which a number of cases of yellow fever have developed and are still developing, no effort being made to destroy the infection. All along the line of the railroad from Puerto Barrios to Zacapa, wherever there is a station, he invariably found the stegomyia present.

## LONDON LETTER.

## The President of the Royal College of Surgeons on Medical Education.

At a dinner given at the Society of Apothecaries, Mr. Tweedy, the president of the Royal College of Surgeons, in responding for that body, claimed that it would meet any test of efficiency that could be applied. The statistics of the last ten years, he said, showed that the number of students entering the profession in England is declining, and he believes that it will continue to decline. In accordance with the promptings of the general medical council the standard of general education of students has been raised and the multiplicity and severity of the examinations has been increased. He would like to see the wheel turned back a little. Too much is being attempted in the way of examinations. He desires to see steps taken in the direction of simplifications without any sacrifice of efficiency. If some of the restrictions and regulations are relaxed he believes that a better practitioner than is possible under the present conditions would be produced. The student is overtaught and overexamined, so that he has no time to reflect, and to exercise his reason and intellect. The whole system, Mr. Tweedy said, is one of rush and cram. The Society of Apothecaries and the Royal College of Physicians and Surgeons have done their best to resist this encroachment and the mushroom-like growth of universities throughout the land. He believes that medical examinations are best entrusted to professional corporations.

## The Prevention of Consumption.

A remarkable meeting at which all classes from the royal family to workmen were represented has been held in support of the scheme to provide sanatorium treatment for the working classes. The Princess Christian of Schleswig-Holstein, president of the national association for the establishment and maintenance of sanatoria for workers suffering from tuberculosis, represented the royal family; representatives of both houses of parliament, a bishop, municipal authorities, and hundreds of labor delegates and members of friendly societies and trade unions, many of whom wore their insignia of office, filled the body of the hall. It was announced that a sanatorium of not too expensive a character was being erected in Kent, where 250 acres of land had been acquired. On the grounds were two farms, where cured consumptives could gradually be trained to resume work. It was pointed out by one speaker that it would be more economic for the friendly societies to prevent and to cure the disease than to take the consequences of it and to pay sick allowances and funeral expenses.

## The Dangers of Anthrax.

The danger of working among camel's hair and "low foreign wools" is shown by a case which recently occurred at Bradford. A coroner's jury returned a verdict of death from anthrax of a woman who had been employed as a finisher on camel's hair and low foreign wools. The inquiry showed that though these materials had been "sorted, washed, willowed, carded and combed," the anthrax bacilli had not been removed nor had they lost their vitality. Something more, therefore, should have been done before those working among them could do so safely.

## Japan and Medical Practice.

At the meeting of the general medical council Dr. MacAlister, the president, stated that a communication had been received from the government stating that application had been made to his majesty on behalf of the Japanese government, requesting that Japan might be recognized as one of the countries to which the medical act of 1886 applies, thus enabling Japanese doctors to practice in the Straits Settlements as well as in other parts of the British empire. Inquiries have been instituted for the purpose of ascertaining the conditions under which British practitioners are permitted to practice in Japan; should these prove satisfactory and should an order in council be sanctioned, it will fall to the general medical council to consider what medical diplomas granted in Japan shall be recognized for registration in Great Britain.

## A Mysterious Epidemic.

At the conference of health officers for London and the neighboring counties Dr. Freemantle, health officer for Hertfordshire, reported that an epidemic simulating cerebrospinal meningitis was first brought to the attention of health officers last January, when several persons, often of the same family, were attacked by a disease presenting symptoms, sometimes resembling those of scarlet fever, sometimes of tuberculosis, sometimes of meningitis, sometimes of influenza, and sometimes of cerebrospinal meningitis. Notes were obtained of 162 cases treated dating back to August, 1904, of which 16 were fatal.



## Pharmacology

### What Are "Proprietary" Medicines?

There seems to be a decided misunderstanding of the meaning of the term "proprietary" medicine, and before condemning one should realize what this term "proprietary" means. If all proprietary medicines are to be condemned, then the Council on Pharmacy and Chemistry has no cause for existence, for its work is to examine and to pass on such articles.

Proprietary medicines are those which some one owns; those that are the property of some one. Their ownership or proprietorship is held in two ways: (1) By a patent, or (2) by a trade or copyright name.

1. **PATENTED MEDICINES.** A patented medicine is one on which a patent has been granted. This requires that a full description of the article be filed with the Government, which description can be obtained by anyone for 5 cents by writing to the Patent Office. These are non-secret (patent means open); and the protection lasts for seventeen years. Some of our better preparations were patented, such as antipyrin, sulphonal, lanolin, but the patents have now expired. So long as the patents were in force these preparations were "proprietary medicines." Phenacetin is patented, the patent expiring next March. Until then it will be a "proprietary medicine." Alphozone, acetozone, thiocol, creosotol and other well-known remedies are patented medicines, and therefore proprietary. There is no objection to them, if they are advertised and marketed in an honest way.

2. **COPYRIGHTED OR TRADE-NAMED ARTICLES.** The vast majority of the preparations on the market in this country come in this class. They are proprietary in that the name given them is owned and controlled by some one. The name is the thing in this case. Nearly, but not quite, all the preparations that are sold under trade names are to be condemned because the composition is secret in character. If the composition is known, and if the remedies are honestly exploited, they are not necessarily to be condemned. One serious objection applies to all copyrighted or trade-names—they are a perpetual monopoly. A patented article becomes public property after seventeen years, but a trade-named article never does.

"Patent medicines" come in this class, the term being used to designate those advertised and sold directly to the public. The name, of course, is a misnomer, for they are not patented medicines. We suggest that the words "patent medicines" be always placed in quotation marks when the proprietaries advertised to the public are meant, so that there may be no misunderstanding. The word "nostrum" means "A medicine, the ingredients of which are kept secret for the purpose of restricting the profits of sale to the inventor or proprietor."—Webster. Hence, all proprietary medicines which are in any way secret come under this category.

### Medical Literature "Made in Germany."

Some weeks ago<sup>1</sup> we called attention to a petition that was being circulated among the members of the profession of Germany as a protest against paid write-ups. The following abstract of matter taken from one of our German exchanges refers to the same subject and emphasizes what has been charged for some time, i. e., that paid write-ups are being published in German journals to be re-copied in this country. There seems to have developed the impression that anything "made in Germany" must be all right. The number and variety of

mixtures that are simply nostrums that are being imported from Germany, and from France for that matter, should put physicians of this country on their guard, and especially against accepting as truth everything that is published in German journals or because the Germans said it. In the *Zeitsf. f. aertzl. Fortbildung*, No. 17, is an article on the subject that should make interesting reading at the present time:

The petition cites as a typical example of the evil, the medical write-ups published on behalf of ———, stating that not only the manufacturers themselves, but their American agent ("an American journalist") have paid out hundreds of dollars for favorable articles on this new product, written by physicians who were not in a position to form a decisive judgment in regard to the curative value of the remedy. A letter from the American agent to a Berlin specialist and his reply are quoted, the condition of "strict secrecy" being explicitly demanded by the latter. The sum asked and paid was 2,000 marks (\$500). For other write-ups the manufacturers or their agent have paid out sums ranging from 1,000 to 4,000 marks (\$250 to \$1,000). These investments have proved profitable, as a purchaser has been found in America who has signed a contract for a large sum—\$125,000 it is rumored. An editorial in the *Zeitsf. f. aertzl. Fortbildung*, No. 17, quotes the above from *Die Post*, with the comment that the medical chambers (Aerztekammer) have too little jurisdiction in such matters to arrest these practices arbitrarily. They will stop only when the medical profession as a whole resolve to repudiate and to expose such practices as extremely injurious to the reputation of the profession, and does everything in its power to combat them. In a later issue, No. 19, the *Zeitsf.* states further that the manufacturers of ——— have since written to *Die Post* publicly disclaiming all responsibility for the actions of their American agent. His business affairs are entirely independent, they say, of the business of the home office, and are not under the control of the latter. Consequently, they can not be held responsible for the means he has adopted to further his business aims. The editorial comments that this explanation does not alter the aspect of the case, as the home office has not repudiated nor dismissed the American agent.

### Kansas Against Nostrums.

At its last meeting the Kansas State Medical Society adopted the following resolution, which was offered by Dr. W. H. Graves:

*Resolved*, That the council of the Kansas Medical Society endorse the action of the national organization in refusing to insert advertisements of secret preparations, and recommend to the editor of the *Journal of the Kansas State Medical Society* that, as fast as present contracts expire, space be refused to such secret preparations.

This resolution was discussed by all present and was adopted unanimously.

### Work of Council Indorsed.

The following resolutions were adopted at the December meeting of the Will County (Illinois) Medical Society:

*Resolved*, That the Will County Medical Society expresses approval of the action of the American Medical Association in establishing the council on Pharmacy and Chemistry.

That this society indorses the work of investigating non-official drugs and medicinal preparations.

That the society gives its hearty support to the educational campaign regarding secret nostrums and commends the good work of THE JOURNAL of the American Medical Association.

F. C. FISHER, Secretary.

At the regular meeting of the Fort Wayne Medical Society (the Medical Society of Allen County), December 5, the following resolution, presented by Dr. M. F. Porter, was passed:

*Resolved*, That the Fort Wayne Medical Society approves of the appointment of the Council on Pharmacy by the American Medical Association, and of the efforts the members of this council are making to rid the country of those pharmacists and their products, which, while sailing under an ethical banner, are really doing a business alike disgraceful and harmful, and that it also commends the editor of THE JOURNAL of the American Medical Association in the vigorous assistance he is giving this council.

### Resolutions Regarding Dr. Billings' Paper.

ALBUQUERQUE, N. M., Dec. 7, 1905.

*To the Editor*:—I forward herewith a copy of the resolutions passed at the last meeting of the Bernalillo County Medical Society and request that you bring them to the attention of

1. THE JOURNAL, October 21, p. 1264.



the profession through THE JOURNAL with the view of securing some concerted action.

W. W. SPARGO, M.D.

WHEREAS: Dr. Frank Billings, of Chicago, read before the Portland meeting of the American Medical Association an article entitled "Nostrums," which was printed in THE JOURNAL of the American Medical Association, a publication owned by the medical profession, and for the use and information of the profession; and

WHEREAS: One at least of the corporations manufacturing a compound drug and offering it to the profession and public under a copyrighted name, not representing the ingredients, has threatened the journals issued by the various state societies with suits for libel if the said journals reprinted Dr. Billings' article; and

WHEREAS: Many of these corporations alluded to in Dr. Billings' article have banded themselves together under a distinctive name and are commonly accredited with controlling many of the medical journals published, but not including those owned by the State Societies; and.

WHEREAS: There are many manufacturing drug companies who are willing and do publish the ingredients of their manufactured articles; therefore, be it

*Resolved*, That the members of the Bernalillo County Medical Society, feeling that as physicians they have a right to know the composition of all drugs used by them, refrain hereafter from using such articles as do not contain on the label attached the ingredients of which they are composed; and that they dispense or prescribe the products of such houses as comply with the above requirement; and,

*Resolved*, That the members of said society deny the right of any drug manufacturing concern to prevent any legitimate investigation into the composition of their manufactured articles; and that the Board of Trustees of the American Medical Association shall be requested by the secretary of this society to take such steps as shall lead to a concerted action of the medical profession, calling on the government and congress to enact such laws as will make impartial analyses of such articles compulsory; and,

*Resolved*, That the said society will co-operate with the state society in maintaining the right of the journal of this state society to publish any legitimate professional information; and be it further

*Resolved*, That a copy of these resolutions be forwarded to THE JOURNAL of the American Medical Association, be published in the JOURNAL of the Medical Society of New Mexico, and also be furnished to the retail druggists of this city.

## DUFFY'S PURE MALT WHISKEY.

### Fraudulent Testimonials.

We have repeatedly asserted that there is no dividing line between nostrums advertised to the public in newspapers—"patent medicines"—and those advertised to the medical profession—"proprietarys." Many are advertised both to the public and to the profession openly—because there are medical journals that will take such advertisements. It is not our intention to expose the fraudulent character of so-called "patent medicines" except incidentally, until the fraudulent character of the "ethical" proprietary business has been published to the profession. We refer to Duffy's Pure Malt Whiskey this week because it is among the nostrums advertised to physicians.

We know of no more fraudulent and extravagant claims for any "patent medicine" than those which the proprietors of Duffy's Pure Malt Whiskey make in their advertisements. Their claims for it as a health restorer equal those made for peruna, liquozone, wine of cardui and similar nostrums.

But "Duffy's Pure Malt Whiskey" is advertised in medical journals!

### A Sample Testimonial.

Some months ago a big display advertisement of Duffy's appeared in the newspapers. It was accompanied by a photograph of an old lady and by the old lady's testimonial. Here is the testimonial, with some of the comments on it that appeared in the "ad.":

"A DEAR OLD SOUL ACTIVE AND HAPPY AT 106.

"Mrs. Nancy Tigue, of Lafayette, Ind., Although in Her 106th Year, Says:

"I Really Don't Feel Like I'm a Day Over 60, Thanks to Duffy's Pure Malt Whiskey, Which Is the Real Secret of My Great Age, Health, Vigor and Content."

"Mrs. Tigue is Blessed with All Her Faculties and Does Exquisite Fancy Work Without Glasses. She is as Spry as Many Women Half Her Age.

"With the Help of the Invigorating and Life-Giving Powers of This Wonderful Medicine Mrs. Tigue says She Expects to Live Twenty-five Years Longer.

"I will be one hundred and six years old," writes Mrs. Tigue, "on the fifteenth of March, and really I don't feel like I am a day over sixty, thanks to Duffy's Pure Malt Whiskey. Friends say I look younger and stronger than I did 30 years ago. I have always enjoyed health and been able to eat and sleep well, though I have been a hard worker. Even now I wait on myself and am busy on a pretty piece of fancy work. My sight is so good I don't even use glasses. Am still blest with all my faculties. The real secret of my great age, health, vigor and content is the fact that for many years I have taken regularly a little Duffy's Pure Malt Whiskey, and it has been my only medicine. It's wonderful how quickly it revives and keeps up one's strength and spirits. I am certain I'd have died long ago had it not been for my faithful old friend 'Duffy's,' August 10, 1904."

"Duffy's Pure Malt Whiskey  
"Is the Comfort and Support of Old Age.

"The sincere and grateful tribute of Mrs. Tigue to the invigorating and life-prolonging powers of Duffy's Pure Malt Whiskey is one of the most remarkable and convincing on record. She sews, reads and is dependent upon no one for the little services and attentions of old age. Mrs. Tigue's memory is perfect, and her eyes sparkle with interest as she quaintly recalls events that have gone down into history of the past hundred years. Instead of pining, as many women half her age, she is firm in the belief that with the comforting and strengthening assistance of Duffy's Pure Malt Whiskey she will live another quarter of a century."

These statements were so remarkable that we wrote to two physicians of Lafayette for facts. It seems that one of the Indianapolis newspapers published an item regarding Mrs. Tigue having reached her one hundred and fifth birthday, and evidently this was the cue for the Duffy exploiters.

The following letter is from Dr. George F. Keiper, one of the councilors of the Indiana State Medical Association. As the eye and ear surgeon to St. Elizabeth Hospital he visited that institution every day, which explains his personal knowledge of the ease.

LAFAYETTE, IND., Nov. 18, 1905.

*My Dear Doctor:*—Yours of the 14th has been received; also a copy of an advertisement published in the newspapers last winter, which contains, among other matter, a photograph of Mrs. Nancy Tigue, and also, among other statements, the following: "Mrs. Nancy Tigue, of Lafayette, Ind. Although in Her 106th Year, Says: 'I Really Don't Feel Like I'm a Day Over 60, Thanks to Duffy's Pure Malt Whiskey, Which is the Real Secret of My Great Age, Health, Vigor and Content.'"

I have had several interviews concerning Mrs. Tigue and this testimonial. I have known the old lady for a number of years and, to my certain knowledge, she has never used alcoholics in any form. I used to see her every day at St. Elizabeth's Hospital. I interviewed Sister Bernardi, the Sister Superior of St. Elizabeth's Hospital, where Mrs. Tigue was for a number of years. The Sister Superior says that Mrs. Tigue never took any whiskey while there. I further asked Sister Benigna and Sister Aloysia and they both denied that she used Duffy's Malt Whiskey.

For the past three or four years Mrs. Tigue has been at St. Anthony's Home for the Aged, going there from St. Elizabeth's Hospital when the Home was opened. This Home is a branch of St. Elizabeth's Hospital. Sister Frances is in charge of the Home, and she told me that Mrs. Tigue has never taken a drop of any kind of whiskey while there.

I also saw her son, Mr. Michael Tigue. The advertisement of Duffy's Malt Whiskey filled him with indignation passing all bounds. He corroborated all that the Sisters told me, and he further told me that when this advertisement appeared, he had some sharp correspondence with the Duffy people.

The photograph used in the advertisement was obtained by a party who said he wanted to use it in one of the Indianapolis papers. Of course, misrepresentation was resorted to.

Concerning the testimonial: The man who obtained it, went to Mrs. Tigue and requested her to sign a testimonial concerning Duffy's Malt Whiskey, but she said she never used it, and the agent was told to see her son. The man then saw Mr. Michael Tigue, who refused to grant his request. The agent then took a notary public to the Home and represented to Mrs. Tigue that her son told her to sign the testimonial. Very truly yours,

GEORGE F. KEIPER.

Dr. W. W. Vinneedge is another Lafayette physician to whom we wrote. His letter we quote:

LAFAYETTE, Nov. 21, 1905.

*Dear Doctor:*—In response to your inquiries as to Mrs. Nancy Tigue of Lafayette, I beg to say that I investigated her case as to Duffy's Malt Whiskey somewhat less than a year ago. . . . This morning I found Mr. Michael Tigue, single, stone-cutter, ex-township trustee, 58 years old, son of Mrs. Nancy Tigue, and . . . he dictated and signed the enclosed statement. . . . You have been misinformed in one particular, Mrs. Tigue does not live in a home for feeble-minded, but in the Old People's Home, under the care of the Poor Franciscan Sisters. I visited her there twice in the early part of the past summer, saw her sitting by her bed fully dressed, saw her led across the floor by a Sister with a hand under her (Mrs. T's.) elbow, and she appeared to be nearly blind, as the Sister said. The old lady, however, is fairly intelligent, and while very senile in appearance talked understandingly. She and the Sister assured me that she drank no intoxicating drinks at all, and never had done so, and from their manner and words I saw that they thought the report ridiculous. I am sure that the old lady knows nothing at all about Duffy's Malt Whiskey.

As to the testimonial given by the old lady. About a year ago a young man from Indianapolis, a newspaper man, got off the train here one morning and called on Mr. Mike Tigue, and asked for a testimonial. Mr. Tigue gave him permission to see his mother, but refused the testimonial. The enterprising young man hired a horse and buggy from a livery stable, and taking Mr. Oscar Campbell, notary, Lafayette, drove out to the Old People's Home, about two miles, and saw the old lady, led her to think that her son Michael had sent them, that he wished her to sign the testimonial, which she did by making her mark, and without having a clear idea of the contents of her statement, and without having any idea at all of what use was to be made of it. You know the balance.

Later, as I am informed, Mr. Michael Tigue wrote, or caused his attorneys, Messrs. Kumler & Gaylord, Lafayette, Ind., to write to the Duffy Malt Company protesting against the use of his mother's name, forbidding it. Finally, he told me to-day, the firm quit publishing her picture and statement in the newspapers, but it is in press and will appear in Duffy's book soon; they could not "cut it out" of that at this stage. If you wish any additional information and will indicate what it is, I will be very pleased to try to get it and to help along the good work in which you are engaged.

Very truly yours,

W. W. VINNEEDGE.

The following is the statement referred to, made by Mr. Tigue:



LAFAYETTE, Nov. 21, 1905.

*To Whom it May Concern:*—I am the son of Mrs. Nancy Tighe, who is now an inmate of the St. Anthony's Home, and I am 58 years old. My mother is one hundred and five years old, was born in Ireland. Our home is, or was, 413 S. 1st St., Lafayette. Mother is almost blind, and she has been cared for by the Sisters about four years—one year at the Old People's Home. My mother never drank any intoxicating drinks at all. She does not know what Duffy's Malt Whiskey is. She was imposed on in order to obtain the advertisement of Duffy's Malt Whiskey, being nearly blind was influenced to sign a false affidavit by Duffy's solicitor, which was published without our knowledge or consent. MICHAEL G. TIGHE.

Still Duffy's Malt Whiskey must be "ethical," for is it not advertised in reputable medical journals!!

#### Centenarian Feels Like a Girl.

A "companion piece" to the above is the picture and testimonial of Mrs. Louisa Cox of Harrington, Maine. This is still appearing in the newspapers, or was a month ago. Here is the testimonial as it appeared in the newspapers:

"HARRINGTON, ME., May 20, 1904.

*"Gentlemen:*—I am 105 years old. I am well, without a pain or ache. I sleep as well as I did when I was a girl. I use your whiskey and like it very much. Duffy's Pure Malt Whiskey is the only medicine I use. I get water from the well, bring in wood, and do my housework.

MRS. LOUISA COX."

The advertisement is accompanied with the usual extravagant claims and statement, but we have only space for one quotation. In this advertisement we are told that:

"There are 4,000 men and women in this country alone who have passed the hundred year mark, and nearly every one of them has publicly acknowledged that he or she owes health, strength, continued use of all the faculties, and extreme old age to Duffy's Pure Malt Whiskey, the great cure and preventive of disease, the true elixir of life."

Four thousand people in this country over 100 years old have publicly acknowledged that they use Duffy's Malt Whiskey!! Think of this statement and then realize that Duffy's Malt Whiskey must be an "ethical" preparation, for is it not advertised in reputable medical journals?

We wrote to Dr. E. A. White, Columbus Falls, Maine, and asked him to investigate the case. Dr. White replies as follows:

COLUMBIA FALLS, ME., Nov. 11, 1905.

*Dear Doctor:*—In accordance with your request I went to the home of Mrs. Lovisa Cox (not Louisa as appears in the advertisement). She tells me she will be 107 the 12th of January, 1906. She says she never took Duffy's Pure Malt Whiskey or any other whiskey in her life. Never took but very little medicine any way. Her daughter, Eliza A. Shaw, with whom the old lady lives verified the statement. You will notice a statement from her on the back of your enclosed letter. She knows about the advertisement which has appeared in the *Bangor Commercial*, a paper printed in Bangor, Maine. She has been interviewed a number of times about the matter and always denied it. Calls it a lie. The advertisement is in the *Bangor Commercial* now, same as the one you sent me. An article came out in the *Bangor News*, another paper printed in Bangor, Maine, denying the statement of the old lady's appearing in ad. of the *Commercial*. The old lady can neither read nor write, so if she made her cross (x) under any statement she would have no way of knowing really what it contained, thereby giving some unscrupulous person a chance to deceive her. I do not think this was even done. I do not charge you anything for my trouble; am only too glad to help you to unearth such frauds. Let me know if you need anything more. Yours,

E. A. WHITE.

On the back of the letter to Dr. White is written with pencil the following:

This is to certify that I, Eliza A. Shaw, daughter of Mrs. Lovisa Cox, know that my mother never has taken Duffy's Pure Malt Whiskey, or any other whiskey for medicine.

Witness: SUSIE A. SHAW.

ELIZA A. SHAW.

A letter to the postmaster of Harrington, Maine, brought the following reply:

HARRINGTON, ME., Nov. 13, 1905.

*Dear Sir:*—Relative to enclosed ad. would say that party in question has never used liquor in any form and can secure her affidavit to that effect if you care to bear the expense. Party lives some four miles from town; it would be necessary to drive out in order to interview her. Yours,

WM. N. DYER, P. M.

Those who want further information regarding the character of the Duffy testimonials should refer to the article in *Collier's Weekly*.

For the wonderful virtues of Duffy's Malt Whiskey, as a medicine, we respectfully refer to the advertisements appearing in the newspapers of the country.

The advertisement of Duffy's Malt Whiskey is appearing in some well-thought-of medical publications. Would it not be well for those physicians who are subscribing to and supporting such publications to write to the publishers regarding this insult to their intelligence? Of course, the cancellation of a few subscriptions does not compare with the amount received from a several hundred dollar advertising contract, and the publishers who have only the financial end in view will not be materially impressed at first. Still, every little counts, and if the profession will take up this matter it will surely have some effect.

## Correspondence

### Fees for Life Insurance Examinations.

SKIPPAK, PA., Nov. 29, 1905.

*To the Editor:*—In the light of and with the knowledge daily brought before us of "high financiering" as exemplified in the old-line life insurance companies of New York, with more to come, it would seem that any physician who makes an examination for a fee of three dollars or less is, to say the least, "easy." Some men have refused to examine an applicant for such a fee, only to be sarcastically informed by the agent that there were "others," not only waiting but anxious. Unfortunately he was telling the truth. We are cheap. Medical societies should take this matter up.

J. NEWTON HUNSBERGER.

### The Burning of the Books.

CHICAGO, Nov. 24, 1905.

*To the Editor:*—No species of vandalism has ever aroused such universal execration as the wanton destruction of literature and records, whether accumulated for that purpose or captured with other acquisitions of victory. In modern times the easy production and multiplication of books has brought the dignity and presumptive value of the book to a low ebb; and, while the ancient tome had, from its very existence, a modicum of permanent value, the book of to-day may be valueless and a mere incumbrance, either because of its primary inherent worthlessness, or its worthlessness in a particular form, or on account of the enormous edition, or an edition made incomplete by abridgement, by faulty translation, by reproduction on poor paper, in bad print or with other defects. To the bibliophile any book within his horizon has a certain bibliographic, literary and commercial value, based on fluctuating interest and fluctuating supply and demand. To the student a book is valuable for the data or the literature which it contains. To the antiquarian and second-hand book dealer a book is worth just so much as he can get for it. To the paper maker all books are valued by the pound or ton.

In modern times the great public library has come to be a hopper, into which the private libraries of declining families, dissolving households and defunct societies naturally tend, and as a result the store rooms of the principal libraries are flooded with an unsorted mass of books, magazines and manuscripts. The value of these contributions is not great, yet each wagon load contains a few volumes desirable for exchange and one or two worth binding and preservation, and every few months a rare book is added to the archives of history.

We may almost condone the affront which is offered our regard for the book when the management of these great libraries stealthily and covertly disposes of carloads of material to the paper maker.

A now prominent scholar and author who, thirty years ago, published a masterful reflection of his instructor's theories and conceptions in a handsome book has, during the past twenty years, gradually bought up and consumed in his furnace and fireplace every obtainable copy. He has slowly raised its price from two cents a pound to twenty-eight dollars and a half a copy, and from taxing the capacity of his furnace with the annual consumption he now has scanty material for folded lamplighters on his mantelpiece. We may doubt whether the silent influence of the printed page, even of the full edition, was as subverting to public morals as the active bid of the increasing price is to systematic larceny from library shelves.

In spite of the aggravation to which the baited librarian and sometimes the unhappy author yield, it is painful for us to see the printed page consumed. We turn away from the bonfire and the paper mill with a pang and look on the ruffled books stripped of their covers with regret. Nevertheless there is a book which deserves this fate. It merits the worst form of destruction; its pernicious influence is more deadly than all the bacteria and contagion which its greasy covers and soiled pages can harbor. It deals death and gives complacency to the widespread destruction of adults, youths and infants. There are few epidemics that destroy as many as the endemic of this dirty book. If the boards of health are called



on to arrest epidemics; if they may use police power to abate nuisances destructive of health or life, this power and this function ought to be called in play to exterminate this death-dealing book.

The antiquated text-book of medicine is a positive and widespread danger to society. It perpetuates and makes active the baleful influence of our medical forbears. This influence is greater the greater the authority and the more permanent the position of the author. If a man has done his work before he is 50 and ought then to step aside and give place to the young, the medical text-book has outlived its usefulness in one-tenth that time. The libraries of sixty thousand physicians are encumbered, their practices vitiated and their patients put to unnecessary suffering and danger by the sixty thousand antiquated Oslers. How boldly the vanquished physician standing at the bedside of his unfortunate patient quotes, to his complacency and the palliation of his defeat, the dictum of an Osler of the edition of 1894, and with what humility, not to say astonishment, would he read the reversal of that opinion in the last edition! The antiquated text-books of medicine of ten years ago, especially those that treat of the care of infants and the treatment of genito-urinary diseases and general medicine, are now supporting the pernicious practices of an army of physicians, in whose hands they cause uncalled-for and immeasurable suffering and no small mortality. These old books, however, maintain an unquestioned dignity and respectability, while the automobile and cigarette call forth columns of malignant abuse, interminable persecution and drastic legislation. Single lines have been followed by a weeping and limping procession, which the repeated recantation of the author in subsequent editions and the earnest and dramatic teaching in class room, lecture hall and journal has been unable to arrest. The curse of modern medical book selling is the antiquated text-book. The book agent foists his wares on the indulgent physician who scarcely turns in his last payment on a good book before it is superseded by another edition made necessary by the rapid advance in medical diagnosis and treatment. Since we have referred to Osler, let us take as illustrations the diagnosis and treatment of any of the diseases of the abdominal viscera in the last edition and the edition of ten years ago. Could there be a greater contrast between the teachings of any medical sect and that of rational medicine than between Osler's own account of the non-malignant diseases of the stomach, the diseases of the biliary apparatus, dysentery and appendicitis<sup>1</sup> in these two editions? Nevertheless we hear the Osler of ten years ago quoted ex cathedra in every medical society and often at the bedside with no appreciation of its melancholy import. Should an attorney quote the decision of a court which had for ten years been reversed, he would be sharply corrected by the opposing counsel. The patient's advocate, the physician, meets, unfortunately, a silent plaintiff in a court of unquestioned justice. When he meets defeat he departs, often unconscious of his remissions, and even the autopsy fails by its rarity and novelty to jolt the complacent and luck-trusting practitioner into the serious consideration of the rapid advance of his art.

104 East Fortieth Street.

BAYARD HOLMES, M.D.

#### Acetozone Solutions.

NEW HAVEN, CONN., Dec. 3, 1905.

*To the Editor:*—I am anxious to learn if any one else has had any experience in the use of acetozone solutions for injection into the spinal canal after lumbar puncture in cerebrospinal meningitis. I have used it recently with apparently good results in two severe and protracted cases. In both these cases puncture had already been required to relieve urgent pressure symptoms, but, while successful in this respect, the procedure had been without effect on the temperature. After the acetozone injections this remained nearly normal. A weak solution (5 grains to quart) was used, the patients being aged 7 and 4 respectively. In the first case 30 c.c. of fluid were withdrawn and 15 c.c. of the acetozone solution injected; in the second case 35 c.c. were withdrawn and 15 c.c. injected. In

1. "The medical treatment of appendicitis can be expressed in three words—rest, opium and enemata."

the acute fulminating cases, in which death takes place before the formation of much fluid, such injection would be difficult and probably ineffectual. Probably stronger solutions can be used.

LOUIS S. DE FOREST.

#### Is the Bituminous Coal Miner Immune from Tubercular Infection While Actively Engaged in His Occupation?

DUQUOIN, ILL., Nov. 21, 1905.

*To the Editor:*—After an experience of 25 years in one of the largest coal mining towns in southern Illinois, and during this time having under my observation from 700 to 1,200 coal miners; and after careful enquiry among the oldest miners in this locality as to the number of coal miners that have been infected with this dreadful disease, I have been forced to the conclusion that bituminous coal miners, while actively engaged in their occupation, are practically immune from tubercular infection.

About seven years ago I commenced the treatment of whooping cough by sending the patient down in the mines immediately after the miners had fired a shot; having the patient inhale the gas and powder smoke for one and a half to two hours at a time. I found that one or two sittings was sufficient to effect a cure in from four to six days, and without other medicine.

This was followed up until I have on my records from 75 to 100 cases, ranging in age from 3 months to 27 years. This treatment has passed so far as my experience goes, from the experimental stage to the stage of confirmation. It is so successful and is now so well known in this locality, the miners take their children so affected into the mines, without consulting a physician, and always with the happiest results.

In June, 1905, I obtained from the coal operators "Blue Book," and from a United States medical directory the addresses of 600 physicians practicing in the coal mining towns of Illinois, Indiana, Ohio, Pennsylvania and West Virginia. I carefully selected the names of those who had practiced not less than 10 years, and sent to them a circular letter containing four questions, and enclosing with each a stamped, addressed envelope for reply, in order that I might gather from their experience some statistics on the liability of coal miners to tubercular infection, while actively engaged in their occupation. The following is the text of the body of the letter and the four questions:

*Dear Doctor:*—In order to obtain statistical information from those of my professional brothers who can speak from experience and observation concerning the frequency and liability of infectious tuberculosis among coal miners as a class, I respectfully submit the following questions:

1. How much professional experience have you had among coal miners?

2. About what per cent. of all coal miners who have come under your professional observation have had infectious tuberculosis?

3. About what per cent. of those who, of your own knowledge, had been exposed to tuberculosis have been infected?

4. Taking into consideration their usual habits of life, together with their daily exposure, do you consider coal miners, as a class, immune from tubercular infection while actively engaged in their occupation?

As a result of these inquiries I have thus far received in reply over two hundred letters. Of this number about 75 per cent. give as their experience and observation, that during active service in his occupation the bituminous coal miner is immune, wholly or in part.

M. C. CARR, M.D.

#### The Psychopathic Manifestations of the Non-Insane Psychoneuroses.

NEW YORK, Dec. 8, 1905.

*To the Editor:*—In the valuable article under the above title in THE JOURNAL, December 2, Dr. John Punton makes some timely remarks on inexact nomenclature. I wish to add some suggestions: As physicians giving the word in our own lan-



guage, we say disease of the mind and not disease of the soul; German physicians say *Geisteskrankheit*, which is also distinctly disease of the mind in distinction from *Seelenkrankheit*, disease of the soul; the French say likewise disease of the mind, namely, *frénésie*, and not disease of the soul, which would be *maladie de l'âme*, and the Greeks, like Frenchmen and Germans, in their own language call it phrenopathia, when they mean the medical term, not psychopathia; they do not say psychocomion, but phrenocomion for lunatic asylum. At this occasion no criticism is intended, but only statement of facts. Another fact is that psychosis in Greek means animation, infatuation, inspiration, but never mental derangement; the correct word for alienation of the mind is phrenitis, an excellent term. It is to be assumed that everybody knows by this time that the suffix "itis" does not necessarily mean inflammation. Phrenitis means distinctly a morbid affection of the mind. The new term suggested by Dr. Punton, "psychosomatasthenia," is rather Lexicon-Greek; phrenosomatitis would express the same meaning, but I would not dare to offer it for adoption before consulting Greek friends, if it would be acceptable.

A. ROSE.

## Marriages

DAVID M. RANK, M.D., to Miss Susie F. Herr, both of Annville, Pa., November 28.

JOHN LEHR, M.D., Lykens, Pa., to Miss Laura B. Hehring of Reading, Pa., November 29.

RAYMOND G. OLSON, M.D., to Miss Charlotte E. Burke, both of Muskegon, Mich., December 4.

JAMES S. AKEHURST, M.D., Baltimore, to Miss Agnes Hance of Stewartsville, N. J., December 3.

WALTER M. BOWERS, M.D., Bassett, Iowa, to Miss Clara Belle Parks of Waterloo, Iowa, December 5.

NAPOLÉON BERTRAND ROSS, M.D., to Miss Mary Agnes Loughlin, both of Sonyea, N. Y., December 2.

HARRY C. DILTZ, M.D., Wilkesburg, Pa., to Miss Elsie Pammilla Smith of Derry, Pa., December 7.

THOMAS D. MAHER, M.D., San Francisco, to Miss Josephine Hannify of Sausalito, Cal., November 28.

WALDEMAR T. RICHARDS, M.D., New Orleans, to Miss Jessie Ross Cotter of La Grange, Ga., December 13.

N. O. PEARCE, M.D., Chisholm, Minn., to Miss Elizabeth Carlton Harden of Minneapolis, Minn., December 4.

EDGAR LEE CRAFT, M.D., Sumrall, Miss., to Miss Mamie Amelia Royals of Meridian, Miss., November 15.

GEORGE M. INGHAM, M.D., Milwaukee, Wis., to Miss Margaret Atwater of Iowa City, Iowa, November 29.

WILLIARD B. HYDE, M.D., Christiansburg, Ohio, to Miss Leo Robinson, Lost Creek Township, at Piqua, Ohio.

WARREN E. G. HIGH, M.D., lieutenant (j. g.) U. S. Navy, to Miss Mary L. Knabb of Reading, Pa., December 5.

ARTHUR A. PRATTE, M.D., Keene, N. H., to Miss Marie J. Belanger of Everett, Mass., in Boston, November 28.

BENJAMIN J. EDGER, JR., M.D., U. S. Army, to Miss Edith Downing of San Francisco, Cal., the last week in November.

ALLEN MONROE OTTMAN, M.D., Hilton, N. Y., to Miss Caroline Elizabeth Hatfield of New Hartford, N. Y., November 27.

CHARLES HYDE DAVIDSON, M.D., Lexington, Va., to Miss Addie McChesney Brown of near Hebron Church, Va., November 22.

HERBERT CHARLES GIBNER, M.D., assistant surgeon, U. S. Army, to Miss Charlotte Elizabeth Bruce, at Wawona, Cal., November 30.

## Deaths

Charles B. Schoolfield, M.D. Medical College of Ohio, Cincinnati, 1873, of Dayton, Ky.; state referee for Campbell County; president of the county board of health; first president of the Northern Kentucky Medical Society; president of the Campbell and Kenton County Medical Association, and president of the medical staff of Speers Hospital, Dayton, of which he had been a trustee since its opening, died at a hospital in Charleston, W. Va., from sciatica, after a long illness, aged 59. Resolutions of respect and sympathy have been adopted by the societies of which he was so long a member.

William Friend, M.D. Years of Practice, Illinois, 1877; a member of the American Medical Association, Illinois State Medical Society, and Lawrence and Wabash County medical societies, and several times president of the latter organization; for 47 years a practitioner in Lancaster, Ill.; from 1868 to 1872 a member of the State Board of Equalization, died at the home of his son in Sumner, Ill., December 4, from cerebral hemorrhage, aged 77.

John J. Walsh, M.D. University of Buffalo, Medical Department, 1871; a member of the county and state medical societies; some-time sanitary inspector of the Buffalo Department of Health; a member of the Board of Health, and secretary of the Alumni Association of the University of Buffalo Medical Department, died at his home in Buffalo, December 6, after a long illness, aged 57.

John S. Arwine, M.D. Medical College of Ohio, Cincinnati, 1853; member of the Bartholomew County (Ind.) Medical Society; some-time health officer of Columbus, and physician of Bartholomew County, died from heart disease at his home in Columbus, Ind., December 2, after an illness of one year, aged 81. The county medical society passed resolutions of respect and regret.

Herman Emanuel Muller, M.D. University of California Medical Department, San Francisco, 1880; a member of the American Medical Association, Medical Society of the State of California and Alameda County Medical Society; one of the most prominent practitioners of Oakland, Cal., died suddenly at his home in that city, December 2, from acute laryngitis, aged 47.

L. Rollin Hudelson, M.D. Jefferson Medical College, Philadelphia, 1896; a member of the American Medical Association, Indiana State Medical Society, and Rush County Medical Society, died at his home in Milroy, Ind., December 6, from appendicitis, after an illness of one week, aged 48.

Edson Davidge Royal, M.D. College of Physicians and Surgeons in the City of New York, 1904, an interne in the General Hospital, Paterson, N. J., died at his home in Lebanon, Conn., November 28, from valvular heart disease, after an illness of six months, aged 31.

William Perry Bennett, M.D. Ohio, 1877, for many years surgeon of the Pennsylvania Lines at Crestline, Ohio; a member of the American Association of Railway Surgeons, died in his office in Crestline, November 30, from morphin poisoning, aged 49.

Leonard M. B. Ferleman, M.D. Meletanic College of the Netherlands, 1864, of Ithaca, Mich., for many years surgeon on Atlantic liners, died suddenly from heart disease while making a professional call, November 30, aged 62.

Henry J. Thomas, M.D. Rush Medical College, Chicago, 1873, surgeon in the Army during the Spanish-American war, died at his home in Winston-Salem, N. C., November 29, from pneumonia, after an illness of one week, aged 55.

William J. Collins, M.D. Illinois Medical College, Chicago, 1903, of Geneva, Ind., was struck by a train and instantly killed while driving across the G. R. & I. R. R. tracks near Geneva, December 3, aged 39.

Edgar H. Whitten, M.D. Medical College of Alabama, Mobile, 1887, of Munford, Ala., fell from his buggy near that place, December 2, and was found dead in the road next morning, from cold and exposure.

Edward Osborn, M.D. College of Physicians and Surgeons in the City of New York, 1886, died at his home in East Hampton, Long Island, N. Y., December 4, from heart disease, aged 70.

Joseph Furniss, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1872, died suddenly at his home in Lancaster, Pa., December 8.

Benjamin F. Bronson, M.D. Pennsylvania, 1873, died at his home in Bridgeport, Conn., from cerebral hemorrhage, after an invalidism of three years, aged 54.

John Matheson, M.D. New York University, New York City, 1896, was robbed and murdered near his home in the Bronx, New York City, December 8, aged 38.

Francis Rowan Webb, M.D. Chicago Medical College, 1875, died at his home in Chicago, December 7, from pneumonia, after a short illness, aged 54.

Solomon B. Bowerman, M.D. Philadelphia, 1866, died at his home in Leaf River, Ill., November 27, from nephritis, after an illness of ten days, aged 77.

Joseph Berens, M.D. Pennsylvania, 1841, died at his home in Philadelphia from senile debility, after a short illness, December 6, aged 92.

George Kassen, M.D. Miami Medical College, Cincinnati, died at his home in Cincinnati, December 10, from cirrhosis of the liver.



## Book Notices

**CLINICAL METHODS.** A Guide to the Practical Study of Medicine. By R. Hutchison, M.D., F.R.C.P., and H. Rainy, M.A., F.R.C.P. Ninth Edition. Cloth. Pp. 634. Price, \$2.50 net. Chicago: W. T. Keener & Co., 1905.

This American republication of the well-known English book only needs mention. The numerous editions through which it has already gone are sufficient evidence of its worth. Its full and apparently accurate description covers the whole field of physical and clinical diagnosis.

**ATLAS AND EPITOME OF DISEASES OF THE SKIN.** By Prof. Dr. Franz Mrazek of Vienna. Edited with Additions, by Henry W. Stelwagon, M.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Second Edition, Revised, Enlarged and Entirely Reset. Pp. 272; 127 illustrations, 77 in Colors. Cloth. Price, \$4 net.

This work is improved in its second edition by many new illustrations and considerable revision to bring it up to date. The colored pictures are certainly very valuable. Illustrations of skin lesions without colors are of comparatively little use; the practitioner will find this work decidedly helpful.

**MICROTOMIST'S VADE-MECUM.** A hand-book of the Methods of Microscopic Anatomy. By A. B. Lee, Sixth Edition. Cloth. Pp. 358. Price, \$4.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

This edition contains much new matter, but the text has been condensed considerably so that the size of the book is not increased appreciably. The old chapter on staining with the coal-tar colors is omitted, but its contents have been worked up into the chapter on staining, which has been rewritten entirely. This combination adds to the worth of the book. The chapters treating of the nervous system have undergone a most thorough revision so as to conform with the technic now employed for the microscopic study of these tissues. The new arrangement increases the value of the book as a guide to the laboratory worker.

**MEDICAL DISEASES OF EGYPT.** By F. M. Sandwith, M.D., F.R.C.P. Lecturer at the London School of Tropical Medicine. Part I. Cloth. Pp. 316. London: Henry Kimpton, 1905.

This is an interesting book, written by one who understands his subject. He not only writes as one who has mastered what has been written by others on the topics which he discusses, but adds much that is valuable from his personal experience. To us in America it is of interest as a contribution to the study of the distribution of commoner diseases and of tropical diseases in particular. The first chapter, if we are to make any criticism on it, is too brief. It is devoted to the history of medicine in Egypt from the earliest time to the present. It is extremely interesting and might easily have been extended with value to the reader.

Part first, which is all that is in our hands, is a volume of several hundred pages and covers many of the infectious diseases. Forty pages are devoted to typhoid fever, and many facts of interest are noted. Among them we note that in Egypt typhoid is most prevalent during January, February and March and not during the fall months, as is the case in temperate climates. The author also cites as evidence of a degree of immunity on the part of native Egyptians to this disease that Americans and Englishmen acquire the disease by drinking impure water, which is used constantly by the natives with apparent immunity. Several illustrations of this fact are cited. It would be interesting—and our author says nothing on this point—to know whether the fever occurs in modified form commonly in childhood among the Egyptians and thus confers immunity on the adult. Sixty pages are devoted to plague.

Ankylostomiasis is discussed fully and is a common disease in Egypt. The author points to the fact that Joachin and Schentbauer think that it was referred to and partly described in the Ebers Papyrus written 3,460 years ago. He also describes the observations of Dr. Looso on the early symptoms of this malady, which are those of ground itch, and to the experiments which show that the parasite gains access to the body through the skin, producing so-called ground itch. He also refers to the observations of Claude Smith, of this country, bearing on the same point.

This book can be heartily recommended to all who are interested in the geographical distribution of diseases and their varying manifestations under varying conditions of climate.

**OPHTHALMIC NEUROMYLOGY.** A Study of the Normal and Abnormal Actions of Ocular Muscles from the Brain Side of the Question. By G. C. Savage, M.D., with 51 illustrations. Cloth. Pp. 221. Published by the author, Nashville, Tenn.

Any work on the oculomotor system by Dr. Savage must attract attention, as he is admitted by every ophthalmologist conversant with the literature of the day to be, perhaps, our highest authority on the subject. This, we are sure, is true not only of theories connected with eye muscle problems, but of their bearings in practice. Quite apart from his other works touching on these questions, "New Truths in Ophthalmology" and "Ophthalmic Myology" he has written many articles in which original views of the innervation of the straight muscles, their actions under normal and abnormal conditions, and their relations to one another are plainly set forth. Although it has not been possible for some observers to accept all these new doctrines, it must be said that the majority of them have successfully withstood the test of time, criticism and further investigation. Consequently, we are inclined to regard with favor the following propositions of Dr. Savage and to commend them and his book to the serious study of all earnest ophthalmologists and neurologists. These hypotheses (which after reading the work under consideration rise in our mind to the dignity of theories) form the basis and constitute the gist of the monograph:

"There are eight conjugate brain centers in the cortex, by means of which the several versions are effected, and one conjugate center by which convergence is caused. These conjugate centers act alike on orthophoric and heterophoric eyes and when there is only one eye. Each is connected with two muscles, and the work done by the center and its muscles under the guidance of volition, is normal work. The conjugate centers have no causal relationship with heterophoric conditions, nor have they any power to correct them.

"There are twelve basal centers, each connected with one muscle only. If the eyes are emmetropic-orthophoric these centers are at rest; in the presence of any form of heterophoria they are, during working hours, ever active. These centers do not produce heterophoria, but they stand ready to correct it. Under the guidance of the fusion faculty each basal center is prepared to act on its muscle, whenever there is a condition likely to cause diplopia. They may be called fusion centers."

Turning to the application of these hypotheses one finds that not only is no revolution in our well-known means for detection and treatment of muscle imbalance attempted, but these recent studies of the author rather emphasize that we, in America, generally accept as the best means of measuring and relieving the various forms of heterophoria and heterotropia. Of the many truths forcibly and clearly stated in Dr. Savage's monograph there is at least one that observing members of the profession will heartily applaud. It is that every man or woman who aspires to correct errors of refraction and of the oculomuscular balance should be "required to complete a graded course of study covering four years in a reputable medical college; for this work is as much a part of the practice of medicine, as is the treating of a case of pneumonia or the setting of a broken bone."

## Miscellany

**Glass Balls for Treatment of Trachoma and Pannus.**—Likiernik writes from Lodz to the *Med. Klinik* for November 5 that he has obtained fine results in 310 cases of more or less chronic granular eye affections by local massage with a glass ball mounted on a long handle. The diameter of the ball is from 7 to 12 mm., and it is readily introduced under the upper or lower lid. After a few sittings the patient learns to use the ball himself. Diffuse granulations of years' standing yield rapidly to the daily use of the ball for merely thirty to sixty seconds, supplemented by the action of some antiseptic solution in which the ball is dipped before using. Pannus, if not too old, subsides quickly. Complications, such as infiltration of the cornea or indolent ulcers, do not contraindicate the ball treatment. Sometimes before using the ball he moistens it with a weak mercurial or 3 per cent. boric-acid solution.



**Education Is the Cure.**—The best weapon of the right is education. The best way to overcome quackery and public indifference is through education. Hence we believe that every high school and college should offer courses in domestic hygiene. Under that term we mean an explanation of the nature of disease and its causation, the conditions of health in the home and about town, simple nursing, the laws of cure, etc. This is, of course, along the line attempted by the school physiology work of recent legislation, but it is yet so different that the need is not met by the teaching of the elements of anatomy and physiology to children. The course should discuss all the more common diseases and the principles of treatment. It should include vaccination and serum treatment. In fact, it should be a popular course on the subject of rational medicine. Only thus can the man who has a cure-all be forestalled.—*Journal of the Kansas Medical Society.*

**Sleeping Sickness in the Angola Highlands.**—F. C. Wellman, in the *Journal of Tropical Medicine*, states that in the interior of Central and Southern Angola there is a distinct line of demarcation between the sleeping sickness districts and the regions free from that scourge. This line is the Coanza River. From the north bank of the Coanza to the northern boundary of the colony sleeping sickness is endemic in many situations; while from the south bank to German Southwest Africa it is not endemic, and, although one meets with occasional cases imported from the north, the disease does not spread nor attack the southern tribes. It is of great interest, he states, to note in this connection that north of the Coanza River the ordinary *Glossina palpalis* (so he has been informed), is the common tsetse-fly, while south of the Coanza the typical *G. palpalis* is not found, but its place is taken by the new subspecies, *G. palpalis wellmani*, recently described by Austen, which evidently is not a distributor of sleeping sickness. The exact relation between the geographical distribution of the disease and that of the two flies is a problem on which Wellman is now at work.

**Hygiene in the Days of Good Queen Bess.**—An interesting article describing the precautions taken in the reign of Queen Elizabeth to prevent the spread of plague and showing that even in the sixteenth century the value of isolation and disinfection was known and appreciated appears in the *Indian Medical Record*, Aug. 23, 1905. The regulations, etc., were published in a book, and the instructions to justices and the various rules are reproduced by the *Indian Medical Record* in full, with the quaint diction and spelling of those days. Houses of people sick with plague were required to be kept closed for a certain length of time, and if the owners of the infected houses did not observe this regulation they were imprisoned in the stocks and a sign put on the house. "And where any such houses shall be Innes or Ale houses, the signes shall be taken down for the time of restraint and some crosse or other marke set up in the place thereof, to be a token of the sickness." Certain persons were appointed to provide food and other supplies and to deliver them to the sick, and these persons, during their term of office, were required to carry a white rod in their hand or to wear some distinctive mark whereby other people might avoid them. A place was ordered set apart in every parish for the burial of those who died of the plague. The burial had to take place after sunset but before dark "so as the Curate be present for the observation of the rites and ceremonies prescribed by the lawe, foreseeing as much as conveniently he may, to be distant from the danger of infection of the person dead, or of the companie that shall bryng the corse to the grave." Bedding and other articles used by the sick were ordered to be "either burnt and cleane consumed with fire or else ayred." Poor people were recompensed for the destruction of their property. Any person preaching or publicly stating that precautions were vain and that a person dies at his appointed time was warned to desist, and if the warning was not heeded he was imprisoned. All justices in towns and villages were required to aid in carrying out these regulations. Taxes were imposed on the various towns and on wealthy people to defray expenses.

**Decreasing Birth Rate in France.**—Consul Haynes, of Rouen, in *Monthly Consular Reports*, says that there is no more worrying, persistent question in French economy than that of popu-

lation. Nothing, he says, is so vexatious to the ambitious Frenchman than the fact that in Germany there are 600,000 more births annually than in France; and nothing more exasperating than the remark of von Moltke: "Every year by our birth rate we gain a battle over France." Mr. Haynes quotes statistics to show how this "nightmare of depopulation" has grown with every census in the last hundred years. In 1800 the population of Europe, in round numbers, was 98,000,000, of which 26,000,000 was French; thus France then had 26 per cent. of the population of Europe and now has only 11 per cent. At one time French was spoken all over the world; today it is the language of 45,000,000 people, while German is spoken by 100,000,000 and English by 150,000,000. Until 1850 France, in point of population, had been the first of the great European nations, afterward the second, but now the sixth, with Italy closely following and threatening to pass France and to leave her seventh. French statesmen realize the danger to their country and are asking what is to become of France, while bills intended to remedy the evil are being introduced into the legislature and societies are being formed all over the country. The National Alliance for Increasing the French Population was founded in 1896, its object being to point out the danger that threatens the country and to devise means to remedy it, and to secure appropriate legislation. The alliance states: France is on the way to become a third-class power; this tendency is due to the decreasing birth rate. It is as much a man's duty to contribute to the perpetuity of his country as to defend it in time of war. To bring up a child is a duty to the state equivalent to paying taxes. To acquit sufficiently this duty every family should have at least three children; therefore, families with more than three children should be exempt from taxation. The laws of inheritance and the present methods of dividing property should be modified, as the present laws are not conducive to large families. Lastly, infants should be protected in order to diminish the mortality of the new born. One of the causes of this comparative depopulation of France is said to be the neglect of religious practices and beliefs. Other causes are said to be military service and the inheritance laws by which all land goes to the eldest son, thus assuring him a position and competence. Paternal selfishness is given as another; many fathers who would have been able to live in ease if they had a limited number of children are compelled to labor arduously to provide for their families.

## Queries and Minor Notes

### ESPERANTO MANUAL.

NEW HAMPTON, N. H., Dec. 8, 1905.

*To the Editor:*—Will you kindly inform me through THE JOURNAL if there have been published a dictionary and a grammar of the artificial language Esperanto? If so, where are they procurable and what is the price?

A. S. DOLLOFF.

*ANSWER.*—A students' complete manual of Esperanto, with vocabulary, a book of 175 pages, by J. B. O'Connor, B.A., was published in 1903 by F. H. Revell & Co., Chicago. The price is \$0.60. The dictionary costs \$1, from the same firm. The Librairie Hachette, Paris, publishes the monthly in Esperanto called the *Internacia Scienca Rivuo*. The original grammar contains only sixteen rules, and there are no exceptions to any rule.

### RECIPROCITY WITH WISCONSIN.

—, Dec. 1, 1905.

*To the Editor:*—1. What states have reciprocity with Wisconsin in the matter of recognizing, without examination, a license gained by examination in Wisconsin? 2. What other states, though having no established reciprocity with Wisconsin, recognize, without examination, a license earned by examination under the Wisconsin State Board?

N. Y. Z.

*ANSWER.*—1. Wisconsin reciprocates only with Indiana, Michigan, Ohio, Iowa, Kansas, Illinois, Nebraska, Kentucky, Maryland, Georgia, Oklahoma, South Carolina, New Mexico, North Dakota and District of Columbia, on the basis of qualifications as adopted by the American Confederation of Reciprocating Medical Examining and Licensing Boards. Requirements by the various states are so different that the question can not be answered by a general statement. Any physician desiring to register in another state should correspond directly with the secretary of the licensing board of that state.

2. None.



## POLISH AND GERMAN CONVERSATIONAL AIDS.

NORWICH, CONN., ———, 1905.

To the Editor:—I am often called to Polish families and am anxious to secure a small book containing Polish-English sentences, if you know of any such, or in fact any book by which one could be able to converse with them as a physician would like to. Similar simple books in German-English and French-English would be of service.

CHARLES F. WHITNEY, M.D.

ANSWER.—A series of small pamphlets, written by F. Thimm, is published by Dick & Fitzgerald, 18 Ann Street, New York, entitled "Self-taught German," "Self-taught French," "Self-taught Spanish" and "Self-taught Italian," containing brief conversations on various subjects, including one on the health. The pronunciation of each word is given so exactly as to aid greatly. There is no Polish pamphlet, but a very good Polish-German guide to conversation is published by B. Behr, Berlin. It has a large part devoted to "Conversation with the doctor." It is by F. Fischer, and copies are for sale by the Foreign Bookstore, Koeling & Klappenbach, 100 Randolph Street, Chicago, for 55 cents. There is no pronunciation in this manual, but any one able to pronounce German can make himself understood with the Polish sentences. "Medical German," by Deutsch, contains conversations with patients in German and English. Cloth. Price, \$1.75.

Parallel reading of an article with a literal translation is a great help toward acquiring proficiency in a foreign language. Comparing the words and paragraphs, line by line, sentence by sentence, shows the structure of the foreign language, while the reader makes rapid progress without the bother of turning to the dictionary (see THE JOURNAL, July 22, 1905, page 253). Copies of a small semi-monthly for parallel readings in German and English have been received at this office. The *Translator* aims to supply short articles, stories, news items, business letters, puzzles, etc., in parallel columns of German and English text. A French and German number is also issued, called *Le Traducteur*, now in its thirteenth year. A specimen number will be forwarded free of charge on writing to the publisher of the *Translator*, La Chaux-de-Fonds, Switzerland. The subscription price is \$1 a year, doubtless with something extra for foreign postage.

## THE PERCENTAGE OF UREA IN URINE?

LOS ANGELES, CAL., Nov. 17, 1905.

To the Editor:—It is not an uncommon experience in reading articles in medical periodicals in which an analysis of the urine is given, to see it stated that the urine contained a certain percentage of urea, without giving any hint as to the amount of urine passed *per diem*, which gives no information whatever regarding this valuable excretion. Now the ultimate object of analysis of urine for urea is to determine the amount of burned up tissue excreted each twenty-four hours. We know that for that time tissue waste should be represented in the ordinary individual by an excretion of from twenty to thirty-five grams of urea, and if the quantity falls below the minimum, with other known pathological conditions, there is reason to believe that this excretion is not being properly eliminated. My attention was called again to this form of statement in an article published in THE JOURNAL, Nov. 11, 1905, page 1489, where the pathologist reports (if the quotation is accurate) that an examination of the urine "showed a specific gravity of 1007, indican slight, urea 59 per cent." I do not wish to question the accuracy of the analysis, paradoxical as it appears, but would simply call attention to the fact that this percentage, as in all other like statements, without giving the quantity of urine passed, gives the reader absolutely no information as to the excretion of urea, except that some was excreted. If the pathologist will give the amount of urine each twenty-four hours, and the per cent. of urea found, the reader can figure it out and learn the quantity in grams or grains, when the reader or auditor will have a fact of some specific importance relative to the condition of this excretion.

WILLIAM H. DUDLEY, M.D.

ANSWER.—Your criticism is altogether correct, and we assume part of the blame in not seeing the fault and calling Dr. Cott's attention to the error before publishing the paper. There is altogether too much laxity in reporting urinary findings in general, and urea figures in particular, and in interpreting them.

Urea determinations, to be of value, should be performed in the total 24 hours' quantity for several days in succession; moreover the diet, especially the nitrogenous articles of food and the total liquids, should be included in the calculation, for the urea of the urine is in great part derived directly from the nitrogenous elements of the food (chiefly albumins) and in lesser part from the dissimilation of the body tissues proper. Any deviation from the normal, therefore, either in the amount of nitrogenous pabulum ingested or in the power of the gastroenteric walls to absorb it must needs become manifest in the urine—a copious amount of albumin in the food causing a large urea excretion, a small amount a correspondingly diminished urea excretion; a healthy gastric and intestinal function leading to greater urea excretion after the same amount of nitrogenous food than a diseased one. Other important elements must be included in the calculation:

1. *The amount of exercise*; a resting individual always excretes

less urea than a subject indulging in much physical exercise, for the latter destroys more of his own tissues.

2. *The amount of liquid intake*; abundant water drinking at first always causes a broad stream of urica to enter the urine, for all residual circulating urica is in this way flushed out; the same applies to certain (particularly saline) diuretics.

3. *The presence or absence of fever*, a febrile subject always passing more urea than an individual with a normal temperature for in the former the catabolism of the body tissues is more active.

4. *The alkalinity, i. e., acidity of the blood*, any factor that determines acidosis, i. e., a reduction in the blood alkalinity, reduces the urinary urea, for abnormal acids (oxybutyric, diacetic, lactic, phosphoric, uric, etc.) or normal acids in excessive quantity that may enter the bloodstream immediately combine with ammonia and bear the latter with them into the urine; as, now, ammonia is the physiologic precursor of most of the urea that is manufactured in the liver, it is clear that this loss of ammonia means a corresponding decrease in the amount of urea that is formed in the liver, enters the blood-stream and thence the urine.

5. *The state of the liver function*. Any element that produces insufficiency of the hepatic cells also produces a decrease of the urinary urea; this is apparent from what has been said above, for when the liver cells are no longer adequate to form urea from ammonia salts, less urea must of necessity appear in the urine.

It will be seen, therefore, that the urea excretion is by no means an index *per se* of the state of the renal function, but that it is merely an expression of the state of the general metabolism as influenced by the divers factors enumerated above. How crude it is to interpret a small percentage of urea in a single specimen of urine to signify insufficiency of the kidneys! and how commonly is this error committed!

Granted even that all the elements named above were carefully considered, that the determination were performed with the mathematical accuracy of a metabolic experiment, even then a decreased urea excretion might mean nitrogen retention, i. e., be a good omen, especially if the patient gains in weight. At best, if this interpretation could not be accepted, it would mean that the kidneys did not permit the passage of urea but might be permeable for other urinary bodies; for little correspondence exists between the retention of the different urinary ingredients. It might finally mean that less urea than normal is formed while the kidneys were at the same time quite permeable for whatever amount of urea actually reached them in the renal blood and clamored for elimination. When one considers, finally, that, especially in chronic nephritis, the permeability of the kidneys varies from day to day, that in some renal disorders affecting chiefly one kidney, the healthier organ vicariously assumes a compensatory hyperfunction, that finally abnormal amounts of urea might be circulating while the kidneys were partially impermeable, and that as a result an approximately normal amount of urea would appear in the urine; when one considers all these points, and many more that can not be elaborated, it is clear that our correspondent's point is well taken, and that the only objection to his criticism is that it stops far short of the actual deplorable state of modern urea determinations and their clinical interpretation by practitioners in general.

## State Boards of Registration

## COMING EXAMINATIONS.

MISSOURI State Board of Health, Kansas City, December 19-21. Secretary, J. A. B. Adcock, Warrensburg.

CALIFORNIA State Board of Medical Examiners, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.

UTAH State Board of Medical Examiners, Salt Lake City, January 1. Secretary, R. W. Fisher, Salt Lake City.

ARIZONA Board of Medical Examiners, Phoenix, January, 1-2. Secretary, Ancil Martin, Phoenix.

WASHINGTON State Medical Examining Board, Spokane, January 2. Secretary, C. W. Sharples, Seattle.

OREGON State Board of Medical Examiners (Regular), Portland, January 2. Secretary, Byron E. Miller, Portland.

NORTH DAKOTA State Medical Examining Board, Grand Forks, January 2. Secretary, H. M. Wheeler, Grand Forks.

MINNESOTA State Board of Medical Examiners, Old Capitol Building, St. Paul, January 2-4. Secretary, C. J. Ringnell, Minneapolis.

RHODE ISLAND State Board of Health, State House, Providence, January, 4-5. Secretary, G. T. Swarts, Providence.

ARKANSAS MEDICAL Board, Little Rock, January 9. Secretary, J. P. Runyan, Little Rock.

NEW HAMPSHIRE State Board of Medical Examiners, State House, Concord, January 9-10. Secretary, H. C. Morrison, Concord.



VERMONT State Board of Medical Registration, Burlington, January 9-11. Secretary, W. S. Nay, Underhill.

WISCONSIN Board of Medical Examiners, Pfister Hotel, Milwaukee, January 9-11. Secretary J. V. Stevens, Jefferson.

SOUTH DAKOTA Board of Medical Examiners, Sioux Falls, January 10-11. Secretary, H. E. McNutt, Aberdeen.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, January 11. Secretary, W. C. Woodward, Washington.

ILLINOIS State Board of Health, Great Northern Hotel, Chicago, January 18-20. Secretary, J. A. Egan, Springfield.

NEW YORK State Boards of Medical Examiners, January 30-February 2. Secretary, Charles F. Wheelock, Albany.

**Iowa Reports.**—Dr. J. F. Kennedy, secretary of the Iowa State Board of Medical Examiners, reports the examinations held at Des Moines, March 22-23; Keokuk, April 20-21; Sioux City, May 1-3; Des Moines, June 5-6; Iowa City, June 8-9, and at Des Moines, June 22-23.

At the examination held at Des Moines in March the number of subjects examined in was 8; the total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 16, of whom 7 passed and 9 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Barnes Med. Coll., St. Louis.....	(1905)		81
College of P. & S., Chicago.....	(1892)		87
Drake University Des Moines.....	(1905)		82
National Med. Univ., Chicago.....	(1904)		80
Northwestern University Woman's Med. School.....	(1892)		86
Rush Med. Coll., Chicago.....	(1903)	88; (1905)	88

College.	FAILED.	Year.	Per
		Grad.	Cent.
Barnes Med. Coll., St. Louis.....	(1901)	69, (1902)	72
Rush Med. Coll., Chicago.....	(1900)		63
Marion Sims-Beaumont Med. Coll. ....	(1904)		71
University of Iowa.....	(1904)		74
Eclectic Med. Inst., Cincinnati.....	(1905)		69
College of P. and S., Chicago.....	(1904)		65
American Med. Coll., St. Louis.....	(1903)		58
Chicago Homeo. Med. Coll. ....	(1904)		73

At the written examination held at Keokuk April 20-21, 1905, the number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 54, of whom 48 passed and 6 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Barnes Med. Coll., St. Louis.....	(1901)		77
College of P. & S., Keokuk (1905). the grade of 75 was reached by two; 77, by two; 78, by four; 79, by three; 81, by four; 82, by three; 83, by two; 84, by seven; 85, by five; 86, by three; 87, by three; 88 and 89 by two each, and 76 and 80 by one each.	(1902)	87; (1905)	81
Rush Med. Coll. ....	(1905)		80

College.	FAILED.	Year.	Per
		Grad.	Cent.
College of P. & S., Keokuk..	(1902)	70; (1904) 74; (1905) 62, 67, 74, 74.	

At the written examination held at Sioux City, May 1-3, 1905, the number of subjects examined in was 8; the total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 14, all of whom passed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Sioux City Coll. of Med..	(1905)	81, 83, 83, 83, 83, 84, 84, 84, 84, 85, 86, 86, 89.	
Trinity University, Toronto, Canada.....	(1904)		80

At the written examination held at Des Moines, June 5-6, 1905, the number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 25, of whom 21 passed and 4 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Barnes Med. Coll. St. Louis.....	(1902)	78; (1905)	80, 83
College of P. & S., Chicago.....	(1905)		86
Creighton Med. Coll., Omaha.....	(1905)		89, 90
Drake University, Des Moines, (1904), 79. (1905)	81, 81, 81, 82, 83, 84, 85, 86, 87, 88.		
University of Michigan.....	(1904)		88
Western Med. Coll., London, Ont. ....	(1905)	82, 83	

College.	FAILED.	Year.	Per
		Grad.	Cent.
University Med. Coll., Kansas City.....	(1897)		0
Rush Med. Coll., Chicago.....	(1899)		70
Illinois Med. Coll., Chicago.....	(1905)		74
Eclectic Med. Inst., Cincinnati.....	(1903)		69

At the written examination held at Iowa City, June 8-9, 1905, the number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 69, all of whom passed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
College of P. & S., Chicago.....	(1905)		85
University of Iowa (1905). The grade of 78 was reached by four; 79, by two; 80, by two; 81, by five; 82, by two; 83, by five; 84, by five; 85, by ten; 86, by six; 87, by four; 88, by eight; 89, by eight; 90, by three; 92, by two, and 91 and 95 by one each.			

At the written examination held at Des Moines, June 22-23, 1905, the number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 19, of whom 17 passed and 2 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
College of P. & S., Chicago.....	(1905)	76, 76, 80, 81	
Hahnemann Med. Coll., Chicago.....	(1905)		89
Jefferson Med. Coll., Philadelphia.....	(1904)		83
Northwestern University.....	(1905)	83, 85, 86, 87, 88, 90	
Queen's University Kingston, Ont. ....	(1905)		76
University Med. Coll., Kansas City.....	(1905)		81
University of Michigan.....	(1905)		84
University of Minnesota.....	(1899)		83
University of Pennsylvania.....	(1902)		79

College.	FAILED.	Year.	Per
		Grad.	Cent.
University Med. Coll., Kansas City.....	(1897)		57
Ensworth Med. Coll., St. Joseph.....	(1905)		64

**Iowa September and October Reports.**—Dr. J. F. Kennedy, secretary of the Iowa State Board of Medical Examiners, reports the written examinations held at Des Moines, Sept. 13-14, and Oct. 18-19, 1905. At both examinations the number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75.

At the September examination the total number of candidates examined was 23, of whom 19 passed and 4 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
College of P. and S., New York.....	(1905)		86
Homeo. College of Missouri.....	(1904)		79
Howard University, Washington, D. C. ....	(1905)		80
Jefferson Med. Coll. ....	(1905)		81, 89
Marion-Sims-Beaumont Med. Coll.....	(1898)	77; (1903)	83
National Med. Univ., Chicago.....	(1904)		83
Northwestern University.....	(1905)		87, 88
Queen's University, Kingston, Ont. ....	(1904)		78
Rush Med. Coll. ....	(1905)	82, 87, 90	
Toronto Med. Coll. ....	(1905)		76
University of New York City.....	(1897)		79
University of Pennsylvania.....	(1905)		87
Western Reserve University.....	(1893)		83
College of P. & S., Milwaukee.....	(1900)		77

College.	FAILED.	Year.	Per
		Grad.	Cent.
College of P. & S., St. Louis.....	(1904)		66
Ensworth Med. Coll., St. Joseph, Mo.....	(1905)		72
Eclectic Med. Inst., Cincinnati.....	(1903)		71
College of P. and S., Chicago.....	(1905)		71

At the October examination the total number of candidates examined was 7, of whom 5 passed and 2 failed. The following colleges were represented:

College.	PASSED.	Year.	Per
		Grad.	Cent.
Rush Med. Coll. ....	(1904)		87
Johns Hopkins University.....	(1905)		78
Keokuk Med. Coll. ....	(1903)		84
University of Kentucky, Louisville.....	(1904)		88
Woman's Med. Coll., Philadelphia.....	(1904)		85

College.	FAILED.	Year.	Per
		Grad.	Cent.
College of P. and S., St. Louis.....	(1904)		56
College of P. and S., Chicago.....	(1905)		71

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending December 9:

Cowper, H. W., asst.-surg., relieved from duty in Philippines Division, and ordered to Washington Barracks, D. C., for temporary duty, at expiration of sick leave.

Snyder, Henry D., surgeon, left Fort Sam Houston, Tex., for duty at State Militia Camp, Austin, Texas.

Lewis, Wm. F., asst.-surgeon, on his arrival at San Francisco, will proceed to Chicago, for duty as attending surgeon and examiner of recruits.

Manly, C. J., asst.-surgeon, granted 30 days' leave of absence.

Wall, Francis M., contract surgeon, returned to Fort Oglethorpe, Ga., from target range.

Dickenson, Clarence F., contract surgeon, left Fort Logan, Colo., on leave of absence.

Slater, Ernest F., contract surgeon, left Washington Barracks, D. C., on sick leave of absence for ten days.

Leeper, John F., contract surgeon, granted leave of absence for two months in the United States, from the Philippines Division.

Pinquard, Jos., contract surgeon, ordered from the Philippines Division to the United States for annulment of contract.

Enders, Wm. J., contract surgeon, granted leave of absence for one month, ten days.

Brooks, John D., contract surgeon, granted leave of absence for 30 days.

Parkman, Wallace E., contract surgeon, arrived at Presidio of San Francisco for temporary duty.

Mount, Jas. R., contract surgeon, granted leave of absence for three months in the United States from the Philippines Division.

Newlove, George, contract surgeon, ordered to San Francisco, as witness before a general court martial, after which he will resume his leave of absence from the Philippines Division.

Wertebaker, C. I., contract surgeon, granted leave of absence for one month.



### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending December 9:

Huntlington, E. O., surgeon, ordered to treatment at the Naval Hospital, New York, N. Y.

Woodward, J. S., asst.-surgeon, detached from the *Brooklyn* and ordered to Colou, Panama, for special duty.

Holloway, J. H., asst.-surgeon, ordered to the Navy Yard, Norfolk, Va.

Wise, A. H., acting asst.-surgeon, detached from duty with the Naval Recruiting Party No. 1, December 16, and ordered to the Navy Yard, Washington, D. C.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending December 6:

Vaughan, George T., asst. surgeon general, granted leave of absence for two months and eight days from December 1.

Gassaway, J. M., surgeon, reassigned to duty at St. Louis, Mo., effective Aug. 2, 1905.

Meade, F. W., surgeon, on being relieved by Surgeon A. C. Smith, to proceed to Charleston, S. C., for duty.

Kalloch, P. C., surgeon, authorized to attend meeting Maine State Board of Health, at Augusta, Dec. 7, 1905, relative to small-pox.

White, J. H., surgeon, relieved from duty at Mobile, Ala., and from special temporary duty in New Orleans, La., and directed to assume charge of the service at New Orleans, La., relieving Surgeon A. C. Smith.

Smith, A. C., surgeon, relieved from duty, New Orleans, La., and directed to proceed to Pittsburg, Pa., for duty, relieving Surgeon F. W. Meade.

Corput, G. M., P. A. surgeon, relieved from duty at Pascagoula, Miss., and directed to report to Surgeon, J. H. White, New Orleans, La., for special temporary duty.

Wilson, R. L., P. A. Surgeon, relieved from duty at Vera Cruz, Mexico, and directed to report to the medical officer in command, New Orleans, La., for duty and assignment to quarters.

Wilson, R. L., P. A. surgeon, granted fifteen days' leave of absence en route from Vera Cruz, Mexico, to New Orleans, La.

Berry, T. D., P. A. surgeon, relieved from duty at Biloxi, Miss., and directed to proceed to New Orleans, La., reporting to Surgeon J. H. White for special temporary duty.

Earle, B. H., P. A. surgeon, reassigned to duty at Columbia River Quarantine Station, Astoria, Ore.

McKeon, F. K., asst.-surgeon, granted leave of absence for ten days from December 22.

Duke, B. F., acting asst.-surgeon, granted leave of absence for twenty-five days from November 29.

Rodman, J. C., acting asst.-surgeon, granted leave of absence for five days from December 3.

Stearns, W. L., pharmacist, granted leave of absence for twenty-one days from December 9.

Maguire, E. S., pharmacist, granted leave of absence for thirty days from December 2.

Van Ness, George L. Jr., pharmacist, granted eleven days' leave of absence from December 4.

### RESIGNATION.

Vaughan, George T., asst. surgeon-general, resigned, to take effect Feb. 9, 1906.

## Medical Organization

### North Carolina.

STATE MEDICAL SOCIETY.—We have received a reprint of the presidential address by Dr. D. T. Tayloe before the last meeting of the Medical Society of the State of North Carolina. The principal topic discussed in the address is the value of hospitals, and President Tayloe's plea for more hospitals of the right kind will be indorsed by the profession generally. We are particularly interested, however, to note the progress of the work of organization in North Carolina, as indicated in the address, from which we quote:

"I can not refrain from congratulating the society on the success the new plan of reorganization has achieved, sufficient beyond all doubt to satisfy the most skeptical. In 1903 the state society had nearly 500 names on the roll, but only 283 were in good standing (on account of dues). In June, 1903, we reorganized, and at that time had less than ten county organizations in the state. In May, 1904, we met and had double the attendance we ever had at any state society meeting, and there have been sent out transactions for 1904 to 1,065 members whose dues are paid up for that year. This speaks for itself. I wish to add, however, that this fine showing is to a large extent due to the efforts of our efficient secretary, Dr. J. Howell Way, who has spent much time and energy in furthering the progress of this great work, there being few men who could have accomplished such results.

"I wish to impress on the different county organizations the importance of having an efficient, painstaking and business-like secretary, as much of the work devolves on him, and much of the success of the society is through his efforts.

"The society is also to be congratulated on having such efficient members in the Senate and House of Representatives as successfully to defeat the progress and invasion in our state of quacks, osteopaths and other designing fakes. To this same body is due also our thanks and the sincere thanks of the entire state in establishing a state laboratory of hygiene, which was much needed and which is a public beneficence."

## Society Proceedings

### COMING MEETINGS.

American Dermatological Association, New York, Dec. 28-30.  
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

### THE AMERICAN SOCIETY OF TROPICAL MEDICINE.

Meeting held Nov. 17, 1905.

DR. ROLAND G. CURTIN in the Chair.

#### Study of Tropical Medicine.

DR. F. C. WELLMAN of Benguela, Angola, West Indies, contributed this paper, which was read by Dr. Joseph McFarland, president of the society. The author referred to the comparatively recent growth of the remarkable and general interest in the problems of tropical pathology. When Sir Patrick Manson published his study of *Filaria sanguinis hominis* in 1883 but little scientific knowledge of tropical ailments had been collected. Dr. Wellman thought no one could claim to be *au courant* with the science of general medicine without an appreciative acquaintance with the leading facts of tropical pathology. The following statements were made by the author:

1. The successful settlement of the tropics is of very great importance to the world.
2. Such settlement depends in no small measure on the solution of various hygienic and epidemiologic problems there obtaining.
3. In the absence of this knowledge an enormous extra expenditure of lives and money is certain to ensue.
4. The problems in question can best be studied and met by trained observers, scientific medical men living in the tropics. Methods of study were discussed by reference to some of the best work done in the past, for instance, that on the subject of animal parasites by Cobbold, Leuckart, Blanchard, Stiles and Braun, Laveran, Manson, Ross and others. With reference to the personal equation, Wellman quoted Sir Patrick Manson in that "the student of medicine must be a naturalist before he can hope to become a scientific epidemiologist or pathologist, or a capable practitioner." Reference was made to the very incomplete state of knowledge of the geographical distribution of disease. The epiphytic skin diseases of the tropics, the behavior of the ordinary bacteria in hot climates, and the peculiar form which some cosmopolitan diseases assumed in warm countries offered fruitful fields for investigation. Another subject of great moment is that of the intermediate hosts which subserved various parasites. For example, the life history and seasonal prevalence of comparatively few mosquitoes and other blood-sucking diptera had been observed. Of 13 species of mosquitoes collected by himself in a small district in West Africa 7 were new to science. Of 11 different biting-mouthed flies only one had been previously described, and the district was shown to rejoice in several new blood-sucking ticks. In conclusion suggestions were made of special work worthy of attention in the following connection: The completion of the investigation of the so-called Leishman-Donovan bodies; explanation of the puzzling dyscrasia in certain obscure fevers; observation of the new Maxwell-MacLean disease; critical examination of the suggested relation between ainhum and leprosy; further confirmation of the work done by Ross and Milne and the Liverpool School on "tick fever," and by Christy and Feldman on the intermediate host of *Filaria perstans*—a study of the neglected *Sarcoporiidia* and gregarines of the tropics, to say nothing of the special hygienic, surgical and ophthalmologic questions which specialists in hot climates have raised. All these, he thought, indicate that the scope of tropical medicine is practically unlimited and that the work is still in its commencement.



**Uncinariasis.**

DR. CLAUDE A. SMITH, Atlanta, Ga., gave the results of his observations and experiments in connection with the disease, and especially of his investigation of infection through the skin. His patients had given a history of "ground itch," although many who did not have the disease also gave a history of "ground itch." Investigation showed that those patients who had had "ground itch" and did not have the parasites in the intestines, had the eruption a great many years before. It was, therefore, supposed that the parasites had died out in the intestines in the meantime. A study of the life history of the parasite showed that in an attack of true ground itch within a period of about eight years, the parasite was always present in the intestines. Ground itch is very common throughout the South, where it is also known as "dew poison," "toe itch." These terms, however, might be misleading, as their significance differs in different localities. True ground itch, he said, appears almost invariably after the person has been walking barefoot in the mud, especially if the ground had been wet for several days. The itching at times becomes excruciating. Macules at the points of irritation rapidly change to vesicles, which remain discreet or confluent and usually rupture. The duration of the attack varies from two to several weeks, dependent on treatment and the spread of the infection by scratching.

Dr. Smith's investigations of the source of infection show that the water could not be the cause in most of the cases, nor lack of cleanliness. Further investigation shows that the disease is of the country and not of the city. In a study of the parasite itself he found that to hatch the eggs of *uncinaria* the best plan is to use a Petri dish with a snugly fitting top. The process of hatching and the development and habits of the larvæ were minutely described. Little motility is displayed by the organisms while in the Petri dish, but if placed on a slide they move rapidly for a few minutes to half an hour, when they lie perfectly still for a corresponding length of time with their bodies perfectly straight, after which they again resume their lively motions. The life of the larvæ may be maintained in the Petri dish for three to four months. The diagnosis of the disease can only be made by the finding of the eggs of the parasite in the stools. The treatment is simple and effective, and consisted in the administration of thymol and purgation. Thymol, however, should never be given without a preliminary examination of the stools with the microscope. A purgative is given at night, usually of salts, followed in the morning by 30 grains of thymol. Two more doses are given at intervals of two hours, followed by another large purgative. A second treatment in the course of a week practically clears up the intestines. If indicated, the treatment is to be repeated. The indifference of the patient to infection is a marked feature. In the treatment of a case there should be close observation on the part of the physician because of the possible bad results of thymol.

**CHICAGO MEDICAL SOCIETY.**

*Regular Meeting, held Nov. 29, 1905.*

The President, DR. CHARLES S. BACON, in the Chair.

**Etiology, Diagnosis and Treatment of Perinephritic Abscess.**

DR. RAMON GUITERAS, New York City, reported 15 cases, and emphasized the following conclusions: 1. Many more cases of perinephritic abscesses are due to suppurative renal disease than is generally supposed. 2. Traumatism, exposure and similar influences to which perinephritic abscess is attributed are not so important as many observers have claimed; they are given as causes when they are simply coincidences, or the active cause of rupture of already existing abscesses of the kidney or neighboring structures. 3. It is important, though difficult, to determine the source and course of the pus; therefore, during the operation the surgeon should try to determine whether the kidney is the source, and, if not, what tissue is the source. It is quite important to discover the route taken by the pus, as it indicates where counter-incisions should be

made, and the further treatment of the complications of the case. 4. The elements of success in operations for perinephritic abscess may be summed up as follows: (a) Early operation, incision and evacuation before the pus has had time to burrow extensively; (b) thorough exploration without timidity, opening the kidney and exploring the ureter if need be; (c) thorough drainage down the deepest part of the sac by means of large rubber drains of gauze, the drain being kept in place until a well-formed sinus exists down the deepest part of the cavity; (d) secondary nephrostomy or nephrectomy, if indicated at the time of the operation, later. 5. Nephrectomies are exceedingly dangerous in these cases, and it is better to perform nephrotomy or to content one's self with the simple opening of the abscess cavity even though a sinus results.

**Sanatorium Treatment of Tuberculosis.**

DR. G. W. HOLDEN, Denver, said that the first aim of any institution should be to restore to a life of usefulness those who are afflicted with this disease. A most important object is the education of those reached directly and indirectly by the work of such an institution. Holden reported on the cases treated at the Agnes Memorial Sanatorium during one year. Two hundred and twenty-four patients were admitted, 107 discharged, 8 dismissed for non-observance of rules, and 13 remained less than one month. Of 102 cases, whose average stay was from six to eight months, 13 were discharged apparently cured, 28 arrested, 43 improved, 16 unimproved, with progressive disease, and 2 died. The cases fell into three classes—the incipient or favorable cases, the moderately advanced, and the far advanced. Of the incipient cases 64.70 per cent. were discharged apparently cured, 17.65 per cent. were arrested, 17.65 per cent. were improved. In none did the disease progress, and none died. Of the cases moderately advanced 4.65 per cent. were discharged apparently cured, 39.54 per cent. were arrested, 46.50 per cent. were improved; in 9.30 per cent. the disease was progressive; none died. Of the far advanced cases none was cured, 19.05 per cent. were arrested, 47.62 per cent. were improved; in 38.57 per cent. the disease was progressive, and 4.76 per cent. died. Holden says forced feeding is not essential nor desirable to obtain results. He prefers to depend on an abundance of good food served in the three regular meals, in conjunction with the careful regulation of the life of the patient. Constant attention is paid to assimilation and elimination. Of the incipient cases 17 gained 132 pounds, an average of 7¾ pounds. This is a small gain for each case, but the majority of incipient cases are not emaciated. Of the cases moderately advanced 38 gained 432 pounds, an average gain of 11 1/3 pounds. In exceptional cases exceptional gains were made. Of these cases 5 lost 16¾ pounds, an average of 3 1/3 pounds. His experience shows that when a patient is near his average weight, the gain or loss is not always an index of the pulmonary condition, and after all, the lung condition is the vital matter. Of the far advanced cases 29 gained 288 pounds, an average of 10 pounds; notwithstanding this gain their pulmonary findings placed them in this class; 13 lost 53¾ pounds, an average of 4 pounds plus. Dr. Holden gave an excellent idea of what they are doing at the Agnes Memorial Sanatorium, a work which has been made possible through the philanthropy and public spirit of Mr. Lawrence C. Phipps.

**Behring's New Tuberculosis Remedy.**

DR. ARNOLD C. KLEBS read this paper, which appears in this issue of THE JOURNAL.

**Economic Aspect of Modern Treatment of Tuberculosis.**

DR. J. W. PETTIT, Ottawa, Ill., said that it is primarily based on life in the open air. To meet this demand we must make a radical departure from the conventional plan of hospital construction. It is perfectly natural that sanatoria should at first copy the usual methods of hospital construction, hence there has arisen altogether too expensive an ideal. The great difficulties encountered in carrying out the open-air treatment are so formidable that any method which will cheapen or simplify the treatment should be carefully considered. Providing tuberculous patients with sleeping apartments in substantial buildings is not only unnecessary, but in violation of an essential principle which has for its object supplying the patient



with fresh air. The simplest and least expensive method which would protect the patient from the inclemency of the weather and supply him with the largest amount of the best possible air is the one which commends itself for scientific and economic reasons. We should proceed on the principle of the greatest good to the greatest number. If we can make a given sum of money which is now expended in the care of one patient provide for several, it is our duty to do so. This can be done. This is the problem they have been trying to work out at the Ottawa tent colony, and, they believe, with some degree of success. Since the tent is practicable in a cold climate, it should be used more extensively. It fulfills the conditions most perfectly from a scientific standpoint. The difficulty of keeping patients in the open air is well known. Every temptation placed before them in the way of indoor comforts only adds to the difficulty. The only way to insure patients getting fresh air is to place them where they can get nothing else. To be consistent, patients should be kept out of doors not part of the time, but all the time. In no other way can this be done so easily and satisfactorily as in a tent. A tent is an ideal method of housing tuberculous patients in a mild climate. The cost of food is the most expensive item in the treatment of tuberculosis, and any attempt to cheapen this feature by cutting down the quantity or cheapening the quality will tend to nullify the treatment just to the extent to which this is done. The psychical element must also be considered. This makes it necessary to provide certain forms of amusement and recreation which adds somewhat to the expense.

#### PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Regular Meeting, held Nov. 8, 1905.*

The President, DR. JAMES M. ANDERS, in the Chair.

#### Morbid Physiology of Neurasthenia.

DR. WILLIAM PICKETT pointed out that the Greek root "sthen" meant strength in the sense of dynamic strength, and that asthenia was, therefore, want of endurance rather than simple weakness. In myasthenia gravis the muscles supplied by the bulb are quickly exhausted by use—asthenic bulbar paralysis Strümpell called it, from its parallelism to organic bulbar palsy. Another condition of muscular exhaustibility—asthenopia—resembles a certain organic disease—oculomotor palsy. A general exhaustibility, affecting various organs and functions, suggests by further analogy a disease of the general nervous system, which is called neurasthenia. Added to ready exhaustibility in neurasthenia is a want of recuperative power; so that in the confirmed case the patient not only tires readily, but is always tired. The symptoms of irritability in neurasthenia are apparently due to diminished control of higher centers which are fatigued, a mechanical instance of which is the increased knee jerk, explained, as in organic nervous disease, by overaction of spinal centers, partly released from the control of the motor cortex. By this reasoning, Dr. Pickett said, neurasthenia might appear as a functional brain disease. In neuropathic persons the exhaustion affects the highest centers, causing certain psychic symptoms. These, especially the obsessions (*folie du doute*, morbid fears, impulsions and imperative ideas), constitute the psychiasthenia of Janet. Neurasthenia is a simple fatigue neurosis, not to be confounded with the symptomatic states of exhaustion in phthisis, heart disease, the febrile affections, early paresis, etc. These are to neurasthenia what the "typhoid state" is to typhoid. The chemistry of fatigue does not explain neurasthenia, nor is it likely that there is actual degeneration of cortical cell bodies, as alleged by some writers.

#### Diagnosis of Neurasthenia.

DR. F. X. DERCUM said that in the study of a case of nervousness there should be considered: First, the three great neuroses—neurasthenia, hysteria and hypochondria; second, the various nervous states prodromal to the fully developed psychoses, such as the prodromal or developmental period of melancholia, or paranoia, of dementia præcox and the like. These states, which never present the symptom group of neurasthenia, he terms the neurasthenoid states. The symptoms they

present are never truly neurasthenic, but are like or grossly resemble neurasthenia. Finally, there should be borne in mind the nervous symptoms which accompany various visceral and general diseases, organic and functional. Here again, he said, the nervous symptoms are never those of true neurasthenia; there is present merely a neurasthenia symptomatica, as in chlorosis and other blood diseases, and in diseases of the viscera. In the study of neurasthenia, in detail, the symptoms are found to be essentially those of chronic fatigue, of a fatigue which has become exaggerated and pathologic, and for this reason Dr. Dercum applies to neurasthenia the term "fatigue neurosis." Analysis of the symptoms of neurasthenia shows an expression of the sensory symptoms in generalized fatigue sensations, such as a general sense of tire and of weakness; second, in localized fatigue sensations, such as headache, backache and limbache. Of the motor symptoms there are found in varying degree muscular fatigue, muscular weakness and, above all, ready muscular exhaustion. In the psychic symptoms there is diminution in the capacity for sustained mental effort, ready mental exhaustion and diminution in the spontaneity of thought. In the somatic symptoms are noted especially atony of the digestive tract, atony of the circulatory apparatus and disturbances of the secretions, indicating weakness of defective innervation, and disturbance of the sexual functions, indicating weakness and irritability. These Dr. Dercum termed the essential symptoms of neurasthenia; the other symptoms that make their appearance are the secondary or adventitious symptoms.

#### Treatment of Neurasthenia.

DR. CHARLES K. MILLS regards neurasthenia as a true clinical entity. Genuine neurasthenia, relatively rare, occurs outside of the psychiatric pale. The main features in the treatment of neurasthenia are rest, the skillful use of diet, exercise, work, medicines and special measures, such as massage, electricity and hydrotherapy. No matter what treatment is instituted, suggestion properly used plays an important part. The sufferers from neurasthenia are often, if not always, neurotic or neuropathic, and for this reason the psychic treatment is important. With the co-operation of the family something can be done to secure relative rest for the neurasthenic. There should be nine or ten hours' sleep and one-day period of rest should be insisted on. This should not be less than fifteen minutes and need not be more than two hours. Massage he considered of more value than electricity, although both can be made to play important parts as adjuvants in the partial as well as in the complete rest treatment. A well-chosen mixed diet should be aimed at, although it is often necessary to begin with milk alone, to continue for some time with milk and eggs, the latter, preferably, to be given raw. Digestion and assimilation of food should be secured. Systematized respiratory exercises indoors, or golf playing, horseback riding, etc., can be resorted to, if feasible. In carrying out a complete rest treatment the first point to be insisted on is absolute isolation. Much depends on the judgment, tact and intelligence of the nurse. Mistakes are sometimes made by putting cases of mental disorder, supposed to be instances of neurasthenia, under the rest treatment. In a few cases even genuine neurasthenia does not do well under this treatment. In the rest treatment everything should be scheduled with the greatest care and accuracy. Seasonable vacations, as methods of bringing about rest, should be at least two in number; one comparatively long at the usual summer period and the other late in February or early in March. Neurasthenic attacks might sometimes be prevented, if the patient would take a period of short but complete rest, away from his usual environment, in March. Work is sometimes beneficial in the treatment of neurasthenia. Care should be taken, however, in its selection and manner of performance. In the treatment of insomnia, sulphonal and chloralamid are the most useful hypnotics, although it is often possible to produce sleep by massage and mild hydrotherapeutic measures. Little medicine is needed. The most valuable drugs are those which aid digestion, improve circulatory tone, and strengthen nerve centers. Chlorid of gold and sodium, arsenic, salts of zinc, strychnin or nux vomica in small doses, cactus, asafetida and caffein are useful agents.



## DISCUSSION.

MAJOR CHARLES A. WOODRUFF, U. S. A., spoke of neurasthenia in the tropics, with especial reference to its existence in the Philippine Islands, where the condition has been recognized sufficiently to be termed tropical neurasthenia. European physicians do not take the same view of neurasthenia as do American physicians, and consequently they are apt to call the prevailing nervous conditions by different names. The most important symptom observed in neurasthenia in the Philippines is loss of memory, which condition, in young men, disappears on their return home. Severe indigestion, accompanied by dysentery, is another form. Even a soft boiled egg, at times, causes intense suffering. In the tropics the indigestion of neurasthenia means starving to death. It is not unusual to see men carried from the hospital to the ships, apparently to die, but by the time they reach Japan there is much improvement, and on their arrival at San Francisco there has been a gain in weight of from twenty to thirty-five pounds. Major Woodruff found that among the soldiers of blonde complexion the morbidity rate is much larger than among the brunettes, almost double. This same condition exists in families; one daughter, a blonde, being decidedly neurasthenic; the other, a brunette, being comfortable and enjoying the climate. Further investigations showed that in Scandinavia, Scotland and the southern and central part of Norway there are more blondes than anywhere else in the world, and that going toward the southern end of Italy there are but few. White men who go to India do not survive the third generation. If the white man goes too far out of his dark corner death stares him in the face. The matter is regarded as interesting in its relation to tuberculous patients, and an instance was cited of a patient cured at Saranac who went to Denver, but found himself becoming exceedingly nervous. This man was a decided blonde. A comparison of the death rates of various parts of the United States shows the lowest to be in the northwest corner—Washington, Oregon and Alaska—where there is a minimum of sunshine, proving the existence of good health conditions in spite of the lack of sunshine. The practical point made was that in seeking a change of climate blondes should not be sent south.

DR. WHARTON SINKLER thinks it as common to find cases of unrecognized neurasthenia as to find cases of organic disease diagnosed neurasthenia. He regards neurasthenia as a fatigue neurosis. The condition is more common and more obstinate in men than in women. The treatment depends not so much on the means of the patients as on the temperament. Some do well under the ordinary rest treatment; others by being driven to exert themselves when they feel a disinclination to action.

DR. JOHN K. MITCHELL said that he has seen a case of dilated stomach, one of locomotor ataxia in the early stages, but distinct, and two cases of Bright's disease, which had been diagnosed neurasthenia. A very important—and, perhaps, a neglected—part of the treatment is punctuality and accuracy. Mild neurasthenic cases may be treated successfully by the mere regulation of their lives. The cardinal symptom of indecision is helped, because there is nothing to decide; certain things are to be done at stated hours. This treatment might be made to include a man's business or a woman's household duties. In fact, the whole object of the treatment of neurasthenia, the conservation of energy, can only be secured by rest and punctuality.

DR. CHARLES W. BURR cited a hospital case which had been diagnosed as one of neurasthenia. The patient died suddenly and the autopsy showed the case to be one of fatty heart. True neurasthenia is not a common disease. Too often hypochondriasis is included as a part of neurasthenia. Rest treatment for such patients is not successful, and this is responsible for the belief held by many that the rest cure possesses little merit.

DR. WILLIAM G. SPILLER emphasized the fact of the frequency of association of hysteria and neurasthenia, not, however, in the sense of being different manifestations of the same neurosis, nor that the association is the same as that of mania with melancholia; but, he believed that later on there will be found a closer association than is now thought to exist.

DR. A. C. BUCKLEY said that in a number of cases of post-

traumatic neurasthenia, there occurred, after the shock passed off, a temporary period of almost normal health before the appearance of the true neurasthenic symptoms. This, he thought, was contrary to the natural expectation, that the symptoms would follow more or less closely on the apparent injury.

DR. FRANK WOODBURY referred to a class of cases suffering from the injurious effects of water gas which are apt to be diagnosed neurasthenia. He cited some instances and thought that in the consideration of neurasthenia such cases might be included under a group of toxic neurasthenias. In treatment the first step is to adjust the patient to his environment.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

### Ointments in Nasal Affections.

In considering the therapeutic value of ointments in the treatment of diseases of the nose, L. S. Somers, in *Merck's Archives*, states that clinical experience has demonstrated that better results are obtained from this form of medication than from any other. Ointments protect the membranes and upper lip from irritating discharges and, therefore, are soothing. The application of ointments does away with the danger of douches or washes which are so frequently used by patients troubled with catarrhal conditions of the nasal passages, with the accompanying danger of infection of the middle ear by way of the Eustachian tube. Unlike the use of ointments in diseases of the skin, the consistency is of great importance for nasal application. Wool fat (lanum or lanolin) may be used as a base after being rendered sterile.

When these applications are made by the physician the ointment should be applied on a cotton tuft wound tightly on an applicator. The author recommends placing the ointments in a collapsible tube for the patient's use at home. With the head thrown backward, he can insert the tube into one nostril and then into the other. The nostrils should be thoroughly cleansed previously to introducing the ointment. Of the various diseases of the nasal passages in which ointments may be employed either as curative factors or in allaying symptoms, acute rhinitis, according to the author, is probably the most frequent, and this is often relieved in both its early and later stages. During the early part of the disease, when acute coryza is present, the active principle of suprarenal gland is of great service, applied in the following combination:

R. Adrenalin .....	gr. 1/2	03
Olei geranii.....	m. i	06
Lanolini .....	3i	30

M. Sig.: Apply locally to the nares.

The author states that while the strength of adrenalin in the foregoing formula is about the same as the 1 to 1,000 normal saline solution, its action is greatly prolonged and the results are much more satisfactory. It should be used by the patient from two to four times daily, depending on the severity of the coryza. This combination is also of service in such vasomotor conditions as are accompanied by excessive secretion, and in acute exacerbations of chronic rhinitis which is unaccompanied by organic changes.

During the later stages, when the secretion consists of tenacious mucus or becomes mucopurulent in character, one of the following combinations is recommended:

R. Olei eucalypti .....	m. xl	2 65
Acidi borici .....	3ii	8
Liq. petrolati		
vel:		
Lanolini q. s. ad.....	3i	30

M. Ft. unguentum. Sig.: Apply a small portion in the nostrils several times a day and inhale forcibly.

This will tend to render the secretions less tenacious and at the same time it will aid in restoring their normal character.



The following may be used under similar circumstances:

R. Mercuric sulphatis flavi.....gr. ii 12  
Lanolini .....3i 30

M. Sig.: Apply a small portion to the nostrils several times a day.

When the secretion is profuse the following is recommended:

R. Acidi gallici .....3i 4  
Unguenti belladonnæ .....3ii 8  
Lanolini .....3vi 24  
Liq. petrolati q. s. ad.....3i 30

M. Sig.: Apply a small amount locally to the nares several times a day.

In vasomotor conditions of the turbinal tissues various remedies prescribed in the form of ointments are especially beneficial in checking excessive secretion and in relieving the obstructions to the nasal respiration. When the tissues are edematous relief may often be obtained by the application of the following ointment two or three times daily:

R. Quiniæ sulphatis.....gr. iiss-viii 15-50  
Lanolini .....3ss 15

M. Ft. unguentum. Sig.: Apply locally two or three times a day. Or:

R. Ichthyoli .....3ss-3i 2-4  
Lanolini .....3ss 15

M. Ft. unguentum. Sig. To be applied locally two or three times a week by the physician.

The foregoing is to be used when the irritability to the mucous membrane is not great.

In hyperesthetic rhinitis, not of the true hay fever type, but accompanied by attacks of sneezing and irritability of the nares, a combination similar to the following is recommended as a protective to the mucous membranes and for its soothing qualities:

R. Ung. hamamelidis .....3ss 15

Sig.: Apply locally to the nasal mucous membrane. Or:

R. Ung. zinci oxidi.....3iii 12  
Lanolini .....3v 20

M. Ft. unguentum. Sig.: Apply locally two or three times daily.

In some cases belladonna may seem preferable to the foregoing, combined as follows:

R. Ung. belladonnæ .....3ii 8  
Lanolini, āā.....3ii 8

M. Ft. unguentum. Sig.: Apply locally once or twice daily.

In cases in which the hyperesthesia is of comparatively short duration and it is not desired to continue the treatment for any great length of time the following combination is recommended by the author as one which will cause the symptoms to subside rapidly and the reflex sneezing to stop:

R. Cocainæ hydrochlor.....gr. v 20  
Olei eucalyptus.....m. x 65  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: To be applied locally by the physician as the individual case requires. [Cocain, however, should be used cautiously.—Ed.]

The habit of cocain must be avoided in the use of the foregoing combination as well as in the following combination, which may be used in cases of true autumnal catarrh or hay fever.

R. Cocainæ hydrochloratis.....gr. x 65  
Menthol (crystals).....gr. xx 130  
Olei amygdalæ exp.....3ii 8  
Ung. zinci oxidi q. s. ad.....3i 30

M. Ft. unguentum. Sig.: Apply locally by means of a cotton applicator to the nasal mucous membranes, two or three times a day, depending on the severity of the attack.

In cases in which the obstruction is the most prominent symptom of hay fever the following is recommended:

R. Menthol (crystals) .....gr. iiss-viii 15-50  
Lanolini .....3ss 15

M. Ft. unguentum. Sig.: To be applied locally, as often as necessary, by the patient.

As stated by the author, however, when there is a marked increase in the amount of fibrous tissue, the employment of ointments is of no value, as would be the case with any medicinal application which produces no destruction of tissue.

In some cases in which there is slight thickening or induration of tissue the following combinations are recommended:

R. Ichthyoli .....3i 4  
Olei bergamot.....m. v 30  
Ung. zinci oxidi.....3vii 28

M. Ft. unguentum. Sig.: Apply locally. Or:

R. Bismuthi subgal.....gr. xx-xi 130-2.60  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: Apply locally.

The foregoing should be applied to the nares two or three times a week by the physician, and the patient should be instructed to use either the adrenalin or menthol ointments several times a day during the intervals.

In rhinitis sicca the following is recommended:

R. Olei eucalyp.....3ss-i 2-4  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: Apply locally at bedtime.

In those cases further advanced and regarded as true atrophic rhinitis, accompanied by excessive dryness, crust formation and offensive odor, the membranes must be thoroughly cleansed and the crusts removed. After this the following ointments are of value:

R. Hydrargyri oxidi flavi.....gr. v-x 30-65  
Olei bergamot.....m. v 30  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: To be applied locally by the patient. Or:

R. Ichthyoli .....3ss-i 2-4  
Menthol (crystals) .....gr. v-viii 30-50  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: A small amount to be inserted into the nostrils at bedtime.

The following are of value applied by means of tampons:

R. Iodoformi .....gr. xx-xxx 130-2  
Olei eucalyptus.....m. v 30  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: Apply to the nares on tampons.

The foregoing is especially valuable when the fetor is marked.

Ointments are the most essential means of treatment in any case in which erosions of the mucous membrane or perforations of the septum are present, whether specific or otherwise. They not only prevent crust formation, but stimulate the parts to healing. For this purpose mercury is recommended as follows:

R. Ung. hydrarg. nitratis.....3i 4  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: Apply locally in specific cases. Or:

R. Ung. hydrarg. nitratis.....gr. xx 130  
Ung. hydrarg. oxidi rubri.....3ss 2  
Lanolini .....3i 30

M. Ft. unguentum. Sig.: Apply locally to the edges of the perforation.

## Medicolegal

### Makes Recording of Certificate More Important.

Chapter 136 of the Laws of South Dakota of 1905 amends Section 23 of the medical practice act of that state by incorporating the words here inclosed in quotation marks, making the second paragraph of the section read: Any person who shall practice medicine or surgery or obstetrics in any of their branches in this state without having obtained a license as in this act provided, "and had such license recorded in the office of the register of deeds of the county in which such person resides and practices, as hereinabove provided," shall be guilty of a misdemeanor, etc.

### To Secure Pure Foods.

Chapter 114 of the Laws of South Dakota of 1905 is entitled: "An act to provide for a state food and dairy department; to prevent the adulteration, misbranding and imitation of foods, beverages, candies and condiments, and regulating the manufacture and sale of dairy products." One of its many provisions is that it shall be unlawful for any person to manufacture, sell, offer or expose for sale any article of food to which has been added formaldehyd, borax, boracic



acid, benzoic acid, sulphites or sulphurous acid, salicylic acid, abradol, beta-naphthol, fluorin compounds, saccharine or coal tar dyes. In Chapter 135 is an act relating to inspection of meats, slaughter houses and markets:

#### Females to Accompany Female Insane Patients.

Chapter 74 of the Laws of New Jersey of 1905 provides that whenever any female insane patient is to be removed from any county almshouse to a state hospital or asylum for the insane, or from one state hospital or asylum for the insane to another state hospital or asylum for the insane, or from the home of such insane patient to an almshouse, hospital or asylum, or when returned from such institution to her home, it shall be the duty of the court under whose order such patient is committed, or of the freeholders or commissioners of the county, or the overseer of the poor of the district to which such patient is chargeable, if not committed by the court, to provide a female attendant for every female patient in transit, at the expense of the proper county or poor district.

#### Adulteration with Methyl or Wood Alcohol Prohibited.

Chapter 100 of the Laws of New York of 1905 amends Section 165 of the agricultural law by adding the provision that in case of food an article shall be deemed to be adulterated if it contains methyl or wood alcohol, in any of its forms, or any methylated preparation made from it. Chapter 122 amends the public health law by adding to Subdivision A of Section 41, relative to adulterations, the provision that, in case of drugs, an article shall be deemed to be adulterated if it contains methyl or wood alcohol, in any of its forms, or any methylated preparation made from it. It also adds a similar provision with regard to food, under Subdivision B, while Subdivision C, relative to spirituous, fermented and malt liquors, and Section 46, relative to wines, are made to declare against their adulteration with methyl or wood alcohol in any of its forms.

#### Disclosure of Professional Information.

Chapter 331 of the Laws of New York of 1905 amends Section 834 of the code of civil procedure to read as follows: A person duly authorized to practice physic or surgery, or a professional or registered nurse, shall not be allowed to disclose any information which he acquired in attending a patient, in a professional capacity, and which was necessary to enable him to act in that capacity; unless, where the patient is a child under the age of 16, the information so acquired indicates that the patient has been the victim or subject of a crime, in which case the physician or nurses may be required to testify fully in relation thereto on any examination, trial or other proceeding in which the commission of such crime is a subject of inquiry. Nothing in this act contained shall affect any actions or proceedings now pending. This act shall take effect Sept. 1, 1905.

#### Commitment Authorized of Users of Narcotics.

Chapter 3 of the Public Laws of Maine of 1905 provides that a person alleged to be suffering from the effects of the use of an opiate, cocaine, chloral hydrate, or other narcotic may be committed to the care of any general hospital receiving aid from the state, or any legally qualified physician of not less than five years' actual practice, for treatment; and the medical authorities of said hospital or said physician to whom said patient is committed shall have the power and authority to restrain said patient so committed in such manner as may be necessary for his protection for a period not exceeding ninety days. But before any restraint shall be imposed under the authority of this act, a voluntary agreement shall be made in writing by the person suffering from the effects of any drug above mentioned, to the imposition of restraint on his actions, if necessary, and such agreement must be witnessed by the husband, wife, or parent of the person aforesaid, or one of the municipal officers of the city or town in which the person, suffering as described in this act, is a resident, and approved, after reasonable notice, by a justice of the Supreme Judicial Court or a judge of the Superior Court or Probate Court in the county where the patient resides. Any justice of the Supreme Judicial Court, or a judge of the Superior Court or Probate Court in the county where the patient resides, may, at his discretion, require the president or secretary of the state board of health, or one of the

county examiners of insane criminals, to investigate as to the progress of any such case; and, on his certificate that further restraint is unnecessary, may annul the agreement, and the person restrained shall be immediately released on the order of said justice.

#### Provides for Destroying Mosquito-Breeding Areas.

Chapter 80 of the Laws of New Jersey of 1905 is: "An act to provide a method for locating and destroying mosquito-breeding areas, authorizing appropriations for said purposes and providing state aid for freeing salt-marsh areas from mosquitoes." It provides that it shall be lawful for the mayor, or executive officer, or the board of health of any city, borough, incorporated town, village, or the governing body or board of health of any township or county to make request in writing to the director of the agricultural experiment station in the state, or to the person appointed by said director for the purposes of this act, to investigate, or cause to be investigated, the source of breeding places of mosquitoes which may or do infest said city, etc.; and it shall be the duty of such director, or the person appointed by him, as soon as may be, to investigate, or cause to be investigated, the source or breeding places of such mosquitoes, and he shall as soon thereafter as possible report to the officer or body making such application the results of the investigation made, and also the measures that should be adopted to destroy such breeding places, or render them free from future mosquito breeding. Whenever an investigation shows that the mosquitoes infesting the community and causing the nuisance complained of are those breeding on the salt-marsh areas within the jurisdiction of any city, etc., and a copy of the report shall be sent to the board or boards of health of the municipality or municipalities in which the breeding places are situated, attaching statements specifying the localities affected by the marsh-breeding areas, the extent of the dangerous area, the character of the work necessary to prevent further mosquito breeding and the probable cost of the work required in each municipality, the governing body of the municipality may, on the written request of its board of health, appropriate 75 per cent. of the sum required to complete the work, and the director of the agricultural station may, out of money appropriated by the state for this purpose, together with the appropriation of such municipality, complete the work; provided, that not more than \$500 from said state aid appropriation shall be expended in any one municipality in any one year.

#### More About Alcoholics Labeled as Medicines.

Internal Revenue Circular No. 676, issued by Commissioner Yerkes under date of Nov. 24, 1905, states that since the ruling of Sept. 12, 1905, in Circular No. 673, reported on page 1025 of THE JOURNAL of Sept. 30, 1905, was made, manufacturers of preparations referred to in that ruling and wholesale druggists and retail druggists handling them have demonstrated that large losses would occur to them if the ruling was made effective on Dec. 1, 1905. They said that in good faith and under rules heretofore controlling they had purchased these compounds in large quantities, had them in stock, and that it would be impossible to dispose of them by the date originally stated. After careful consideration of this phase of the case, and to protect those who in good faith had engaged in the sale of these preparations, this office has determined to make the order effective as against manufacturers on Jan. 1, 1906, instead of Dec. 1, 1905. With regard to all handling these preparations as retail dealers, both druggists and other merchants, the order will be made effective April 1, 1906, the beginning of the last quarter of the current fiscal year.

It is further stated that it was the purpose to make public announcement before Dec. 1, 1905, of the various preparations found by analysis to be within the terms of the ruling of September 12. By reason of the care given in making analyses of these compounds the office has been unable to complete the examination of all such compounds now on the market. However, it has made analyses of the following preparations and finds that they are within the terms of the ruling of Sept. 12, 1905: Atwood's La Grippe Specific, Cuban Gingeric, De Witt's Stomach Bitters, Dr. Bouvier's Buchu Gin, Dr. Fowler's Meat and Malt, Duffy's Malt Whisky, Gilbert's Rejuvenating



Iron and Herb Juice, Hostetter's Stomach Bitters, Kudros, Peruna, Rockandy Cough Cure. This office will continue to make analyses of other preparations similar to those already examined, and will announce from time to time the conclusions reached. Until public notice is given as to other preparations than those above named, manufacturers of same, druggists, and others handling these preparations will not be held liable for special tax for other articles than those set forth herein, provided that the compounds are sold in good faith as medicines.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

December 2.

- 1 \*Results of the Open-air Treatment of Surgical Tuberculosis. W. H. Halsted, Baltimore, Md.
- 2 \*Action of the Roentgen Rays on the Blood; An Experimental Study. R. S. Morris, Ann Arbor, Mich.
- 3 \*Speech Training as a Factor in the Development of the Feeble Minded. G. H. Makuen, Philadelphia.
- 4 Value of Chloretone and Sulphonai in the Treatment of Insomnia. J. S. Christison, Chicago.
- 5 Approximate Measures of the United States Pharmacopeia. M. I. Wilbert, Philadelphia.
- 6 \*Aseptic Management of the Umbilical Cord. J. T. Schell, Philadelphia.

1. **Open-air Treatment of Surgical Tuberculosis.**—Halsted refers briefly to the open-air treatment of surgical tuberculosis on the "bridge" of the Johns Hopkins Hospital, and describes in detail the splendid results obtained by the open-air treatment of private patients. He says that most patients with surgical tuberculosis will recover without operation if they are given a fair opportunity in the open air. Halsted questions the necessity and wisdom of overfeeding and the value of tuberculin as a means of deciding when to discontinue fixation and to permit the use of the affected joint. He is of the opinion that a definite reaction probably could be obtained in all so-called cured cases. He says that it is the surgeon's duty not only to advise out-of-doors living, but to see that his instructions are carried out as it was intended they should be.

2. **Action of Roentgen Ray on Blood.**—Morris has undertaken the study of the more immediate effect on the blood of moderately long, continuous exposures to the Roentgen ray. He epitomizes his results in the following conclusions:

1. The Roentgen rays cause a marked diminution in the absolute number of leucocytes in the peripheral circulation.
2. Preceding the leukopenia, there may be a moderate rise in the number of leucocytes from 8 to 12 hours after the exposure, the increase being due largely to the greater number of polynuclear cells in the circulation (observed only in the rabbit); the same condition may be found just at the end of the exposure, subsiding rapidly.
3. The lymphocytes are especially susceptible to the action of the rays; they are affected first and most intensely.
4. Alterations in the histologic characters of the lymphocytes and polynuclear amphophiles may be found in the rabbit, similar to those described in the lymphoid tissue and bone marrow.
5. Hard tubes produce the most marked changes in the leucocytes.
6. No noteworthy numeric or histologic alteration takes place in the red blood cells within the first few hours following exposure; the percentage of hemoglobin is not essentially affected within the same time.

3. **Speech Training as a Factor in the Development of the Feeble-minded.**—Makuen considers defective speech a physical and mental sign of feeble-mindedness, and that it may be the cause as well as the result of feeble-mindedness. He refers to the case of a boy who was thought to be feeble minded, and who is now a successful business man as the result of the removal of some mechanical obstructions to the normal development of the organs of speech and the correction by training of the faulty mental and speech habit. Other cases are cited to illustrate the difficulties of diagnosis and prognosis.

6. **Aseptic Management of Umbilical Cord.**—Schell describes a method used by him for some time which entirely does away with the old infected and rotting stump. As soon as the child is born the umbilical cord is clamped with a hemostat about three inches from its abdominal attachment; another hemostat is then placed a short distance from the first one toward the placental end of the cord, and the cord is then cut between. The child is now wrapped in its aseptic receiving blanket and

placed to one side, and the whole attention is given to completing the delivery of the mother, including possible repairs of perineum, etc. After the third stage of labor is completed the vessels in the cord, as a rule, have ceased pulsating. The cord and abdominal wall immediately surrounding it are carefully washed in a 1 to 4,000 mercuric chlorid solution. The hemostat is then grasped in the left hand, and a pair of scissors in the right hand follows the skin amniotic junction until this is severed completely in its entire circumference. Care must be taken not to cut too deeply, as the vessels of the cord are usually very close to the amniotic covering. Schell says that even if they are cut, no serious hemorrhage will result, as the circulation, as a rule, by this time has practically ceased through these vessels. As soon as the vessels have been exposed, the amniotic covering and the Wharton's jelly are stripped away in a direction from the abdominal walls and a ligature consisting of a piece of very fine (No. 0) sterile cat-gut is then thrown around the vessels, and the cord is severed close to the ligature. The stump is washed in mercuric chlorid solution, dried with a piece of sterile gauze, and dusted with any good antiseptic dusting powder. The baby should not be put in the tub for about a week, but should be given a lap bath; the stump must be washed frequently in a boric acid solution, and a small amount of dusting powder used with the usual sterile pad and the abdominal bandage.

#### Medical Record, New York.

December 2.

- 7 \*System of American Hospital Economy. A. G. Gerster, New York.
- 8 \*Essential and Paroxysmal Tachycardia. J. J. Morrissey, New York.
- 9 \*Subcatabolic Mechanism Involved in the Etiology of Common Colds. H. Wakefield, New York.
- 10 \*Test Feces; Their Value in the Recognition in Intestinal Disturbances Taking Their Origin in Other Parts of the Digestive Tract. H. Stern, New York.
- 11 \*Medical Education. E. Castelli, New York.
- 12 \*Valvular Closing of the Gall Bladder After Operation. H. E. Rocky, Portland, Oregon.

7. **American Hospital Economy.**—In analyzing the conditions which underly the extravagance and waste in hospital management in this country, Gerster emphasizes the necessity for more active participation in the executive control by the members of the hospital staff. The plans or organization of the great hospitals of Hamburg, Berlin, Vienna and Budapest are described in detail, the essential features being that the position of the lay superintendent of American hospitals is occupied by one or more salaried medical directors, the attending staff is very limited, so that the service is a permanent one with salaried visiting physicians and surgeons, and the house staff also is composed of paid assistants, whose positions are permanent. In this way all those concerned are able to give the necessary time to details of economical management, and also acquire the experience necessary to carry them out with effect. The present plan of conducting hospitals here resembles that in use in medieval Europe, and the author predicts that sooner or later a system similar to that now employed in Europe must be adopted.

8. **Tachycardia.**—Morrissey classifies tachycardia under two main heads—essential and paroxysmal, and two subheads—true and false. Permanent disease of the heart muscle best illustrates true tachycardia. The false variety, he says, may be produced by causes far removed from the heart. There are certain definite peculiarities which distinguish true tachycardia from the evanescent "heart hurry" so frequently produced by the most trivial causes. 1, The attack is sudden in its onset, reaching its height almost immediately; 2, the patient may or may not be entirely unconscious of the great degree of palpitation; 3, there is generally a definite period covered by the attack; 4, the reversion to the normal condition is as sudden as the onset, the vestiges of the storm through which the patient has passed rapidly disappearing. Morrissey concludes by saying that the treatment of tachycardia is that of the condition from which it arises or with which it is associated, but it must be remembered: 1, That essential tachycardia is not accompanied with indigestion; 2, that paroxysmal tachycardia and the forms of tachycardia, accompanied by signs, no matter how slight, of Basedow's disease, are very frequently associated with dyspepsia; 3, that extreme cardiac arrhythmia frequently



occurs without any indication of stomach disease, and, 4, that tachycardia in its various grades is, however, often but a symptom, a prominent expression of a neuropathic state, which requires to be approached for treatment from many sides.

**9. Subcatabolic Metabolism of Colds.**—According to Wakefield, colds represent the results of disorders of metabolism due to local circulatory disturbances following the unusual exposure to cold of some part of the body. The degree of temperature is subordinate to the state of inequality produced, for a cold may be due to the extrinsic effect of either cold or heat, if sufficiently pronounced or abrupt to insure a localized action of definite heterogeneity from the balance of the organism. Wakefield has discovered that protoplasm as such is subject to the general laws that heat causes expansion and cold contraction, or, in other words, cold heightens, and heat lowers the specific gravity of protoplasm in general, not excepting that of the parenchyma. In analyzing the mode of origin of a common cold Wakefield says that primarily a condition of disequilibrium is produced. An individual, during a period of normal heat balance, gets wet, cold feet; a state of contraction of the tissues of the lower extremities is attained, the blood is ejected from the peripheral vascular areas to the more roomy reservoirs of the splanchnic veins, which readily dilate to receive it, with the result that a pernicious splanchnic venous stasis is produced, concurrent with a capillary and arterial blood deficiency in the extremities and with an inevitable suboxidation of the dependent tissues in the extremities.

**10. Value of Test Feces in Diagnosis.**—Stern discusses the alterations produced in the stools in cases of intestinal disorder associated with gastric, hepatic or pancreatic disease. He believes that many of the transitory and milder intestinal disturbances are the result of gastric disease. Stern says that according to the extent and duration of the secondary, or intestinal affection other pathologic elements may be found admixed with the fecal masses, but the exhibition therein of large amounts of connective tissue fragments invariably points to the gastrogenous causation of the intestinal disturbance, no matter how completely the phenomena due to the latter may overshadow all subjective gastric symptoms. Disturbances of intestinal function are much more rarely the consequence of hepatic than of gastric disease. Almost all hepatogenous intestinal affections are caused by disordered biliary secretion. Stern says that biliary obstruction underlies the intestinal disorder when the test feces, 1, are excreted in very large quantities; 2, when they present a grayish-white color; 3, when the sublimate test is negative; 4, when considerable masses of the ingested fat reappear; 5, when very large amounts of fatty acid flakes can be demonstrated, and 6, when there are no pathologic amounts of other food debris present. The test feces in cases of pancreatic degeneration, contain similar amounts of fat, as those in biliary obstruction. They differ, however, from the latter: 1, by not being excreted in such large amounts; 2, by exhibiting normal quantities of biliary pigments; 3, by containing large quantities of muscle debris, which are macroscopically recognizable; 4, by frequently presenting its fatty contents in the form of globules of neutral fat, when examined under the microscope; 5, by the occasional exhibition of putrefactive changes.

**11. Medical Education.**—Castelli says that the medical student must be of mature age when he enters on his medical studies, because the lad of 22 has not the insight into the problems of life that is necessary in order to give his patient moral support and assistance as well as drugs. It is the lack of the power of mental dominance in physicians that has given to christian science and other "pathics" the position they hold. The physician should also be of the male sex, for woman, in addition to her physical infirmities, is handicapped in the practice of medicine by the fact that she is violating the fundamental principles of her being. Women have done and are doing splendid work in the profession, but it is at a mental and physical price which it is a pity that any woman should be compelled to pay. The physician furthermore in his own physical condition must be able to set an example to his patients and to make his own atmosphere one of physical rationalism. Culture and high moral qualities are also necessary to make

the physician what he should be—the most tolerant of men, a man whose faith in mankind never wavers, who never permits his poise to be disturbed by the unworthy things of life or its disappointments, a man who believes in doing good and does it.

**12. Valvular Closure of Gall Bladder.**—Rockey has devised a plan of introducing the drainage tube into the gall bladder after cholecystotomy, which is intended to prevent the prolonged leakage of bile. The tube is inserted through the incision into the gall bladder, which is surrounded by a purse-string suture of catgut. The edge is turned in so as to bring the peritoneal surface into contact with the tube, and then a second purse string is placed about the first. On tightening this the first suture is invaginated into the gall bladder and a valve is formed varying in size according to the distance between the two sutures. The drainage tube should be fastened to the skin by anchor stitches of silkworm gut, to prevent the tension on the purse strings and consequent puckering of the valve. This is best done by passing a silkworm gut stitch at either side of the tube and tying a small loop above the first knot. A similar tie and loop of silkworm gut is made around the tube about one inch from the skin. A safety pin is then passed through the three loops, thus holding the tubes firmly in place. A firm dressing is applied and a bottle suspended from the bandage over the tube.

#### Medical News, New York.

December 2.

- 13 Present Fallacies in Medical Education. S. W. Lambert, New York.
- 14 \*Is Paralysis Agitans Caused by Defective Secretion or Atrophy of the Parathyroid Glandules. W. N. Berkeley, New York.
- 15 Etiology, Gross Pathology, Symptoms and Surgical Treatment of Pyosalpinx. J. E. Cannaday, Paint Creek, W. Va.
- 16 Headache. J. N. Upshur, Richmond, Va.
- 17 \*Studies in Agglutination in Tuberculosis. M. P. Ravenel and H. R. M. Landis, Philadelphia.
- 18 Substitution of Drugs in the Dispensing of the Physician's Prescription. W. J. Cruikshank, Brooklyn, N. Y.

**14. Relation of Parathyroids to Paralysis Agitans.**—Berkeley discusses the clinical relationship of absence of the parathyroids or of disturbed function of these glands to disease, and whether such disease can be cured by the administration of the dried extract of the glands. Personally he believes that atrophy or insufficiency of the parathyroid glands is, perhaps, the cause of paralysis agitans. He has administered a physiologically tested gland in 11 cases of shaking palsy in all grades of advancement. All the patients remarked on a curious increase in courage, comfort and mental energy while taking the remedy. Berkeley states emphatically that the product used should be tested physiologically beforehand and should be kept on ice till used. The initial dose of the powdered gland is one-twentieth of a grain, from two to four times daily, preferably given in a capsule; larger doses appear to produce weakness, constipation, nervousness and even an exaggeration of the symptoms of the disease. The first good effects in the patients treated were noted, as a rule, only after from 50 to 75 capsules had been taken. Nine of the patients so treated were helped; one considered himself entirely relieved while taking the remedy. In all the earlier cases the patients were greatly helped. Berkeley believes that when a more perfect form of medication is devised the results may prove more encouraging.

**17. Agglutination in Tuberculosis.**—Studies in agglutination made by Ravenel and Landis for the purpose of determining whether the reaction is of any prognostic significance in tuberculosis, and whether the resistance of the individual is increased by the hygienic and dietetic means now employed, showed that the agglutination test is not available for diagnostic purposes, and that the more advanced the disease, the lower is the agglutinating power. Patients living under favorable conditions, as at a sanatorium, have the agglutinating power distinctly increased. A low agglutinating power is of unfavorable prognostic significance. The technic employed is as follows: From 5 to 10 c.c. of blood were drawn from a vein at the bend of the elbow. The blood was allowed to stand for twenty-four hours, when the serum was drawn off and dilutions were made with a homogeneous culture of tubercle bacillus in proportions of from 1 to 5 up to 1 to 100. The homogeneous culture was grown from twelve to fourteen days in 5



per cent. glycerin-bouillon, then formalin was added in proportion of 1 to 1,000. The tubes containing the culture and serum were observed every two or three hours, but the final reading was made at the end of twenty-four hours. A positive result consisted in a clearing of the supernatant fluid, or the agglutination of small whitish clumps, usually at the bottom, but occasionally along the sides of the tube.

#### New York Medical Journal.

December 2.

- 19 Surgical Clinic of To-day; Its Status and Methods of Teaching. N. Senn, Chicago.
- 20 Sarcoma of the Undescended Testes. J. A. Wyeth, New York.
- 21 \*Extrauterine Pregnancy. C. P. Noble, Philadelphia.
- 22 Case of Acute Lymphatic Leukemia, with Consideration of the Pathology. W. Mendelson and F. E. Sondern, New York.
- 23 Diagnostic Significance of Headache in Diseases of the Ear, Nose and Throat. S. J. Kopetzky, New York.
- 24 Reflections Concerning Pretended Therapeutic Successes Obtained by Some Practitioners of the Ophthalmologic Specialty. M. Talmey, New York.
- 25 Nephritis and Hematuria. (Concluded.) H. A. Fowler, Washington, D. C.

21. **Extrauterine Pregnancy.**—Noble has operated in 91 cases of ectopic pregnancy—in 89 by abdominal section and in 4 by vaginal incision, 2 of these requiring subsequent abdominal section. In this series one tube was involved about as often as the other. In twenty women the opposite Fallopian tube was inflamed, the conditions present being salpingitis, hydrosalpinx and hematosalpinx. In no case was a pyosalpinx present on the opposite side. Noble says that this evidence tends to support the view that infection, of mild type, of the tube is a prominent cause of ectopic pregnancy. Noble believes that the causes of ectopic pregnancy are mechanical, due either to infection of the tube, to congenital defects in the tube, or to mechanical distortions which in some way prevent the onward progress of the impregnated ovum. Seven of the patients are reported as unruptured, 13 as ruptured, and 71 as having tubal abortion. Rupture of the tube, with resulting free hemorrhage, occurred in 14 cases. Tubal abortion, complete or incomplete, occurred in 70 cases. In cases of extrauterine pregnancy like those under consideration, Noble advises immediate operation. Light anesthesia, rapidity in operating, the ligation and removal of the affected appendage, the removal of the larger masses of blood clots manually, the removal of a portion of the free blood contained in the abdomen by irrigation with salt solution poured into the abdomen from a pitcher, the dilution of the remainder by leaving the abdomen filled with the salt solution, and the rapid closure of the abdominal wound without drainage, are the characteristics of the operation which, in his judgment, offers the patient the best chance for recovery. Refinement in technic in this group of cases is to be deprecated. The deeper anesthesia necessary, the loss of time entailed, and the additional handling of the viscera will make the shock already present more severe, greatly increasing the prospect of a fatal result. The freest hypodermic stimulation with strychnin, digitalis, and camphorated oil, and the use of salt solution by hypodermoclysis before, during, and after operation, are indicated. Tubal abortion, Noble says, demands prompt abdominal section, the removal of the appendage involved, the careful removal of the blood clots, toilet of the pelvis and peritoneum, and the closure of the abdominal wound *secundum artem*. Drainage is not called for. Existing complications must be dealt with as indicated. When the opposite appendage is diseased and its removal required, it is often simpler to perform a supravaginal hysterectomy rather than a bilateral salpingo-oophorectomy. If the vermiform appendix is adherent to the hematocele, as is frequently the case, unless the condition of the patient forbids, it should be removed. In the exceptional cases in which a large amount of blood has been lost and the condition of the patient is serious, the question will arise as to whether operation shall be immediately performed or postponed until improvement has occurred. The proper course depends on whether hemorrhage is continuing or has ceased, and also on whether the patient is so situated that the operation can be performed immediately, should evidences of recurring hemorrhage become manifest. Errors should be made on the side of prompt operation rather than on that of undue waiting. When the condition of the patient is extreme from shock and excessive hemorrhage, the rules for operation in

tubal rupture apply in dealing with tubal abortion. Noble's experience with extrauterine pregnancy has impressed on him two lessons: 1. A correct and early diagnosis can usually be made if the history of the patient is carefully elicited. The diagnosis depends as much on the history as on the results of physical examination. 2. If an early diagnosis is made, the patients can be operated on while still in good or fairly good condition, with the result of securing a high percentage of recoveries. Deaths from extrauterine pregnancy are usually due either to the occurrence of hemorrhage so sudden and profuse that the patients are *in extremis* before operation can be performed, or else they are due to failure to make a diagnosis or to unwarrantable delay in resorting to operation.

#### Boston Medical and Surgical Journal.

November 30.

- 26 Our First President, Dr. Edward A. Holyoke. F. Holyoke, Holyoke, Mass.
- 27 \*Case of Diabetic Coma, with Recovery Under Alkaline Treatment. G. G. Sears, Boston.
- 28 Rupture of the Intestine. F. B. Lund, Boston.
- 29 Malignant Disease of the Lungs and Pleura. H. Jackson, Boston.

27. **Alkaline Treatment of Diabetic Coma.**—Sears reports the case of a boy, 13 years old, who was treated successfully during an attack of diabetic coma by the administration of large quantities of alkalis. Immediately after his admission to the hospital, the patient was given eight ounces of sterile salt solution, containing bicarbonate of soda almost to the point of saturation, under the skin of each breast. A solution of the same drug, in the proportion of a heaping teaspoonful to the tumbler, was given by mouth to the limit of his capacity. No record of amount was kept, but, as he was very thirsty, large quantities were taken. His stupor rapidly decreased, but he remained drowsy for several days. In spite of the large doses of alkali given, the urine remained persistently acid. Sugar varied between 1 per cent. and nearly 3 per cent. under a diet which contained a little bread and considerable quantities of milk. Acetone was more frequently present in the urine than absent. The only complication of note was the occurrence of suppuration at the site of the hypodermic injections. The injections were given by means of a glass flask used as a fountain syringe. Palpation of the suppuration gave the sensation of an air cushion, and crepitation was present. The patient made a complete recovery.

#### Lancet-Clinic, Cincinnati.

November 25.

- 30 Typhoid Fever in Children. M. A. Brown, Cincinnati.
- 31 Pathology of Epilepsy. M. R. Hughes, St. Louis, Mo.
- 32 Epilepsy. J. W. Selman, Greenfield, Ind.
- 33 Spirochæta Pallida. M. L. Heidingsfeld and A. J. Markley, Cincinnati.

#### Journal of Michigan State Medical Society, Detroit.

November.

- 34 \*Preliminary Note on the Sterilization and Absorbability of Catgut. C. B. Nancrede, F. R. Waldron and C. F. Tenney, Ann Arbor.
- 35 Medical Inspection of Schools. G. L. Klefer, Detroit.
- 36 Wound Infection from the Use of Absorbable Etage Sutures. S. C. Graves, Grand Rapids.
- 37 Diagnosis and Treatment of Empyema of the Chest. A. J. Lawbaugh, Calumet.
- 38 Value of Early Diagnosis in Ulcerations of the Anorectal Region. L. J. Hirschman, Detroit.

34. **Sterilization and Absorbability of Catgut.**—This paper presents the results of the attempts made by the authors to put on a demonstrative basis the questions: (1) As to what are the best materials for ligatures or buried sutures; (2) which is the easiest and at the same time the most reliable method of sterilization, and (3) what is the durability of absorbable material when buried deeply in the tissues. Experiments conducted under the supervision of Nancrede show that sterilization by the Claudius method is entirely reliable. Strands of No. 2 catgut, wound on glass rods and pieces of large white silk, were used. The catgut and silk were immersed in an emulsion of cultures of anthrax in sterile water for 24 hours at room temperature. The Claudius solution was made by grinding together one gram of pure iodine crystals and one gram of potassium iodide and adding 100 c.c. of distilled water. The silk and catgut were immersed in the Claudius solution and removed at stated intervals. It was found that the iodine carried over on the suture material prevented the growth of anthrax spores until sufficiently diluted. That silk and catgut, soaked in an emulsion of anthrax spores



for 24 hours and thoroughly dried, are rendered free from living organisms by at most from 2½ to 3 hours' immersion in the Claudius solution. Pieces of coarse cotton grocer's twine were soaked for 24 hours in emulsions made up of distilled water and potato cultures of anthrax, potato and hay bacilli, all showing abundant spores. Cover-glasses were also smeared with these same potato cultures, both twine and cover-glasses were afterward very thoroughly dried in the incubator. Both pieces of twine and cover-glasses grew their respective bacilli when put, untreated, into tubes of beef tea. The pieces of twine and cover-glasses so prepared were all immersed in the Claudius solution and removed at intervals. These experiments demonstrated that heavy cotton grocer's twine, soaked for 24 hours in an emulsion of the spores of anthrax, hay or potato bacilli, and thoroughly dried, is rendered free from living organisms by at most 24 hours' exposure to the Claudius solution, and that cover-glasses, smeared with potato cultures of anthrax, hay or potato bacilli containing spores, and thoroughly dried, are rendered free from living organisms by at most 24 hours' exposure to the Claudius solution. The first tensile-strength experiments showed the following: 1. Tight winding of the gut markedly affects the gut physically and reduces the tensile strength. 2. Solutions of iodine and potassium iodide do reduce somewhat the tensile strength of the gut. 3. More dilute solutions do not obviate this drawback, except the most dilute examined, which is probably not sufficiently germicidal. 4. Alcoholic solutions preserve or increase the tensile strength, except in dilutions which require the addition of potassium iodide to put the iodine in solution. 5. With a knot in the continuity of the gut, greater tension was almost invariably necessary to break the iodine gut than the wet, untreated gut. 6. The iodine gut is apparently somewhat more elastic than the wet, untreated gut. The second series of tensile-strength experiments showed: 1. The tensile strength of No. 1 gut is lowered by exposure to the Claudius solution, more so in case it has previously been exposed to formalin. 2. Certain pieces of gut are absolutely worthless as ligature or suture material after exposure to the Claudius solution. 3. With a knot tied in continuity the relative loss of strength is much less. 4. In replacing unused gut in the Claudius solution, aseptic gut only must be replaced, as the iodine was present in the solution in less than one-eighth its original strength. The gut must be kept in a glass-stoppered bottle, tightly closed.

#### Albany (N. Y.) Medical Annals.

November.

- 39 Conditions Having as Symptoms Pain and Tenderness in the Right Iliac Region. J. F. McGarrahan, Cohoes, N. Y.
- 40 End Results in Surgery of the Kidney. A. Vander Veer, Albany.
- 41 \*Actinomycosis Limited to the Urinary Tract. D. MacD. Stanton, Albany.

41. Actinomycosis Limited to Urinary Tract.—The case reported by Stanton was clinically one of cystitis and pyelonephritis. The actinomycotic character of the kidney lesion was not recognized during life nor at the time of the autopsy, but was discovered on histologic examination of the kidney. About two months before his death the patient began to have difficulty in passing urine. He could pass only a small amount at one time. For some time before admission he had been troubled with incontinence. The urine was low in specific gravity, 1010. The blood examination showed a hemoglobin value of only 45 per cent. There was no leucocytosis. While in the hospital the patient had an irregular temperature ranging from 99 to 103, and was slightly irrational the greater part of the time. The treatment was purely symptomatic. A histologic examination of portions of the kidneys containing abscesses disclosed colonies of actinomyces. The mode of infection in this case was doubtful, but Stanton suggests that it is more than possible that the lesion in the urinary tract was secondary to a primary focus which had existed in some other part of the body, but which had disappeared at the time of the autopsy. A small scar-like area in the colon, suggesting a healed ulcer, various peritoneal adhesions and an old scar on the outer aspect of the right thigh, each suggested antecedent inflammatory conditions offering possible routes of infection, but no connection could be traced between any of these and the lesion in the urinary tract.

#### Medicine, Chicago.

November.

- 42 Echinococcus Multiloculare. (To be continued.) W. R. Smith, South Australia.
- 43 Word-Blindness Due to a Lesion in the Right Cerebral Hemisphere in a Right-handed Man. C. K. Mills and T. H. Weisenburg, Philadelphia.
- 44 \*An Adjunct to the Fresh-air Treatment of Consumption. G. T. Carpenter, Chicago.

44. Adjunct to Fresh-Air Treatment for Consumption.—There are many reasons, says Carpenter, why persons suffering from pulmonary tuberculosis can not leave their homes for a more suitable climate. To give such patients all the fresh air possible and still permit them to remain indoors, Carpenter devised an apparatus of simple construction, which consists of tubes large enough for the passage of air at normal air pressure, and light enough to be easily handled. The face piece, or mask, can have a transparent front, and is supported by a net cap, which will hold it firm in all positions. Large valves control the passage of air. The tubes are composed of coiled aluminum wire, covered with a light fabric which is impervious to air. These tubes are conducted to a panel which is fitted in an open window, with a suitable aperture to receive it, and a protecting hood on the outside. Openings can also be made through the outside wall of a bedroom to the outer air, choosing a side where the sun shines. The tubes may be detached from the opening, and the opening closed, and the apparatus can be carried to another part of the house and attached to an opening through the wall or paneled window. The mask is so arranged that it can be detached from the net cap, which is convenient in case of a desire to cough or to expectorate. The inhalation tube can be large and contain the exhalation tube, so that but one tube is in sight, and yet all exhalations are carried to the outside of the house. With this contrivance it is possible for patients to have fresh air, no matter what the state of the weather. They can also enjoy a sun bath in a superheated room, if desired, and inhale fresh air at the same time.

#### Texas State Journal of Medicine, Fort Worth.

November.

- 45 Diagnosis and Treatment of Gallstones. J. E. Thompson, England.
- 46 \*Penetrating Wound of the Eyeball. H. C. Hayden, Galveston.
- 47 Abdominal Hysterectomy for Removal of Suppurating Uterine Fibroid. H. A. Barr, Beaumont.
- 48 Medical Aspects of Insanity. J. T. Searcy, Tuscaloosa, Ala.
- 49 Conservative Treatment of Injuries of the Hands and Feet. E. V. Harris, Navasota.
- 50 Considerations Seeking a Higher Standard of Nervous and Mental Health. G. H. Moody, San Antonio.
- 51 Conservative Treatment of Trachoma. E. D. Capps, Ft. Worth.

46. Penetrating Wound of Eyeball.—The feature of special interest in Hayden's case was the fact that the eye which was so badly injured as to seem hopelessly lost should recover itself with comparatively little inflammatory reaction. The patient had been struck in the left eye by a flying projectile, presumably glass, from an exploding oil-carrier. After cleansing the eye, there was seen to be a somewhat vertically placed wound in the conjunctiva and sclera to the nasal side of the cornea. The margins of the wound were ragged, and its shape was that of an obtuse angle, with its apex pointing toward the cornea. The contraction of the internal rectus muscle made the wound gape. There was some blood in the anterior chamber and cloudiness of the anterior part of the vitreous. No foreign body could be found. The scleral wound was closed by one silk suture and the conjunctiva was brought together over it by two sutures. Twelve days after the injury it became necessary to make an incision with the keratome in the lower part of the cornea to allow the blood to flow out from the anterior chamber. The case went on to complete recovery, the patient regaining useful vision.

#### Canadian Journal of Medicine and Surgery, Toronto.

November.

- 52 New Conceptions of the Living Cell; Its Chemical Structure and Its Functions. V. C. Vaughan, Ann Arbor, Mich.
- 53 Prevention of Insanity. C. Meyers, Toronto.

#### The Ophthalmic Record, Chicago.

October.

- 54 Pterygium. T. H. Shastid, Harrisburg, Ill.
- 55 Vernal Conjunctivitis in the Negro. D. Roy, Atlanta, Ga.
- 56 Trachoma as Treated by Dr. Herman Kuhnt of Koelnigsberg. F. E. Brawley, Chicago.



## Vermont Medical Monthly, Burlington.

November 25.

- 57 Uncommon Acute Infections with Surgical Treatment. S. E. Maynard, Burlington.  
 58 Climatic Treatment of Tuberculosis. J. S. Horner, West Pawlet, Vt.

## Chicago Medical Recorder.

November 15.

- 59 The Conservative Treatment of Severe Ocular Injuries. F. Allport, Chicago.  
 60 High Forceps, Pelvic Inlet Forceps. Its Indications and Relations to Forceps and Version. G. Schmauch, Chicago.  
 61 Formalin in the Treatment of Diseases of the Ear, Nose and Throat. O. J. Stein, Chicago.  
 62 Rare Specimen of a Roentgenogram of a Brain Tumor. M. Relchmann, Chicago.  
 63 Notes on the Structure, Technic and Diagnostic Advantages of the Cystoscope. F. A. Leusman, Chicago.  
 64 Urinary Antisepsis with Hexamethylenamine (Urotropin). J. C. Warbrick, Chicago.

## Bulletin Johns Hopkins Hospital, Baltimore.

November.

- 65 Contributions of Pharmacology to Physiology. H. Meyer, Vienna.  
 66 Observations on Several Cases of Acute Pancreatitis. W. S. Thayer, Baltimore.  
 67 Diaphragmatic Grooves on the Liver. R. O. Moody, San Francisco.  
 68 Rise of the Present Conceptions as to the Cause of the Heart Beat. E. G. Martin.

## Illinois Medical Journal, Springfield.

November.

- 69 Edema of the Lungs Following Thoracentesis. S. M. Miller, Peoria.  
 70 Considerations on Phlegmon of the Orbit. C. H. Beard, Chicago.  
 71 Nervous Cases for the General Practitioner. J. Grinker, Chicago.  
 72 Pneumonia in Children. J. C. Cook, Chicago.  
 73 \*Practical Significance of Certain Common Symptoms in the Upper Abdomen. J. E. Percy, Galesburg.  
 74 Pathology and Diagnosis of the Lesions of the Spinal Cord and Peripheral Nerves. F. P. Norbury, Jacksonville.  
 75 Cases Demanding Removal of the Eye of Interest to Physician and Surgeon. J. B. Loring, Chicago.  
 76 Inversion of the Uterus. P. L. Markley, Rockford.  
 77 Ocular Manifestations of Chronic Nephritis. L. E. Schwarz, Chicago.  
 78 Medical Treatment of Nephritis. A. R. Elliott, Chicago.  
 79 Bronchoscopy for Removal of Foreign Bodies from the Lungs. E. F. Ingals, Chicago.
73. See abstract in THE JOURNAL, July 8, 1905, page 78.

## Texas Medical Journal, Austin.

November.

- 80 Effect of Lesions of the Oral Cavity on Other Organs and on the System at Large. P. Cheaney, Dallas, Texas.  
 81 Abdominal Section for Fecal Impaction. J. M. Neel Bonham, Texas.  
 82 Hemoptysis, Causes and Treatment. L. Sexton, New Orleans, La.

## Western Medical Review, Lincoln, Neb.

November.

- 83 Indications for Operation in Mastoid Disease. S. E. Cook, Lincoln.  
 84 Mastoiditis with Spontaneous Perforation into the Digastric Fossa. F. S. Owen, Omaha, Neb.  
 85 Diagnosis in Hemorrhage from the Gastrointestinal Tract. W. F. Milroy, Omaha, Neb.

## Louisville Monthly Journal.

November.

- 86 Nervous Disorders of Children. J. Punton, Kansas City, Mo.  
 87 Illustrative Cases in Abdominal and Pelvic Surgery. L. S. McMurtry, Louisville, Ky.

## Oklahoma Medical News-Journal, Oklahoma City.

November.

- 88 President's Address. W. T. Tilly, Pryor Creek, I. T.  
 89 Typhoid Fever. P. Donohoo, Afton, I. T.  
 90 Gastric Ulcer. F. M. Duckworth, Claremore, I. T.  
 91 Perineal Prostatectomy. V. Berry, Wetumka, I. T.

## Northwestern Lancet, Minneapolis.

November 1.

- 92 Etiology and Pathology of Lobar Pneumonia. J. W. Aird, Provo, Utah.  
 93 Symptomatology and Diagnosis of Pneumonia. F. H. Raley, Salt Lake City, Utah.  
 94 General Treatment of Pneumonia. C. M. Wilson, Park City, Utah.  
 95 Surgical Complications in Pneumonia and Their Treatment. S. H. Allen, Salt Lake City, Utah.  
 96 Present Status of the Treatment of Prostatic Hypertrophy. E. O. Jones, Murray, Utah.  
 97 Tubercular Cyst of the Mesentery. A. E. Spalding, Luverne, Minn.

## Kentucky Medical Journal, Louisville.

November.

- 98 The Relation of Laboratory Methods to Medicine. J. T. McClymonds, Lexington, Ky.  
 99 The Business Side of Medicine. H. F. Bean, Auburn, Ky.  
 100 Auto-intoxication and Infection. L. T. Eckler, Sunrise, Ky.  
 101 Psychic Influence as a Therapeutic Agent. A. J. McNees, Lancaster.

- 102 Some Advantages to be Derived from the Use of Small and Frequently Repeated Doses of Medicine. A. Dixon, Henderson, Ky.

- 103 First Case of Placenta Praevia Centralis. S. B. Bunch, New Roe, Ky.

## Journal of the Association of Military Surgeons of the United States, Carlisle, Pa.

November.

- 104 Experiences During the Russo-Japanese Naval War 1904-1905. S. Suzuki, Tokio, Japan.  
 105 Difficulties in the Diagnosis of Yellow Fever, as Seen on the Isthmus. H. C. Curl, U. S. N.

## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

November 18.

- 1 \*Operative Treatment of Simple Fractures. W. A. Lane.
- 2 Operative Interference in Fractured Clavicle. H. N. Taylor.
- 3 Case of Congenital Synostosis of Both Upper Radioulnar Articulations. S. Hamilton.
- 4 \*Influence of Posture on Normal Cardiac Sounds and on Normal Cardiac Dullness. W. Gordon.
- 5 \*An Aid to Prognosis in Typhoid. R. M. Simon.
- 6 Diarrhea Caused by the Bacillus Prodigiosus. L. C. Parkes.
- 7 \*Spirochetes in Parangi (Yaws). A. Castellani.
- 8 John Murfeld (1393) and Medical Study in London During the Middle Ages. N. Moore.
- 9 Case of Traumatic Asphyxia. W. S. Robertson.

1. Operative Treatment of Fractures.—Lane discusses the treatment of simple fractures devised by him thirteen years ago, and cites illustrative cases.

4. Influence of Posture on Heart.—Gordon is of the opinion that the change in the normal heart sounds produced by change of posture may be explained, in part, at least, by the different relations of the valves to the weight of blood in contact with them in the different positions. An examination of 36 consecutive unselected cases with normal hearts showed that posture also affects the deep cardiac dullness, although in a very small number of cases the over limit of dullness rises instead of falls.

5. Aid to Prognosis in Typhoid.—For the last nine years Simon has made daily observations of the amount of urine passed by every patient suffering from enteric fever. He found that polyuria occurred not only in every case that was doing well, but also in many cases of great severity in which no general improvement or amelioration of symptoms could be observed. He also found that even in severe cases, if polyuria occurred, the patients all recovered. In no cases in which polyuria was noted has he known perforation to occur, and in no case has hemorrhage of any moment ever occurred after polyuria had been established. Furthermore, relapses occurred only rarely when polyuria had once begun.

7. Parangi.—In 7 out of 11 cases of parangi Castellani found spirochetes, one variety being identical with the organism described by Schaudinn. Peculiar oval, chromatin-containing bodies were also observed in 4 cases, 3 among those presenting spirochetes. Castellani does not offer any suggestion as to the identity of these bodies.

## The Lancet, London.

November 18.

- 10 Pathology, Affinities, and Treatment of So-Called Bleeding Polypus (Discrete Angelioma) of the Septum. L. H. Pegler.
- 11 \*Advanced Cancer of Breast Treated by Operation and X-ray. A. M. Sheild and H. L. Jones.
- 12 Bier's Osteoplastic Amputation. J. H. Pringle.
- 13 Case of Vesicovaginal Fistula Followed by Hematometra and Pyonephrosis. J. Phillips.
- 14 Glass a Substitute for Lint in the Treatment of Granulating Wounds. J. L. A. Aymard.
- 15 Position, Use and Abuse of Mental Therapeutics. J. W. Springthorpe.
- 16 Case of Gastric Tetany; Gastroenterostomy; Recovery. W. A. Mackay and I. Macdonald.
- 17 Diphtheria in a Patient 79 Years of Age, with Subsequent Freedom from Old Gouty Symptoms. J. Birt.
- 18 Action of External Muscles of Eye and Diagnosis of Ocular Paralysis. D. M. Mackay.

11. Operation and X-Rays in Breast Cancer.—Sheild operated on a woman aged 46 for an advanced hard carcinoma of the breast. The axillary lymph glands were removed as well as the lower portion of the pectoral muscle. Although the wound could not be closed, healing progressed satisfactorily. Four months later there was evidence of a recurrence in the intercostal spaces. Eight or ten nodules were removed, and two months afterward six more nodules were removed. A



fourth operation was done three months afterward. The patient's condition remaining unfavorable, *x*-ray treatment was advised. In addition the patient was ordered to take 5 grains of quinin hydrochlorate on the mornings of the days of the *x*-ray applications. For two months *x*-ray applications were made twice a week; then once a week. Within three weeks from the commencement of the treatment the patient's condition improved, and at present she is quite well. There is no sign of carcinoma. The *x*-ray applications were of twelve minutes' duration, the tubes used being soft or of medium hardness, and the current between 0.5 and 0.8 mp. The surrounding parts were not screened except the face, arm and forearm. There was no dermatitis or pigmentation.

#### Glasgow Medical Journal.

October.

- 19 \*Radical Cure of Inguinal Hernia. J. H. Nicoll, Glasgow.
- 20 Pathogenesis of Enteric Fever. A. R. Ferguson.
- 21 Agglutination Test in Diagnosis of Enteric Fever. R. M. Buchanan.
- 22 Abortive Cases of Enteric Fever. J. Brownlee.
- 23 Diagnosis of Peritonitis in Enteric Fever. F. Macrae.
- 24 Surgical Aspects of Enteric Fever. T. K. Dalziel.

19. Radical Cure of Inguinal Hernia.—The method of operating followed by Nicoll is applicable to both femoral and inguinal hernia. Its main features are: 1, The employment of the sac to form an intra-abdominal buttress over the internal aspect of the hernial aperture; 2, the use of the pubic ramus as a *point d'appui* in the process of closure of the hernial canal, and 3, the additional security of closure obtained by the superposition on the bone sutures of a plane of musculo-fascial sutures. In ordinary cases Nicoll says that his method gives results as good as, but no better than, many of the other methods in use. In severe cases—cases of large hernial aperture, or lax and atrophic parietes, or high intra-abdominal tension from omental corpulence—the method, with its double closure of the canal, by bone suture, followed by musculo-fascial sutures, attains a high degree of security. One of the main ideas concerned in the application of this method of inguinal hernia is to reinforce in such cases the defective Poupart's ligament by the backing of the pubic ramus. The treatment and final bestowal of the sac are carried out as in femoral hernia, the sac being lodged over the internal aspect of the internal inguinal ring, as a pad resting between the parietal peritoneum, on the one hand, and the fascia transversalis on the other. With blunt retractors the spermatic cord (or round ligament) is pulled upward, and Poupart's ligament downward. An incision is carried along the superior aspect of the pubic ramus. This divides the iliac fascia, the origin of the pectineus, and the periosteum; its limits are the pubic spine and the femoral sheath. Both margins of the periosteal wound are slightly detached. The bone is then drilled near its upper margin in two places, from half an inch to one inch apart. The drill-holes are situated somewhere between the pubic spine and the femoral sheath, their exact position varying with the shape and size of the hernial aperture. The drill may be applied to the bone above the level of the retracted Poupart's ligament in cases in which that is sufficiently lax to afford the necessary room for passing the drill transversely through the bone. In cases in which that is not so, the drill should be applied to the anterior surface of the bone, below the level of Poupart's ligament, and, in consequence, after perforating the pubic portion of the fascia lata. Transverse perforation of the bone is essential. Oblique perforation places the internal apertures of the drill-holes far down on the posterior aspect of the bone, and makes them more or less inaccessible. A stout absorbable ligature is passed in the form of a large mattress suture, through the internal pillar of the hernial aperture. Nicoll says that it is essential that this should have a "good bite" of the conjoined tendon and of the transversalis fascia; it may or may not include the external oblique. During the placing of the suture the peritoneum is protected by the finger passed through the canal into the extraperitoneal fat behind the internal pillar. The ends of the sutures are passed out through the holes drilled in the bone. The sutures may pass in front of the spermatic cord or behind it as may seem best to secure firm closure of the canal without undue compression of the cord. In the former procedure the cord will

occupy the position of the direct inguinal hernia, in the latter that of the oblique variety. The ends of the two loops of ligature are tied separately. The tightening of the knots brings the internal pillar down into the periosteal incision, and lodges it firmly against the bone. The factor in choice of the position of both drill and ligature knots is the degree of relaxation which has occurred in Poupart's ligament. In all cases the knots should be tied firmly to lodge the internal pillar against the bone. Here the amenity of the spermatic cord is efficiently protected, as is that of the femoral vein in the femoral operation, by adjusting the position and size of the loops of suture in the internal pillar, and not by varying the tension of the knots. Should threatened compression of cord (or vein) necessitate the "replacing" of the loops, time may be saved by dividing each loop above the bone, and retaining the ends as tractors for the passage of the new sutures. The operation is completed by lifting the lax Poupart's ligament to the anterior surface of the internal pillar and fixing it there by interrupted sutures, which should be of stout catgut or other absorbable material, and should penetrate at least the external and internal oblique muscles. This final step in the operation is made possible solely by the lax condition of Poupart's ligament. It is difficult in a small hernia. The method may be modified in cases in which the operator finds himself unprovided with a drill. The anterior lip of the periosteal incision may be slightly raised, and the ends of the suture carried through it from within outward and tied there. The knot may lie above or below the level of Poupart's ligament. The operation is finished by suturing Poupart's ligament to the anterior surface of the internal pillar as described above. The closure obtained by the modified operation is less secure than when bone suture is employed, but has been found efficient.

#### Journal of Tropical Medicine, London.

November 1.

- 25 Further Note on a Form of Malarial Parasite Found in and Around Jerusalem. J. Cropper.
- 26 Cancer in the Gilbert Islands. A. Robertson.
- 27 Case of Tertiary Syphilis Obscured by Typhoid Sequelæ. W. Hartigan.
- 28 Notes from Angola. F. C. Wellman.
- 29 Smallpox Inoculation in India. G. H. Fink.

#### Bulletin de l'Acad. de Médecine, Paris.

- 30 (Year LXIX, No. 36.) \*Invaginations de l'appendice ileo-cécal. Jalaguier and C. Monod.

30. Invagination of Appendix.—Jalaguier ascribes to invagination of the appendix a certain number of fatal cases of intestinal obstruction in young children. In two cases of scrotal hernia in children in which the appendix was involved he has observed that it possessed the property of vigorous contractions. At one moment soft and small, it would then grow gradually harder and larger, until it formed a stiff, curving rod, easily palpable and even visible through the walls of the scrotum. The contractions starting in the appendix were invariably transmitted to the cecum, which became hard and stiff in turn. It even seemed as if the peristaltic movements of the cecum and large intestine started in the appendix, and were propagated thence to the rest of the mechanism as the crank of the automobile starts the machinery to work. In case of disturbances in the cecum the contractions of the appendix might not be passed along, and the result would be invagination of the latter in the former. He has observed 3 cases of this kind. In the first the invagination became spontaneously reduced; in the second it was a casual discovery at an appendectomy after subsidence of appendicitis, and in the third, symptoms of enterocolitis were accompanied by a tumor suggesting a floating kidney, which appeared and vanished at intervals. The tumor was assumed to be a recurring invagination, and the lower part of the cecum, part of the appendix and the ileocecal valve were found invaginated in the cecum, while the ileum was also invaginated to a depth of 2 cm. The patients were children from 7 to 11 years of age. Nineteen published cases of invagination of the appendix are reviewed and tabulated, and also Wallace's case in which the appendix was passed in stool, the patient having thus performed an auto-appendectomy.

#### Semaine Médicale, Paris.

- 31 (XXV, No. 46, Nov. 15.) \*Le syndrome myotonique. L. Lévi.



31. **The Syndrome of Myotonia.**—Lévi proclaims that the sarcoplasmic theory in regard to the origin of Thomsen's disease or myotonia congenita connects all the various forms of this disease while distinguishing them. This theory is based on the comparison between the myotonic syndrome and the functions of sarcoplasm, the interfibrillary substance of the striated muscles. He analyzes the literature on the subject and describes the various forms of acquired and congenital myotonia, citing typical examples of each. His arguments tend to prove that the muscular tonus, the function of the sarcoplasm, exhibits the myotonic syndrome when in exaggerated function. This myotonic syndrome may be the result of imperfect development of the muscle or of toxic or nervous irritation of the sarcoplasm.

#### Berliner klinischer Wochenschrift.

- 32 (XLII, No. 40, Oct. 2.) Practical Value of Commercial Diagnostic Fluids in Typhoid.—Ueber die prakt. Leistungsfähigkeit diagnostischer Flüssigkeiten für typhoide Erkrankungen des Menschen. P. P. Klemens (Prague).
- 33 \*Die placentare Uebertragung der natürlichen Immunität (transmission of immunity). A. Schütz (Budapest).
- 34 Determination of "Dumb-bell Bacillus" in Chronic, Villus-Forming Polyarthritis, and ueber Beziehung der Syphilis zu derselben. M. Schüller.
- 35 \*2 Fälle von Nephritis achlorica mit vikarierender Hypersekretion des Magens (of stomach). H. J. Bing (Copenhagen).
- 36 \*Behandlung des Schnupfens der Säuglinge und kleinen Kinder (coryza in young children). K. Vohsen.
- 37 Intravenöse Injektionen. T. A. Maass.

33. **Natural Immunity.**—The conclusions of Schütz's investigations are that the new-born child acquires its natural immunity by way of placental transmission. The colostrum has no protective action, and when diphtheria antibodies can be found in the blood serum, they may be entirely absent from the stomach contents. The protecting power of the child's serum is never higher than that of the mother's serum. The presence of diphtheria antibodies in the blood serum of young infants does not indicate that they are actually immune to the disease, only, at most, that their receptivity has been diminished.

35. **Nephritis with Complete Absence of Chlorids.**—Bing relates the particulars of 2 cases of nephritis distinguished by the entire absence of chlorids from the urine. When the salt in the organism accumulated to a certain point it was eliminated into the stomach by an excessive gastric secretion, and this hypersecretion always induced copious vomiting. The vomiting occurred invariably after the patients had eaten much salt. The nephritis was not very severe, and conditions were finally restored approximately to normal. The albuminuria gradually subsided, the chlorids appeared in the urine, and the attacks of vomiting ceased. The freezing point of the blood had remained normal throughout, and there was no tendency to dropsy. The exact similarity between 2 cases suggests that the syndrome observed may be regarded as a special affection. The patients were a laboring man and woman in the thirties, both previously healthy.

36. **Treatment of Coryza in Infants.**—Vohsen calls attention to the fact that coryza paves the way for otitis, gastrointestinal disturbances, pneumonia and cerebrospinal meningitis, and emphasizes the importance of treating it to ward off these secondary affections. He relieves coryza in adults by reducing pain and swelling with a solution of suprarenal extract, cocaine and water, applied on a cotton-wound wire. As infants are unable to blow their nose, this measure does not help them. He accomplishes the desired purpose with what he calls the air nose douche. A rubber tube about 25 cm. long, with the nose end cut slanting, is inserted in one nostril and air is blown into the nostril under moderate pressure from a rubber bulb or the mouth. Infants and small children usually resist and scream when the tube is being inserted, and this closes the entrance into the air passages below, so that the air blown in pours out at once through the other nostril. The air douche is always given on the side that is closed the most. It is repeated before the child is fed; the secretions escape with the air and are thus blown out through the other nostril. The same procedure will be found a great help for older children when there is difficulty in blowing the nose. In one instance Vohsen was thus able to release and to evacuate in the most

gentle manner a complete fibrinous cast of the nose and nasopharyngeal space in a case of diphtheria in a child of 2. The air douche is also useful for diagnosing adenoid vegetations. He has never noticed anything suggesting danger for the middle ear from the air douche. Others have advocated aspiration of the contents of the nose, but this is liable to increase the hyperemia without insuring as radical cleansing as his technic. The nasal air douche has never failed to relieve the obstructed condition of the nose in young children when the latter is due merely to an acute infection.

#### Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1611.

- 38 (XXIX, No. 38, Sept. 23.) Ueber den Kaiserschnitt in der Agone und post-mortem bei herzfehlerkranken Schwangeren (Caesarean section in heart disease). Busaila.
- 39 Kontraktions-Ring und innerer Muttermund (internal os). O. Schaeffer.
- 40 Pro Domo. H. J. Kreutzmann (San Francisco).
- 41 (No. 39.) Proportions Between Sexes of Newborn Infants, with Special Regard to Macerated Children.—Geschlechtsverhältnis der Neugeborenen mit besonderer Berücksichtigung der mazerierten Kinder. C. J. Bucura.
- 42 \*Elevating the Pelvis for Spinal Anesthesia.—Beckenhochlagerung bei Rückenmarksnarkose. R. Freund (Veit's clinic, Halle).
- 43 \*Die Bier'sche Stauung in der gynäkologischen Praxis (congestive hyperemia). J. Rudolph.
- 44 (No. 40.) \*Untersuchungen ueber das Wesen der Eklampsia (nature). M. Reeb.
- 45 Ueber die sekretorischen Fähigkeiten des amniotischen Epithels (secreting capacity). O. Polano.
- 46 Zur Kasuistik und Technik der Hebotomie.—Eine neue Hohlsondennadel zur Einführung der Gigli'schen Drahtsäge (needle for introducing wire saw). L. Seeligmann (Hamburg).
- 47 \*Wechselnder Tonus der Gebärmutter auf intra-uterine Reize hin (varying tonus of uterus). O. Schaeffer.
- 48 (No. 42.) \*Zur Pubiotomie. K. Reifferscheid. Id. H. Hohlweg.
- 49 (No. 43.) Behandlung des intraperitonealen Blutergusses nach Tuben-Ruptur (hemorrhage). H. Füh.
- 50 \*Ein neues Operations-Verfahren zur Heilung des totalen Prolapses bei klimakterischen Frauen. T. Landau (Berlin).
- 51 Missed Labour bei Placenta prævia centralis. Chvojka.

42. **Spinal Anesthesia with Elevated Pelvis.**—Freund had occasion to operate in 2 cases of carcinoma of the cervix requiring the elevation of the pelvis. The operation was done under spinal anesthesia induced with 0.06 gm. stovain and a little extract of the suprarenal gland and salt, the combination known as Billon's mixture. The anesthesia was complete in four or five minutes and lasted for an hour and a quarter to two hours. One of the patients showed minimal symptoms of collapse, weaker pulse, cold sweat on the face and slight groaning, but these symptoms were slight and transient. The second patient had only the two last symptoms in an almost imperceptible degree. There was no pain, and after the operation the patients were entirely free from vomiting, headache or fever, and did not present the appearance of having just passed through a severe operation. One left her bed the fourteenth day and the hospital the seventeenth. The other was so debilitated that a longer period was necessary for her to regain strength. In 5 other cases of tuberculous peritonitis, echinococcus of the mesentery, carcinoma of the ovary or myoma with carcinoma of the ovary, spinal anesthesia by this technic, with the pelvis raised, gave invariably excellent results.

43. **Bier's "Passive Congestion" in Gynecologic Practice.**—Rudolph discusses the three ways in which Bier induces artificial congestive hyperemia: by superheated air, by constricting the limb above, and by the suction of an air pump. The superheated air acts in the same way and is fully as effective as irrigation with hot water, and can be used for the same indications. He gives illustrations of the wood, asbestos and metal, bent, flaring tube which he uses when applying superheated air to the vagina. Also of the solid glass speculum with a cork plug in the flaring end, through which passes a tube from a vacuum pump. By inducing suction with the pump the parts can be seen to swell and become dark red in color. Some blood usually accumulates in the speculum. This local suction is indicated in case of inflammatory processes in the cervix or corpus uteri. The result obtained depends on the greater or less stability of the tonus of the vessel nerves. The uterus as a whole is liable to be influenced by this stimulation of the nerves. Most of the women complained of labor-like pains after the suction had lasted some time. Amenorrhea is often favorably influenced. Suction might also prove an excellent preliminary to dilatation of the internal os. It makes the tis-



sues softer, collects blood in them and renders them less sensitive. The suction speculum is merely a glass speculum, syringe and tube, and the *modus operandi* is extremely simple. The blood-drawing action of the vacuum suction suggested to him that possibly the opposite—the compression with air—might have the contrary effect and check bleeding. He tried this measure in 2 cases, filling the vagina with filtered air under pressure. This pneumatic tamponing accomplished the desired result very promptly. He does not think that there is danger of air embolism except in case of a recently delivered uterus, but still great caution should be exercised with this air tamponing. By alternating suction and compression from the vacuum pump, it might prove possible to draw down and to push up the uterus in turn, thus massaging its supporting ligaments and toning them up if relaxed.

**44. Nature of Eclampsia.**—Reeb has succeeded in isolating from the urine of eclamptic women a yellowish, insoluble mass which induces paralysis when injected into frogs and guinea-pigs. This substance was never found in the urine of normal parturients. He also pulverized the brains of two women dead of eclampsia and found that the powder induced progressive paralysis in rabbits. He suggests the possibility that in the organism of the pregnant woman or in that of the fetus or in the placenta, some tetanizing poison may be produced which is eliminated without disturbance under normal conditions, but which accumulates and causes intoxication in case its elimination is interfered with in any way. He suggests, as an analogy, samandarin which is a normal metabolic product of the salamander, but which has first an exciting and then a paralyzing action.

**47. Varying Tonus of Uterus in Response to Intrauterine Stimuli.**—Schaeffer proclaims that the varying tonicity of the uterus is due to vasomotor as well as to purely motor influences. It is a co-ordinate function. Every dilating stimulus emanating from the internal os has a regular, dilating influence, even on the non-gravid uterus. The fundus balloons out regularly on all sides and stretches upward. The grating during curettement is due to the formation of ledges by the especially strongly contracting muscularis. The uterus of nulliparæ is not capable of a high degree of relaxation. A predisposition to a high degree of relaxation is afforded by retroflexed and originally hypoplastic uteri, by those with edematous myometritis and in anemic multiparæ, in uteri after abortion with metrorrhagia and in cases of degeneration of the ovaries. The uterus in these cases may bag out or may be asymmetrically stretched. The difference may be from 2 or 3 cm. to 11 or 12 cm., and is noted when the sound is introduced into one of the horns of the fundus. The uterus should be curetted only with a blunt spoon in such cases. If it measures longer than from 12 to 14 or 15 cm., this suggests the suspicion of defective involution of the entire fundus, especially of one horn after an early abortion. Schaeffer's experience has shown further that affections of the adnexa causing metrorrhagia also induce a predisposition to a lively alternating tonus, similar to that of pregnancy, and from this up to paralysis. The sound may show a difference of from 8.5 to 10.25 cm. during a single examination of the subinvolved uterus. Perforation may occur without the slightest sensation of resistance, and even with a wide metal dilator, but always and exclusively in the vicinity of the tubes.

**48. Extramedian Symphyseotomy or Pubiotomy.**—These two communications each describe 4 cases in which women were delivered by sawing the pubic bone on one side. The results, both immediate and remote, were most excellent.

**50. Operation for Total Prolapse of Climacteric Women.**—The main features of the technic which Landau describes are the fixation of the posterior part of Douglas' cul-de-sac to the highest part of a sagittal incision in the vagina. The operation is a kind of incomplete extirpation of the uterus with this permanent fixation of Douglas' pouch. A muscular support is retained from the rear wall of the cervix or corpus uteri or both, and the cul-de-sac is thus strengthened by resistant tissue, so that it can hold up the contents of the abdomen. The operation is a combination of an exaggeration of Wertheim's technic with almost total resection of the uterus.

**Deutsche medizinische Wochenschrift, Berlin and Leipsic.**

- 52 (XXXI, No. 41.) Die Behandlung der Gallensteinkrankheit (gallstones). T. Rosenheim. Clinical lecture.  
 53 Isolierte neuritische Lähmungen von Bauchmuskeln (paralysis of abdominal muscles). O. Minkowski.  
 54 \*Unfall und multiple Sklerose (and trauma). E. Grossmann.  
 55 \*Unterbindung der Venæ spermaticæ und hypogastricæ bei puerperaler Pyämie (ligation in treatment). H. Haeckel.  
 56 \*Ueber Prostatektomie. A. Schlesinger.  
 57 Ueber isolierte subcutane Fissuren der langen Röhrenknochen (in long bones). K. Forsterling.  
 58 \*Ueber die Spirochæta pallida. C. Siebert.

**54. Trauma and Multiple Sclerosis.**—Grossmann describes the case of a strong, young laboring man of 28 who fell from a moderate height while cleaning a window; he was leaning against a wire which broke. He was unconscious for a short time and two days later, when examined in the hospital, exhibited a typical case of multiple sclerosis. His friends had never noticed any indications of anything abnormal before the accident, but it seems impossible for the atrophy of the optic nerve, the "intention tremor" (on attempting voluntary movements), and the differences in the knee jerks to have developed in the course of two days. The multiple sclerosis must evidently have developed in two phases. In the first it remained latent and did not interfere with the man's working capacity. With the trauma the affection entered its second, severer phase. The man did not mention the accident, and it was only learned accidentally later. The case illustrates the way in which trauma can exaggerate an existing multiple sclerosis, but it also casts doubt on the assumption that trauma alone is able to induce the affection.

**55. Ligation of Ovarian and Hypogastric Veins in Puerperal Pyemia.**—Haeckel comments on the 4 cases of this procedure that have been published since Trendelenburg first suggested it. Michels reported one, and Bumm has recently published another successful case. Haeckel applied it in the case of a woman of 42 who presented evidences of pyemia after the removal of a vesicular mole. The fever persisted and severe chills recurred every day, but there were no signs of metastatic suppuration and the genital findings were normal, only in the parametrium something resembling a soft worm could be felt. After two weeks of this condition he opened the abdomen on the median line, but found no indications of inflammation or adhesion; all the organs were exceptionally pale, the ovarian and hypogastric veins were visible as soft cords. The peritoneum was incised over the right ovarian vein and the vein was ligated with a fine silk thread. The incision in the peritoneum was then extended, the ureter and the hypogastric artery were drawn aside and a fine silk ligature was thrown around the right hypogastric vein. The subserous tissue was a little tougher and less easily pushed aside than in normal conditions. The veins on the left side were then ligated in the same way, the incision in the peritoneum was closed with a running suture and the abdominal wound was closed by three tiers of sutures. The next morning there was a single, comparatively feeble chill and no more for two weeks, when there was a slight intimation of one, but the general health rapidly recuperated after the operation, and in less than six weeks the patient was regarded as cured. Except for a slight, transient swelling of the right leg no local reaction from the ligatures was observed. The operation does not remove the focus, but merely prevents the deportation of infectious material from it to other parts of the body. The focus has to be absorbed, and until this is completed there is a possibility that some small collateral route may convey some of the material into the veins and thus at times induce slight temperature. The conditions are much less favorable when the pyemia is of the acute puerperal form. The process in the veins in this case is not so much thrombosis as ulceration of the vein wall, and the germs are much more virulent. In a typical case of the latter kind he performed the same operation, but it had no effect on the temperature and chills. Bumm, however, has been successful in one case of this kind. In the chronic form, in appropriate, carefully selected cases, ligation of the ovarian and hypogastric veins may cure the patient and prove an important progress in the treatment of such cases.

**56. Prostatectomy.**—Schlesinger's article issues from Israel's surgical service at Berlin. The suprapubic route is preferred there, as the operation is considered simpler, the middle lobes



are more easily reached and the danger of consecutive incontinence is regarded as less, while it discloses stones that might be overlooked with the perineal operation. Total enucleation of the prostate was always accompanied by removal of the prostatic urethra, but it is probable that in many instances it might be possible to spare the urethra, especially when the prostate is large and hard. In such cases there seems to be a membrane of connective tissue between the prostate and the urethra. When the condition of the bladder was good, the suprapubic wound was sutured and a permanent catheter left in the bladder for the only drainage. When the urine was infected an external urethrotomy supplemented the suprapubic operation. The perineal wound always healed without a fistula. In the after treatment the patients are soon allowed to be up and about with the permanent catheter, and it is removed after a time, when conditions allow, and merely reinserted once or twice a day, rinsing the bladder afterward, allowing the urine that escapes through the wound above to trickle into the dressings. Out of 12 cases, 3 were partial prostatectomies. In 2 cases the results were excellent, but in the third there was a complicating bladder stone, and there has been retention since. Catheterization was necessary three times a day; the cystitis has now almost entirely healed. Of the other 9, one patient died three months later from pyelitis; nothing is known of a second, who still had incontinence when dismissed. Two cases were complicated with bladder stones and 2 are still under treatment. The other 4 patients urinate normally without disturbances of any kind. Malignant degeneration was evident in one of the total dozen cases.

58. *Spirochetes in Syphilis*.—Siebert examined 125 patients for spirochetes and failed to find the *Spirochæta pallida* in any of the 46 cases of superficial cancer and other affections, while he found it in 52 out of 66 cases of lues. It was not discovered in a case of malignant syphilis, while specimens were extremely numerous in a case of syphilitic rupia. It was never observed in the blood, and it failed to pass through a porcelain filter.

#### Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 1768.

- 59 (LXXVIII, Nos. 4-6.) Ueber die Früh-Operation bei akuter Appendicitis. A. Krogius (Helsingfors).
- 60 Tuberculous Strictures in Intestine.—Zur pathogenese und Anatomie der auf entzündlicher namentlich tuberkulöser Basis entstandenen Darm-Strikturen, nebst Bemerkungen zur Frage der Darmtuberkulose vornehmlich in der Türkei. Wieting (Constantinople).
- 61 \*Perorale Intubation mit Ueberdrucknarkose (anesthesia under plus atmospheric pressure). F. Kuhn (Cassel).
- 62 Wirksamkeit des Cholins. A. Exner.
- 63 Zur Kenntnis der Fractura capituli humeri (eminentiæ capitatæ). H. Lorenz.
- 64 Zur Frage der Contusions-Exostosen des Oberschenkelknochens (femur). O. Bode.
- 65 Ueber totale congenitale Luxation der Knie-Gelenke, bei 3 Geschwistern (luxation of knee in 3 brothers and sisters). F. Magnus.
- 66 Open Treatment of Wounds and Transplantation—Offene Wundbehandlung und Transplantation. O. Bernhard.
- 67 Zur Behandlung der cicatricellen Larynx- und Tracheal-Stenose. R. Göbell.
- 68 Zur Behandlung des Pleuraempyems. A. Martina.
- 69 Zur Casuistik der tödlichen reflectorischen Anurie beim Menschen nach Nephrektomie wegen einseitiger Nierentuberkulose (fatal reflex anuria after nephrectomy). A. Jenckel.
- 70 Zur Behandlung der myelogenen Sarkome der langen Röhrenknochen (of long bones). Blecher.
- 71 Fall von Myxo-Osteochondro-Sarkom der Tibia. O. Seitz.

61. *Intubation per Os for Anesthesia Under Increased Atmospheric Pressure*.—Kuhn describes and illustrates his instruments and apparatus and a number of clinical cases in which he has applied them. THE JOURNAL has summarized in these columns from year to year his announcements in regard to his technic for introducing the anesthetic directly into the lungs through a tube, thus avoiding all the nose and throat reflexes. Since Sauerbruch invented his method of operating in the air chamber under negative pressure, Kuhn has applied this principle to his intubation technic, but uses plus instead of minus pressure for the purpose. He relates his experiments on himself and in 5 clinical cases. He regards the chloroform-oxygen anesthesia induced by introducing the anesthetic and oxygen directly into the lungs, as a great advance in surgery.

#### Münchener med. Wochenschrift, Munich.

- 72 (LII, No. 40, October 3.) \*Ueber Beri-Beri und Intestinale Intoxikations-Krankheiten im Malaischen Archipel. H. Dürck.

- 73 \*Action of Natural and Artificial Edema.—Einige Wirkungen des natürlichen Oedems und der künstlichen Oedemisirung. E. Joseph.
- 74 Pylorospasmus mit Magen-Hypersekretion und Tetanie. Jonnesco. One case.
- 75 2 Fälle von Malta-Fieber. Roosen-Runge (Hamburg).
- 76 \*Zur Diagnostik der Zwerchfell-Hernie (of diaphragm). A. Herz.
- 77 2 seltene Fälle von subkutaner Sehnenzerreissung (laceration of tendon). F. Bruning.
- 78 \*Kardiolysse bei adhäsiver Mediastino-Perikarditis. Meyer-Westfeld.
- 79 Dauer des Kurgebrauches in Karlsbad beim Gallensteinleiden (length of Carlsbad course for gallstones). F. Fluk.
- 80 Zur Praxis der Lokal-Anästhesie. C. Müller.
- 81 Relations Between "Aggressiveness" and Body Substance of Bacteria.—Beziehungen zwischen Aggressivität und Leibes-substanz von Bakterien. O. Bail. (Concluded.)
- 82 Restriction of Advertising of Secret Remedies.—Zur Verbot der Ankündigung von Geheimmitteln. C. Becker (Munich). See pharmacology item page 1670.

72. *Research on Beriberi*.—Dürck has been making a special study of tropical pathology in the Dutch East Indies. He remarks in regard to beriberi that although we are still ignorant of the agent causing in such a brief space of time such havoc in the nervous and muscular systems, yet one point seems to be established, namely, that the causal agent can not be a living animal or vegetable organism. Until the veil is lifted further, there seems to be little prospect of a rational and successful method of treatment.

73. *Action of Artificial Edema in Bier's "Passive Congestion" Therapy*.—Joseph remarks that the importance of edema as a prominent factor in inflammation has only recently been realized. In the passive, congestive hyperemia induced by constriction of the limb, the edema that forms is static. He measures the amount of the edema by the displacement of water when the limb is placed in a cylinder of water, before and after the constriction. A float on the surface rises, with the water, along a graduated scale in the side of the cylinder. Each cm. that it rises represents a displacement of 200 c.c. The arm of one patient displaced 1,900 c.c. before constriction and 2,750 c.c. after twenty-two hours, showing an accumulation of 850 c.c. of edema in the arm. After removal of the constricting band and suspension of the arm, the displacement was reduced to 2,300 in three hours, showing that 450 c.c. of fluid had passed out of the arm. The displacement varies during the first few hours after removal of the band, the amount of the edema increasing and subsiding in waves, but never regaining its first extent, and gradually subsiding altogether. The accumulation of fluid stretches the walls of the capillaries and dilutes the toxins. Bacteria are unable to live in solutions of their own toxins, and this is one of the reasons why no bacteria are found alive in fresh edema. Toxins are diluted by the edema to such an extent that they are comparatively harmless for the organism. Another factor in the benefits of artificial edema is that absorption is prevented by the mechanical compression of the vessels by the accumulated fluid, and also by the fact that the parts of the body elsewhere are anemic, owing to the local congestion in the constricted limb. In addition to all these advantages of Bier's method of passive congestive hyperemia in the treatment of acute inflammation and wounds, it has the further point in its favor that the treatment of the lesion can be much simpler and gentler than by other technics. After incision of a phlegmon and application of the constricting bandage to the limb above, part of the accumulating serous secretions finds its way out through the wound. If all escaped this way it would be unnecessary to suspend the limb to promote the subsidence of the edema, but enough pours out through the wound to keep it rinsed with a natural irrigation and rendering tamponing or absorbent dressings superfluous. The frequent and painful manipulations necessary to prevent the union of the edges of the wound in severe infections are spared the patient treated with congestive hyperemia. This leaves the wound in peace, and this peace allows the tender structures to recuperate without injury. Under other conditions they suffer from the changing of dressings and absorbent applications, and are liable to fall a prey to necrosis. In conclusion, he remarks that the artificial edemization is only a single factor in the general effect of artificially induced congestive hyperemia. Bier calls the method "Stauungs-Therapie"; "Stauung" means the stowing away of a cargo in a ship, but it is applied to engorgement of any kind, and hence to passive congestion.



76. **Diagnosis of Hernia of the Diaphragm.**—Herz had occasion to observe a case of hernia of the diaphragm in which the descending colon, especially the splenic flexure, rose during inspiration and sank during expiration. He regards this symptom of paradoxical respiration as important for the differentiation of hernia from eventration of the diaphragm. The patient was a man of 30, always healthy, until two years previously he noticed that he was becoming corpulent, perspired more freely and suffered occasionally from dyspnea on exertion. One day he experienced great dyspnea while walking, and coughed considerably. These symptoms becoming more severe, he entered the hospital, complaining of a sense of oppression in the chest, especially at the lower third of the sternum. The percussion findings are illustrated. Herz differentiates the case as one of congenital hernia of the diaphragm with a large defect. The stomach is in its normal place. Lager found in 266 cases of hernia of the diaphragm in which several organs were involved that the stomach was in the hernia in 161 cases and the colon in 145, while in 53 cases in which only one organ was involved the stomach was implicated in 27, the colon in 13, the small intestine in 6 and the omentum only once.

78. **Cardiolysis in Mediastino-Pericarditis with Adhesion.**—Meyer-Westfeld states that besides Brauer's 3 cases and Beck's 3 there is only one other case on record in which an operation was undertaken for the relief of adhesive mediastino-pericarditis. He here describes an eighth case. The results of surgical intervention have invariably been good, accomplishing much more than could be anticipated from medical measures. In his case, the benefit was apparent in the complete subsidence of the symptoms of general stagnation, in the improvement of the symptoms of pseudo-cirrhosis of the liver, the stronger pulse and blood pressure, the vanishing of the relative insufficiency of the mitral valve, and, above all, in the return of an appreciable reserve force in the myocardium. This success is due only partially to the direct relief of the heart by the operation. This consisted in removal of the ribs covering the heart, resecting the fourth and fifth ribs from their attachment to the sternum to the region of the anterior axillary line. The heart thus released from its bonds rapidly recuperated, and soon threw off the disturbance manifested by the relative mitral insufficiency.

#### Therapie der Gegenwart, Berlin.

*Last indexed page 1529.*

- 83 (XLVI, No. 10, October.) \*Congestive Hyperemia in Treatment of Throat Affections.—Ueber die Behandlung akuter Halsaffektionen mittels Stauungshyperämie. H. Hochhaus.
- 84 \*Utilization of Sugar in Enemata.—Ausnutzung von Zuckerklystieren im Körper des Diabetikers. A. Bingel.
- 85 \*Asphyxie (Seheintod) und Tubage. F. Kuhn.
- 86 Verwendung und Einflüsse des Stickstoffoxydul auf den Organismus (laughing gas). B. Müller.
- 87 \*Zur Prophylaxe und Abortivbehandlung der Gonorrhoe. R. Sondermann.

83. **Treatment of Acute Throat Affections with Bier's "Congestive Hyperemia."**—Hochhaus has treated 36 patients with diphtheria, 12 with ordinary sore throat and 7 with erysipelas by strapping a rubber band around the neck. Unmistakable benefit was derived in every case, he says, most pronounced in the diphtheria cases. Among the typical instances he reports is that of a child of 5 with pains in the neck and croupy cough for twenty-four hours. The tonsils were covered with false membrane. Antitoxin was injected and the strap applied to the neck. The false membrane was thrown off the third day, the child being dismissed completely well by the twelfth day. A young man with the same symptoms was treated with the congestive hyperemia alone and was dismissed cured in a week. In cases of erysipelas the process seemed to be arrested by the rubber band around the neck, and the patients could be dismissed in from three to five days.

84. **Utilization of Sugar Enemata in Diabetes.**—The sugar in an enema vanishes from the fluid in a short time, and it has been supposed that it is absorbed by the intestine. Bingel here presents evidence to show that the vanishing of the sugar can be explained by fermentation processes. Probably very little has been absorbed. In none of his tests could he trace the influence of sugar on the elimination of sugar or of nitrogen.

85. **Intubation in Asphyxia.**—Kuhn protests against the application of the term asphyxia—which means arrest of the pulse—to arrest of the respiration. His method of intubation per os for artificial respiration, with introduction of air or oxygen under pressure above that of the atmosphere, has proved in his hands a wonderful technic for resuscitation in cases of apparent death. Dogs continue to breathe tranquilly and normally with both sides of the thorax open when the air is supplied to their lungs under plus pressure, but the moment the supply of air is cut off their lungs collapse and they apparently die. If the stopcock is turned and the air or oxygen is allowed to flow into the lungs once more, they expand at once, and if the heart has not ceased beating entirely the animal promptly revives. In the prevention of chloroform asphyxia, the pulse is an unreliable guide as, when it varies, the trouble is already too far advanced. As a rule, chloroform asphyxia is due to hindrance in the intake of air, and Kuhn thinks that the falling back of the tongue or of the jaw or other mechanical blunder is responsible for the large majority of such cases, and wonders that it does not occur oftener. The intake of air becomes insufficient and gradual carbonic acid gas intoxication results. The respiration is of much more importance than the pulse for the anesthetist. If absolutely free respiration is ensured, the dangers of anesthesia become reduced to the minimum at one stroke. This is ensured, he proclaims, by administering the anesthetic through a tube passing into the upper air passages and extending through the nose or mouth. He is convinced that intubation should be one of the indispensable preliminaries to anesthesia, or at least, that the tube should be at hand, ready for emergencies. It should also be used at once in all cases of arrest of respiration from mechanical or chemical causes. It is easily introduced in an asphyxiated person, and allows immediate artificial respiration with oxygen or not as indicated. In case of drowning, the pelvis should be raised and the head allowed to hang over backward. The tube is introduced through the mouth, and this allows aspirated fluids to escape, while it ensures free respiration as physical measures to induce artificial respiration are instituted. In case of chemical asphyxia, the tube allows the introduction of oxygen, the measure most urgently indicated. Venesection, infusion and massage of the heart are valuable adjuvants. In short, this method of intubation is the alpha and omega of prevention of asphyxia and of resuscitation in cases of apparent death. Kuhn's tube has a shoulder which prevents it from being bitten by the teeth and also prevents it from slipping in too far. See also 61 above.

87. **Prevention and Treatment of Gonorrhea.**—Sondermann applies aspiration to the urethra, followed by rinsing, and has found the combination remarkably effectual in preventing and curing infection. The cannula is perforated; it screws into the center of a rounding skeleton frame a little wider and longer. The top of the cannula is connected with a suction pump on the right and with a jar of water or some medicated fluid on the left. When the stopcock between the jar and the cannula is closed and the suction bulb squeezed, air is aspirated through the cannula out of the urethra and hyperemia is induced, while all the secretions are drawn away and the remotest crevices cleansed. By turning the stopcock, water flows into the urethra and is aspirated out by the pump, thus producing a constant outward flow. He gives an illustration of the simple combination of cannula, skeleton frame, the two jars and the rubber bulb. It has demonstrated its efficacy in prophylaxis of gonorrhea and also in aborting early cases, and it has even effected a cure in one chronic case in his experience.

#### Wiener klinische Wochenschrift.

*Last indexed page 1699.*

- 88 (XVIII, No. 31.) \*Liver in Protection Against Poisons.—Ueber die entgiftende Funktion der Leber. C. J. Rothberger.
- 89 Ueber Spirochätenbefunde im syphilitischen Gewebe. L. Spitzer.
- 90 \*Weitere Beiträge zur Radiometrie. L. Freund and M. Oppenheim.
- 91 (No. 32.) \*Beitrag zur Kenntnis der Herz Dilatation (of heart). A. Selig.
- 92 \*Zur Radium Behandlung des Skleroms. O. Kahler.
- 93 (No. 33.) \*Einfluss der Röntgenstrahlen auf den Verlauf der Leukämie (mit besonderer Berücksichtigung der Blutbefunde). M. Franke.



- 94 Zur Kasuistik der multiplen primären Karzinome. J. Richter.  
 95 Ueber Cytodagnostik des Kolostrums. E. Zuckerkandl.  
 96 \*Zur Behandlung interstitieller Erkrankungen. Fälle von  
 Tabes dorsalis und Myelitis chronica, mit Keratin be-  
 handelt. S. M. Zypkin. (Commenced in No. 32.)

88. **Protecting Action of Liver.**—In Rothberger's experiments on dogs, the animals remained in good health after the liver had been excluded from the circulation by tying off the portal vein. This occurred even when the animals were fed exclusively on meat. Experiences like these shake the foundations of the theory that the liver is the main agent in protecting the organism against toxins from the intestine. If the poisons generated in the intestine do not affect the general organism, he says, we have not the liver to thank for this as much as has been previously supposed. The walls of the intestine probably do not allow the poisons to pass through them.

90. **Radiometry.**—Freund and Oppenheim assert that the chemical appliances which measure the penetrating power of the Roentgen rays behave differently under varying temperatures. All tests to determine the chemical efficiency of the Roentgen rays, therefore, should be made at a standard room temperature, to enable the results to be compared. A temperature of 18 C. (65 F.) they suggest as a good standard. They further assert that biologic effect of the rays does not always parallel the findings of the radiochromometers.

91. **Dilatation of the Heart.**—Selig has been studying the effect of climbing stairs as a test of 40 patients with dilatation of the heart. Comparison of the findings showed that neither the blood pressure nor the pulse rate afforded such accurate information in regard to the functional capacity of the heart as the general aspect of fatigue. The appearance of exhaustion is more conclusive than any symptom. He was surprised to find so many of his patients still capable of considerable exertion without exhaustion, especially those who would be classed as cases of "congestion" dilatation. He believes that there must be another kind of dilatation besides that due to distension from defective contraction and that due to distension from over-supply of blood. The patients with dilatation who yet are capable of considerable effort without exhaustion must belong to this other category. He examined four football players after hard games and found that the blood pressure had dropped from 20 to 45 mm. mercury, and that the pulse had increased by 21 beats, while the apex beat had changed its location by 1.5 cm. in two of the players, and three had considerable albuminuria. None was cyanotic or exhausted, and yet Selig accepts the symptoms described as signs of incipient heart incapacity. Similar symptoms are observed in cases of valvular defect and arteriosclerosis after exertion, but in this case the patients all appear exhausted after exertion.

92. **Radium Treatment.**—Kahler gives illustrations of a case in which great improvement was obtained by combining exposures to radium with the usual measures. The accessible parts were treated with Roentgen rays, while the interior of the nose healed under the radium rays.

93. **Influence of Roentgen Rays on Course of Leukemia.**—Franke reports the details of 4 cases of leukemia treated by Roentgen exposures of the spleen alone. The results were strikingly beneficial, but not enduring. It is impossible to speak of a cure, but the results surpass anything ever realized before, so that Roentgen treatment should be instituted, he thinks, as a routine procedure in all cases of myeloid as well as lymphoid leukemia. He ascribes the improvement observed to the destruction by the rays of the leucocytogenetic tissue in the spleen. This destruction is followed by a reduction in the number of leucocytes in the blood and in the size of the spleen.

96. **Keratin in Treatment of Interstitial Affections.**—Zypkin became impressed with the possibilities of keratin in therapeutics during the course of some experiments on mice in regard to the synthesis of albumin bodies out of albuminoids. He used keratin and gluten principally in his experiments, and found that keratin seemed to prevent the proliferation of connective tissue which was observed in the course of his research in the animals not ingesting keratin. He describes the various premises which led him to the conclusion that the

animal organism has the faculty of synthetically binding keratin with gluten (the main constituent of connective tissue), and hence that keratin might prove effectual in the clinic in treatment of interstitial affections of various parenchymatous organs. He has applied this treatment in 4 cases, commencing with chronic affections of the central nervous system, as the slightest variation in the intensity of the pathologic anatomic process becomes clinically manifest in such cases much more perceptibly than in interstitial affections of other organs. The results answered his expectations. Three tabetics and one patient with chronic myelitis took ten or more keratin tablets a day for several months, and the improvement was actually striking in some and marked in all. He explains the benefit as due to the binding of the gluten in the connective tissue by the keratin, which permits the reabsorption of the new-formed connective tissue. The idea that keratin is not dissolved in time in the stomach is a mistaken one, he says. In conclusion, he remarks that many infectious diseases are accompanied by extensive parenchymatous changes in the internal organs, and yet the organs regain normal functional capacity afterward. This is due to the regeneration of the parenchymatous cells which proceeds unhindered. If the infectious agent has induced proliferation of the interstitial stroma in the organ, the infectious disease leaves behind it a stationary or progressive affection of the organ. The regeneration of the parenchymatous cells is prevented by compression from the proliferating interstitial tissue. It is especially in such cases that keratin may prove extremely useful, putting a stop to the proliferation of the connective tissue, improving certain symptoms and checking the further progress of the affection or curing it completely in time.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

**THE PRACTITIONERS' VISITING LIST** (Heretofore known as the Medical News Visiting List) for 1906. A pocket-sized book, containing memoranda and data important for every physician, and ruled blanks for recording details of practice. The weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years, \$1.25. Lea Brothers & Co., Philadelphia, 1905.

**PROGRESSIVE MEDICINE.** A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., assisted by H. R. M. Landis, M.D., vol. IV. December, 1905. Diseases of the Digestive Tract and Allied Organs: Liver, Pancreas and Peritoneum—Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics—Genito-Urinary Diseases—Diseases of the Kidneys—Practical Therapeutic Referendum. Paper. Pp. 367. Price, \$6.00 per annum. Philadelphia: Lea Brothers & Co., 1905.

**BABY INCUBATORS.** A Clinical Study of the Premature Infant, with Especial Reference to Incubator Institutions Conducted for Show Purposes, by J. Zahorsky, A.B., M.D. Reprinted from a series of Articles in the St. Louis Courier of Medicine, 1905. Cloth. Pp. 135. Price, \$1.00 net. St. Louis, Mo.; Courier of Medicine Co., 1905.

**LECTURES ON AUTOINTOXICATION IN DISEASE, or Self-Poisoning of the Individual,** by Ch. Bouchard. Translated with a Preface and New Chapters Added by T. Oliver, M.A., M.D., F.R.C.P. Second Edition. Cloth. Pp. 342. Price, \$2.00 net. Philadelphia: F. A. Davis & Co., 1905.

**CONTRIBUTION L'ETUDE DE LA FUNICULITE Lympho-toxique dans les Pays Chauds.** By Dr. R. Menocal. Professor de clinique chirurgicale à la Faculté de Médecine de la Havane. Paper. Pp. 28. Havana, Cuba: M. Ruiz y Ca., 18 rue Obispo, 1905.

**MEASUREMENTS OF TWINS.** By E. L. Thorndike. Archives of Philosophy, Psychology and Scientific Methods. Edited by J. Mck. Cattell and F. J. E. Woodbridge. No. 11. September, 1905. Paper. Pp. 64. New York: The Science Press.

**PROFESSIONAL EDUCATION.** United States Bureau of Education. Chapter from the Report of the Commissioner of Education for 1904. Advance Sheets. Chapter XXVII. Paper. Washington: Government Printing Office, 1905.

**MEDICAL AND SURGICAL REPORTS OF THE BOSTON CITY HOSPITAL.** Fifteenth Series. Edited by H. L. Burrell, M.D., W. T. Councilman, M.D., and C. F. Withington, M.D. Paper. Pp. 242. Boston: Published by the Trustees, 1905.

**ANATOMISCHER ATLAS IN STEREOSKOPISCHEN RONTGENBILDERN.** 1. Normale Anatomie. 1. Abteilung: Knochen und Gelenke. By Dr. Ernst Sommer. Mit 20 Tafeln Würzburg. A Stuber's Verlag (C. Kakitsch), 1906.

**SAUNDERS' CATALOGUE OF MEDICAL AND SURGICAL BOOKS.** Illustrated. Revised, November 1905. Paper. Pp. 80. Philadelphia: W. B. Saunders & Co., 1905.



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## Original Articles

### THE ELIMINATION OF CHLORIDS IN NEPHRITIS.

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CHICAGO.

Widal and Javal<sup>1</sup> recently called attention to the inability of many nephritics to eliminate sodium chlorid in a normal manner. The salt retained in the tissues required a certain amount of water to maintain it in the proper molecular concentration, thus leading to edema; they offer this as the probable cause of dropsy in nephritis. This chlorid retention was found chiefly in acute and chronic parenchymatous nephritis, and especially in patients who were edematous. This retention was not found in the interstitial form, and we know that when edema develops in these cases it is usually of cardiac origin. They, furthermore, decided that the impermeability of the kidney to urea and salts did not necessarily go hand in hand, as in the terminal period of Bright's disease there may be marked retention of chlorids, but none of urea, phosphates or sulphates. They report a case of uremia, with daily elimination of 28 grams of urea, but only 0.39 grams of sodium chlorid. For this reason they consider the chlorid elimination as a better index of the functioning power of the kidney than the excretion of urea, and that the unfavorable progress of a case is associated with reduced chlorid elimination. With the chlorid retention there is increased elimination of sulphates and phosphates, and as the chlorids increase these salts diminish.

Only small amounts of sodium chlorid are essential for the animal economy. According to Bunge, a person on a mixed diet requires daily 1 to 2 grams; most people, however, consume 10 to 20 grams. The excess of chlorid is eliminated chiefly through the kidneys. The normal feces contain less than a gram daily, but as a result of diarrhea this may be increased to 4 or 5 grams. The skin eliminates on an average 1,000 c.c. of sweat containing 1 to 2 grams of sodium chlorid. The total daily elimination may, of course, be greatly increased by sweating, and some recent results point to increased sodium chlorid in the perspiration of patients with chlorid retention. In diseases associated with polyuria, as diabetes insipidus or interstitial nephritis, the sodium chlorid intake and excretion may be greatly increased, often reaching 25 to 30 grams daily.

The view is generally held that when a large excess of sodium chlorid is administered to a healthy person this rapidly appears in the urine, the maximum excretion occurring three to four hours after ingestion. Since the

work of Widal, further study has been made<sup>2</sup> of the normal kidney and it has been found that the daily elimination of sodium chlorid suffers wide daily variation without any apparent cause. Koziczowsky found on a fixed diet the daily elimination varied from 9.9 to 23.7 grams in one case and from 6.8 to 14.4 grams in another. He gave people with apparently healthy kidneys an additional 10 grams of sodium chlorid daily for three successive days, having previously estimated the daily output, and reports a chlorid retention of from 18 to 25 grams.

Patients with acute or chronic parenchymatous nephritis, when given, in addition to their usual diet, ten grams of salt, show only moderately increased chlorid in the urine. Except in very severe cases, the amount of urine is increased. When this increased ingestion of salt is continued for several days, the patients gain in weight due to the developing edema, the amount of albumin in the urine is increased, headache, nausea and stupor may develop; in short, a condition resembling uremia. Widal and Javal were able to make the edema appear and disappear at will by increasing or withdrawing the chlorids. The weight of one patient fluctuated from 56 to 60 kilos. The edema rapidly disappeared when the patient was placed either on a milk diet or on meat, bread and potatoes. The addition of ten grams of salt to either diet interfered with improvement. During the disappearance of the edema the daily amount of chlorids eliminated exceeded the intake 3.3 grams. The amount of albumin also decreased from 15 to 3.38 grams daily. When ten grams of salt was added to the milk daily, the urine decreased in amount and the daily retention of chlorids was 4.57 grams, the patient increasing 2.1 kilos in weight, the albumin increasing from 2.4 to 12.12 grams. The patient was then placed on a diet containing 400 grams of meat with bread and 2,500 c.c. of fluids. Within eleven days the weight decreased 3.7 kilos and the albumin had fallen to 0.72 grams daily, the edema reappearing when the salt was added to the diet. Numerous investigators have verified the above results. Koziczowsky reports marked increase in the amount of chlorid in the various organs of patients with uremia. Courmont,<sup>3</sup> in three cases of acute or subacute nephritis, injected subcutaneously normal salt solution. After the second day the urine became scant, and two of the patients developed

2. Only a few references are appended. A complete bibliography may be found in *Centralblatt f. innere Medizin*, 1905, No. 1. Most of the articles on the subject in foreign journals have been repeatedly summarized in the Foreign Current Literature Department of THE JOURNAL. Achard: "Retention des chlorures et pathogenie de l'oedem," Soc. Méd. des Hôp. de Paris, July 31, 1903. "Hyperchloruration et déchloruration," *Ibid.* Nov. 20, 1903. Achard and Loeper: "Rétention des chlorures dans les néphrites," Soc. Méd. des Hôp. de Paris, May, 1903. Chauffard: Soc. Méd. des Hôp., Paris, June 3, 1904. Illyes und Kövesi: *Berlin. klin. Wochft.*, 1902; 1904, Nos. 24, 25 and 26. Strauss: *Zeltft. für klin. Med.*, vol. xlvii.

3. Courmont: *Lyon Médical*, cl, 1903.

1. Widal and Javal: *Presse Médicale*, 41, 1903.



uremia. Nagelschmidt<sup>4</sup> produced an artificial nephritis in dogs and demonstrated chlorid retention with increase of salt in the blood. Castaigne<sup>5</sup> demonstrated that in animals with nephritis moderate amounts of sodium chlorid would double or triple the amount of albumin. He also reports that in patients with nephritis, without albuminuria, after the administration of salt, albumin appeared in the urine.

Kovesi has recently verified Widal's results and given some interesting additional information. Patients with chlorid retention increased in weight and became more edematous after ingestion of excessive amounts of salt, although the fluids taken during this time were not increased and the daily amount of urine not diminished. It must be that the elimination of water by other channels has been lessened. There was no increase in the liquids passed in the stool and there only remain the skin and lungs. He believes as a result of chlorid retention there is a lessening of the invisible perspiration. The amount of evaporation which takes place from the surface of the body is dependent not only on the moisture and temperature of the surrounding air, but also on the molecular concentration of the body fluids. The higher the osmotic pressure the less water is given up.

Soon after Widal's communication I began investigating the subject. The cases for study were obtained chiefly from the wards of Cook County and the Presbyterian hospitals. While no attempt was made to determine the exact intake of salt, the patients were kept on a fairly uniform diet during the period of investigation. In some cases this was milk only; in others, the light ward diet. The chlorids were estimated by the Volhard method. When possible, the patients were weighed daily. The sodium chlorid was administered at first in wafers, but, as this often produced nausea, it was later given in solution. The following method was pursued: The chlorids were estimated daily for nine consecutive days. The first three days the patient had merely the chlorids contained in his food; the following three days he received daily an additional ten grams; then the three following days merely the chlorids in his food.

In the accompanying table the total urine for each of the three-day periods is noted, the total chlorid in each period, the grams of chlorid retained at the end of the period when extra salt was given and the percentage of it in the urine during each period. During the second period ten grams of salt were administered daily, except in the cases indicated by an asterisk, where only five grams were given.

Two cases of acute nephritis were examined: one post-diphtheric with blood, epithelial and granular casts, but only a trace of albumin. There were marked uremic symptoms and moderate edema. The other was of six weeks' duration, the urine containing a large amount of albumin, many granular and epithelial casts, very slight edema. These patients were kept on an exclusive milk diet, consisting of 1,000 c.c. of milk and 250 c.c. of cream. One patient had a chlorid retention of 10.7, the other 24.8. In both there was a visible increase in the edema. One patient was weighed, gaining three pounds during the period, when extra chlorid was given, and losing it quickly after the salt was discontinued. In one case less urine was passed during the period of extra chlorid than in the preceding or following period.

The percentage of chlorid in the urine was increased following the administration of the salt.

Case.	Urine, three day periods, c.c.	Chlorids, gms.	Retained chlorids, gms.	Gms. chlorids per liter.
1. Acute nephritis, moderate edema. ....	1 1680 2 2050 3 2190	13.58 18.14 15.41	..... 23.44 .....	8 8.9 7.01
2. Acute nephritis, marked edema. ....	1 6950 2 6300 3 7500	31.8 36.14 19.5	*10.66 ..... .....	4.6 5.7 1.6
3. Chronic Parenchymatous nephritis; marked edema; myocarditis. ....	1 1150 2 970 3 2380	1. 1.86 2.32	..... 29.14 .....	.86 1.91 .97
4. Chronic parenchymatous nephritis; marked edema....	1 4050 2 4100 3 3360	20. 35.07 18.52	..... 14.93 .....	4.9 8.5 5.6
5. Chronic parenchymatous nephritis; marked edema....	1 5090 2 5300 3 7440	17.55 38.64 31.66	..... 8.91 .....	3.4 7.1 4.2
6. Chronic parenchymatous nephritis; slight edema....	1 3500 2 3800 3 3725	30. 40. 29.25	..... 20. .....	8.5 10.5 7.8
7. Chronic parenchymatous nephritis; marked edema....	1 4600 2 3800 3 2950	28.06 24.96 20.51	..... 33.1 .....	6.1 6.5 7.0
8. Chronic parenchymatous nephritis, probable secondary contracted kidney; no edema.	1 4050 2 5580 3 4270	33.30 55. 21.75	..... *6.7† .....	8.2 9.8 5.1
9. Chronic parenchymatous nephritis; no edema.....	1 6950 2 6300 3 7500	31.8 36.14 19.5	..... *10.60 .....	4.6 5.7 2.6
10. Normal. ....	1 2340 2 5970 3 5040	37.41 44.75 37.45	..... 22.66 .....	7. 7.5 7.4
11. Normal. ....	1 6870 2 9120 3 7090	48.8 67.4 56.4	..... 11.4 .....	7.1 7.3 7.9
12. Normal. ....	1 7580 2 7780 3 5520	37.62 54.7 44.4	..... 12.92 .....	4.9 7.0 8.0
13. Normal. ....	1 3000 2 4000 3 3300	42.84 49.26 36.76	..... 23.6 .....	14.28 12.3 11.1
14. Myocarditis; general edema.	1 3906 2 9840 3 2108	24. 78. 13.	..... 24† .....	6.1 7.9 6.1

\* Patients received five grams extra chlorid daily.  
† Eliminate in excess of chlorids ingested.

Seven patients with chronic parenchymatous nephritis were examined. Six had more or less edema. The patient without edema had probably a secondary contracted kidney. The six patients with edema all had a chlorid retention varying from 8.9 to 29.24 grams during the three days of extra salt. The secondary contracted kidney eliminated 6.7 grams more chlorid than was ingested. In two cases the urine decreased in amount during the period of extra chlorid. Two patients showed marked increase in the edema and both complained of increased headache and stupor. One patient was taking Basham's mixture. A later test was made, with patient taking two grams of diuretin daily, with much better chlorid elimination. The patient with the least chlorid retention died; the one with the greatest retention left the hospital much improved. In two cases with marked edema the albumin was estimated by the Purdy method and the effect observed of potassium acetate, potassium neutral phosphate and theocin on the chlorids and albumin. The results were practically identical in the two cases. During the period of extra chlorid the albumin was decidedly increased. None of the remedies used increased the elimination of chlorid.

Two patients with uremia were examined. Both of these died before the tests were completed, so do not appear in the table. In both cases the urine was scant

4. Nagelschmidt: Zeitft. für klin. Med., vol. 42.  
5. Castaigne and Rathery: Arch. de Méd. expér. et d'anat. path., vol. xv, 1903.



and the daily amount of chlorids less than two grams. Following the administration of salt, the urine was lessened, one case from 500 to 240 c.c., and scarcely any of the extra chlorid appeared. The edema was decidedly increased and the patient's condition worse.

A patient with myocarditis, having fluid in the pleural, pericardial and abdominal cavities, showed marked increase in the daily urine following the administration of chlorids, and excreted 24 grams, or 8 grams daily more chlorid than was ingested. This patient showed actual improvement, which continued after the chlorid was discontinued. This might be considered an increased activity of the kidney due to the ingestion of large amounts of chlorid, analogous to the results of Claude, who found increased elimination of urea following the use of chlorids, or the results of Roque and Lemoine, who found increased activity of kidney to the phloridzin test after the use of common salt. In a single case of this sort, however, no conclusion should be drawn. While we are unable to disprove that excessive sodium chlorid stimulates kidney activity in certain cases, it appears doubtful, especially when we consider its action on the healthy kidney.

Four patients without apparent heart or kidney trouble were tested. All these showed a degree of chlorid retention almost, if not quite, equal to the nephritics. This difference might be mentioned in two, viz., the retained chlorid was eliminated within 48 hours after its discontinuance, while in nephritics it took place more gradually. In each case the administration of chlorids caused a marked increase in the amount of urine. Following the ingestion of the salt, the percentage of chlorids in the urine was increased, not, however, to such a degree as in the nephritics. No edema resulted. Assuming that the salt was absorbed from the intestinal tract, it must have remained in the tissues associated with sufficient water to maintain the proper dilution. In other words, these patients had an undemonstrable edema. The tissues of the nephritics were already water-logged so that any increase in edema was readily observed. In support of this view one of the patients was weighed daily and showed an increase in weight of  $2\frac{1}{4}$  pounds following the administration of the chlorids. Novecourt and Vitry's experiments on nurslings is corroborative of this view. They administered daily for a period of seven days 0.25 to 1 gram of sodium chlorid, and found a greater increase in weight than for the same period on the same amount of food, but without the additional chlorid. They believe this is due to improved nutrition, but it is probably the result of water retention.

A summing up of the evidence would indicate that the chlorid retention in moderately severe nephritis is not greater than in the normal kidney. The terminal stages of nephritis, however, are characterized by very marked impermeability of the kidney to sodium chlorid. This difference, however, exists: in nephritics there is a visible increase in the edema, in the healthy individual there is no detectable edema. It is not necessarily true that a chlorid retention, after moderate excess of salt, exists in every healthy individual, but reports from various writers indicate that such is the rule.

Another phase of the question, and it would seem a much more important one, is the increase in the albuminuria and development of uremia symptoms following excessive chlorid ingestion. The view that the so-called uremia of nephritis is, in reality, a chloremia has little support. It appears that the increased cerebral

edema is the more probable explanation. From a therapeutic standpoint, whatever the final decision regarding the impermeability of the nephritic kidney to chlorid, there is no doubt that excessive salt should be avoided, as it causes not only water retention, but by increasing the osmotic pressure of the blood lessens perspiration and the amount of water lost by respiration. Two grams of sodium chlorid daily are sufficient for the animal economy. Milk contains from 1.2 to 1.7 grams per liter; 100 grams of bread, on an average 1.3 grams; 1,000 grams of beef, 1.15 grams. Vidal reports disappearance of edema and general improvement on a diet consisting of meat, 400 grams; potatoes, 1,000 grams; sugar, 100 grams; butter (unsalted), 80 grams; fluids, 2,500 c.c. This diet contains only 1.5 grams of chlorid. Especially to be avoided are the soups and broths, as they contain large amounts of salt, the broths at the Cook County Hospital containing 11.3 grams per liter, and many patients drink 500 c.c. of this daily. The use of subcutaneous injections of salt is contraindicated, as it may favor the development of uremia. I do not believe that the degree of chlorid retention is necessarily an index of the extent of kidney incompetency. Two cases of nephritis with a mild degree of retention died, while the patient with the highest degree of retention left the hospital much improved.

#### CONCLUSIONS.

In patients with moderately severe nephritis associated with edema, the ingestion of large amounts of sodium chlorid is followed by a chlorid retention. The patient gains in weight, the edema becomes more marked, the albuminuria increases and symptoms may develop resembling uremia.

In patients with severe nephritis, and especially those with uremia, chlorid retention is very marked, as scarcely any of the extra chlorids administered are eliminated.

In individuals with apparently healthy kidneys, following the ingestion of sodium chlorid, there is a chlorid retention equal to that of mild nephritis. The individual gains in weight, but there is no visible edema, no albuminuria and no uremic symptoms appear.

### THE PHARMACOLOGY OF DIETHYLOXY-ACETYL UREA.\*

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Some weeks ago my attention was called to a new group of chemical bodies belonging to the methane series. According to A. H. C. Heitmann and Erik Clemmensen, the discoverers, they are condensation products of urea and the various oxyacetic acids. A consideration of the chemical structure of these compounds led to the belief that all would possess considerable hypnotic power, but the ethyl compound was thought to be the more promising for therapeutic purposes. The originators accordingly prepared and placed at my disposal sufficient quantities of the ethyl derivative in its pure state, and a little later its sodium salt, to undertake a series of animal experiments to demonstrate its pharmacologic properties.

Perhaps the most desirable chemical name that can be given to the compound, as indicating its structure, is the one mentioned in the title of the paper, diethyl-oxyacetyl urea. The chemical formula is given by

\* Read before the central branch of the Am. Physiological Society, March 29, 1905, at Chicago.







*Frogs.*—A series of frogs were injected with small quantities of the drug in the abdominal lymph sac. Very promptly the hypnotic action of the drug was shown, the animals becoming very sluggish, the head falling to the bottom of the cage, but they could be aroused by pinching the toes, when reasonable quantities of the drug had been employed.

*Gold Fish.*—Small gold fish were immersed in solutions of the drug in well-aërated river water, and it was found that their movements became more and more sluggish, until at the end of about fifteen minutes they would float to the surface. In most instances the fish did not show a stage of excitement, as so often occurs when chloral and similar chemicals are used. After a time all respiratory movements of the gills ceased, but, if the fish were placed in fresh water before the entire cessation of respiratory movements, complete recovery occurred in an hour or two. Recovery was hastened if the fish were placed for a few minutes in a dilute salt solution, and then in the aërated river water.

TABLE 2.—DIETHYLOXYACETYL UREA. TOXICITY FOR GUINEA-PIGS WHEN ADMINISTERED PER STOMACH.

Number.	Weight. Average.	Dose per Kilo.	Per Cent. Sol.	Result.
1. . . . .	500 gms.	0.5	10	Lived.
2. . . . .	500 "	0.6	10	Lived.
3. . . . .	500 "	0.6	10	Lived.
4. . . . .	500 "	0.7	10	Lived.
5. . . . .	500 "	0.7	10	Lived.
6. . . . .	500 "	0.7	10	Lived.
7. . . . .	500 "	0.8	10	Died.
8. . . . .	500 "	0.8	10	Died.
9. . . . .	500 "	0.9	10	Died.
10. . . . .	500 "	1.	10	Died.
11. . . . .	500 "	1.2	10	Died.

Minimum fatal dose per kilo 0.8 grams.  
The toxicity was found to be substantially the same when the drug was given subcutaneously.

*Rats.*—A number of gray rats were caught in the stables, and, as they were very wild, were considered desirable subjects for experimentation. Accordingly, a series of them were injected subcutaneously with various doses of the drug, and within a very short time the animals lost their ferociousness, and were soon sleeping quietly in the bottom of the cage. Here again it was possible to arouse them without any great difficulty, but as soon as they were allowed to remain quiet they quickly went to sleep again. The following day they were found as untamable as in their natural condition. They were then destroyed by the use of illuminating gas, and post-mortem examination showed but little irritation at the point of injection.

*Guinea-Pigs.*—A large number of these animals, weighing from 480 to 500 gms., received the drug subcutaneously and per stomach. They were found to be less susceptible to the hypnotic influence of the drug than rats, dogs or frogs. The animals occasionally, when large doses were given, showed a period of excitement similar to that produced by chloroform, ether, etc., and only became unconscious when very large doses were administered. In a number of instances the animals were destroyed with illuminating gas, and evidence of inflammation searched for at the point of injection. Here, again, as in the case of the rats, very slight reaction had occurred.

#### GENERAL ACTION ON TEMPERATURE, RESPIRATION AND PULSE.

A series of twenty dogs of different weight and breed were used for the purpose of determining the general action of the drug when administered to the animals in various ways: per stomach, per rectum, subcutaneously, intraperitoneally and intravenously. All the experiments

showed conclusively that the compound possesses decided hypnotic properties, that in reasonable doses it did not have much influence on temperature, respiration and pulse. Table 3 is typical of the results ob-

TABLE 3.—SODIUM SALT OF DIETHYLOXYACETYL UREA. EXPERIMENT 16. MARCH, 22, 1905. DOG. WEIGHT 14 K.

Time.	Temperature.	Respiration Rate.	Pulse rate.	Remarks.
1 p. m.	103.	16	114	Normal.
1:30 "	102.8	14	110	Normal.
2:00 "	...	...	...	2.8 c. c.; 50 per cent. of the sodium salt of diethyloxyacetal urea in gelatin capsule per stomach.
2:30 "	102.4	18	124	Drowsy.
3:30 "	103.3	17	120	Sleeping soundly but can be readily awakened.
4:30 "	101.9	16	108	Sleeping soundly but can be readily awakened.
5:30 "	102.	16	110	Awake, but still remains drowsy. Can walk readily without incoördination.
8:30 a. m.	101.8	18	100	March 23. Playful. Ate and drank during night. Defecated and urinated.
9:00 "	...	...	...	5.6 c. c. 50 per cent. sol. of the drug given as before.
10:00 "	101.1	16	100	Becoming drowsy. Defecated.
12:00 "	101.3	18	106	Sleeping soundly, awakened with some difficulty.
1:00 p. m.	100.8	17	104	Sleeping soundly. Walks without difficulty when aroused, but goes to sleep at once when undisturbed.
3:00 "	100.8	18	90	Sleeping soundly.
4:00 "	101.	18	88	Sleeping, but awoke when disturbed, and walked about without difficulty.
6:00 "	100.6	16	90	Sleeping but was awakened and put in cage for the night. Ate and drank before going to sleep again.
8:30 a. m.	...	...	...	March 24. Sleepy, but when aroused ate and drank readily. Defecated during night.
9:00 "	102.	18	85	Sleeping, but can be easily aroused.
10:00 "	102.2	16	89	Given 9.4 c. c. 50 per cent. solution of the sodium salt of the drug as before.
11:30 "	101.	16	80	Sleeping, but can be readily awakened.
1:30 p. m.	102.6	20	80	Sleeping. Awakes readily when disturbed, but shows some incoördination.
4:30 "	100.4	16	104	Sleeping soundly. Awakens readily and walks to his cage. Some incoördination.
1:00 a. m.	100.5	12	76	March 25. Sleeping, but could be awakened readily. Eats and drinks.
				March 27. This dog is alive and well.

tained, indicating in detail the action of the drug on one of these animals. One characteristic of the action of the drug, which was always particularly notable, was the ease with which the animals could be awakened even when very deeply asleep, and, when so aroused, they readily partook of food and drink and the excretory

TABLE 4.

Experiment 15. March 4, 1905. Dog. Weight, 15 k. Anesthetized with chlorotone and morphin. Thorax opened. Artificial respiration.

Record showing amplitude of heart contractions taken from the right ventricle by means of Roy & Adami's myocardiograph. Pulse rate and blood pressure record taken from carotid artery by the usual manometer kymograph at the same time as the myocardiogram was made. This experiment was designed to show the action of large intravenous injections of the sodium salt of diethyloxyacetyl urea on the heart and blood pressure. For details read horizontally across the table from these numerals.

No.	Time.	Pulse Rate.	Heart Amp.	Height in mm. before Injection.	Height after Injection.	Remarks.
0	9:55 a. m.	150	38	33	33	Normal.
1	9:56 "	134	20	33	24	10 c. c. of 25 per ct. sodium salt of diethyloxyacetyl urea + 15 c. c. saline injected into femoral vein.
2	9:59 "	126	14	35	22	15 c. c. of 25 per ct. sodium salt + 10 c. c. saline.
3	10:30 "	...	...	...	...	Changed drum.
4	10:50 "	124	5	35	13	20 c. c. of 25 per ct. sodium + 5 c. c. saline.
5	11:15 "	...	...	...	...	...
6	11:39 "	130	10	34	14	20 c. c. of 25 per ct. sodium + 5 c. c. saline.
7	11:44 "	...	...	...	...	Changed drum.
8	11:47 "	122	10	33	5	25 c. c. sodium.
9	11:48 "	...	...	29	...	...
10	11:56 "	...	...	29	...	Stopped drum.



organs were active. In some instances, after very large doses, the animals showed some tendency to dizziness, but this was much less pronounced than is often noticed with drugs of this class. Very large doses produced complete anesthesia, and, if repeated from day to day, the animals would ultimately die of exhaustion, but if the drug was discontinued within a reasonable length of time, even though the animal was completely anesthetized, recovery was complete.

*Dogs.*—A large number of experiments were made on dogs anesthetized with chloroform and morphin, a method that I have used for several years for rendering animals unconscious when employed for making blood pressure and other experiments.

Blood-pressure tracings were made from the carotid artery by means of a mercury manometer, and the myocardiograph records were taken from the right ventricle by means of Roy and Adami's myocardiograph, the animals being supplied with artificial respiration. Experiment 15 shows the results obtained in one typical experiment.

#### SUMMARY AND CONCLUSIONS.

1. Diethyloxyacetyl urea is a clear, transparent, slightly soluble, oily liquid, sp. gr. 1.1117, with characteristic etherial odor and taste. Chemical formula  $C_{13}H_{24}N_2O_5$ .

2. The sodium salt forms flaky, very soluble crystals, having a mild etherial taste. Chemical formula  $C_{13}H_{23}N_2NaO_5$ .

3. Consideration of its chemical structure warrants the belief that the depressing ethyl group, 40 per cent., and stimulating nitrogen, 9.6 per cent., are in the right proportion to produce a safe and efficient hypnotic.

4. Experiments on warm and cold-blooded animals show that diethyloxyacetyl urea is a relatively non-toxic chemical compound.

5. Prompt hypnotic action is produced in warm and cold-blooded animals when the drug is exhibited in any one of the usual methods of administration.

6. Complete anesthesia is produced by large doses, from which recovery is complete.

7. Pulse rate, blood pressure, heart action and respiration are but slightly, if at all, influenced by reasonably sized doses.

8. While the laboratory results indicate that diethyloxyacetyl urea will be of practical value, it remains to be demonstrated by clinical experiments whether it will prove to be a desirable hypnotic for human beings.

### INVERSION OF THE UTERUS,

WITH REPORT OF TWO CASES REPLACED BY LAPAROTOMY.\*

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Inversion of the uterus is that form of displacement in which the uterus is turned inside out. For some hundreds of years<sup>1</sup> it has been the custom to describe two forms—partial and incomplete. In the partial form the fundus, though indented, does not pass through the os externum; in the complete form the fundus has been

expressed through the os, so that the entire uterine cavity is obliterated. As both the method of diagnosis and the treatment vary with the degree of inversion, I would suggest that the first be called "initial," the term "partial" being reserved for those cases in which, although the fundus has passed through the os externum into the vagina, the inversion has not proceeded far enough to obliterate the uterine cavity. This is in accord with the German terminology.<sup>2</sup>

From a study of reported cases and from my own experience in the two cases here reported, I am led to believe that this is by far the most common form, and I shall discuss it more fully in considering diagnosis.

#### ETIOLOGY.

Any consideration of etiology must be preceded by a word as to the pathologic findings. Authoritative pathologic examinations are necessarily rare, since in recent years it has usually been possible to replace the uterus instead of removing it. Peterson<sup>3</sup> examined the tissues cut from the sides of his anterior incision; these showed an increase of connective tissue in the muscularis with sclerotic changes in the blood vessels. In the meshes of the fibrin deposit on the mucosa were found cell-débris and leucocytes. It has been generally assumed as an hypothesis that inversion occurs only where there has been paralysis of the uterine musculature at some point, which, being inactive, is forced in by the contractions of the surrounding muscular tissue.<sup>4</sup> Such paralysis is most apt to occur at the placental site, and we have consequently a large proportion of puerperal cases.

The statistics of Crosse,<sup>5</sup> based on 400 collected cases, are accepted to-day, and show about 88 per cent. puerperal; 12 per cent. due to fibroids and isolated instances of other causes. Given the pathologic paralysis, almost any muscular exertion, such as coughing or sneezing, may prove an exciting cause. The commonly accepted causes are: Traction on the adherent placenta, precipitate delivery, short umbilical cord, traction by tumors. The remarkable cases attested by Baudelocque, Parker and others of inversion of the virgin uterus in the absence of tumor, are probably to be explained as following an unrecognized dilatation by hematometra. In the great majority of cases the inversion begins either centrally in the fundus, or in one cornu, but another form has been established which is due to a progressive eversion which begins at the cervix. The condition is probably much more frequent than is indicated by the oft-published statistics of Denham,<sup>6</sup> who found but one acute inversion in 100,000 births in Dublin, and C. v. Braun, who did not meet with an instance in 250,000 births in Vienna.

Inversions are considered as acute or chronic. It is impossible to set a definite time limit for the acute stage, but it is probably less than twenty-four hours, and the change in the uterine tissues which constitutes the essential feature of the chronic condition may take place within a few hours of the inversion.

Acute inversion is usually accompanied by sharp pain, shock, hemorrhage and collapse. Yet any one or all of these symptoms may be missing. This is particularly true of pain, as inversion is apt to occur while the patient is still unconscious from the anesthetic given at the close of normal labor or for operative procedures.

\* I wish to acknowledge my deep obligation to Drs. Charles M. Green and Franklin S. Newell, my seniors on the gynecologic staff at the Boston City Hospital, for the opportunity of operating on the cases here reported and particularly for their skilled assistance (from the vaginal side), without which my procedure would have been futile.

1. Soranus of Ephesus (A. D. 110) states that "inversio uteri" may follow the careless removal of adherent placenta. Ermerins. Sorani Ephesii, Liber de Muliebribus Affectionibus, 1869, Ch. xxii.

2. Cf. F. v. Winckel: Lehrbuch der Geburtshilfe, Leipzig, 1893, p. 703.

3. R. Peterson: Am. Gynecology, New York, 1903, vol. ii, p. 489.

4. Schauta: Wlen. klin. Woch., 1903, vol. xvi, p. 812.

5. Crosse: Tr. Prov. M. & S. Ass., London, 1847, xv., 243.

6. Denham: Dublin, Q. J. Med. Sc., 1866, vol. xlii, p. 181.



Chronic inversion also may have few or no symptoms, or there may be occasional hemorrhage with consequent anemia, disorders of urinary apparatus, difficult defecation or constipation and discomfort in walking or standing. Complications may occur in acute inversion, but are more often met with in old chronic cases. Thus in an acute case the inversion may be the result of the expression of a large sessile intra-uterine tumor, in which case it is difficult to establish the upper limit of the tumor, or the beginning of the uterine tissue.<sup>7</sup> The complicating tumor may be a subperitoneal myoma, which is mistaken for the fundus in normal situation.<sup>8</sup>

In chronic cases, adhesions may form between the extruded endometrium and the cervix or vagina. There may be adhesions between the peritoneal coats abnormally in contact in the peritoneal crater or between the round ligaments, Fallopian tubes and the peritoneal lining of this crater. The contraction of the cervical ring may be sufficiently tight to cut off the circulation and cause gangrene of the uterus, and of the round ligaments and Fallopian tubes in so far as they lie below the cervix in the crater. Finally, where the blood supply is merely diminished we may have atrophy of the inverted fundus, the endometrium of which has been converted into a tissue resembling skin through its constant friction with the vaginal walls or between the thighs.

In spite of the fact that immediate reposition is usually easy and safe, the prognosis in acute inversion probably will remain always a grave one. Death may occur in a comparatively short interval as a result of extreme shock, or of sudden overwhelming hemorrhage. In the remarkable case reported by Anderodias,<sup>9</sup> he saw the patient less than two hours after the inversion occurred, and though reposition by taxis was comparatively easy, the patient collapsed and died instantly after the manœuvre. Crosse gives a mortality of 73 per cent. in 109 cases; Winckel's more modern statistics show a mortality of 22 per cent. in 54 cases.

Considering unrecognized instances, the mortality is probably higher than the last-named percentage. If the patient lives through the acute stage, her life is endangered by the possibility of acute infection of the endometrium, and later by periodic and irregular hemorrhage and by the grave operative risks incurred in seeking relief for the condition. A certain number of spontaneous repositions are recorded. Thomas,<sup>10</sup> in a classical article on the subject, quotes twelve such cases, and the following anecdote: "There is nothing easier than the rejection of the testimony of others, and the discrediting of deductions which we ourselves have not drawn. When De La Barre presented his case of spontaneous reposition to the Academy of Surgery, Baudelocque was appointed a committee to examine into it and reported that it was 'totally false.' Some years afterwards he met with a very similar case, and yielded to the evidence of his own senses a credence which he had presumptuously denied to the assertions of another."

#### DIAGNOSIS.

The diagnosis of inversion is usually difficult. Apart from numerous instances where the mass has been excised or morcellated as a polyp without considering the possibility of inversion, many eminent surgeons have

erred after the most careful attempts at diagnosis, and in no condition is an error in diagnosis fraught with more danger to the patient. The possibility of inversion of the uterus must be considered whenever a uterine, cervical or vaginal tumor is detected by the physician. Even where the microscopic examination of snippings reveals a fibroma or sarcoma, the possibility of a complicating inversion must be borne in mind.

Velpeau<sup>11</sup> said in regard to this diagnosis: "In some cases doubt is the only rational opinion." Gooch,<sup>12</sup> in his essay, writes: "When partially inverted, the tumor in the smoothness of its surface, the roundness of its body, the narrowness of its neck, and its being encircled by the orifice of the uterus, sometimes exactly resembles polypus of the fundus."

The differential diagnosis lies between inversion, uterine tumor (polyp, fibroid or sarcoma) and procidentia. The last named should be ruled out by a careful examination, but a tumor may deceive in various ways. The orifices of the tubes are by no means always obvious. Where the fundus remains in the vagina they can not be detected, and even where the fundus is outside of the vulva these minute orifices, buried in the thickened endometrium, must be demonstrated with difficulty. The sound is not infallible, as a fibroid polyp may be adherent throughout the cervical circumference, and thus prevent the entrance of the sound. In partial inversion, even a fortnight after labor, the sub-involuted uterine cavity may admit the sound to the normal depth, though its fundus has passed through the os. During a protracted examination the uterus is apt to remain in a state of tonic contraction, when it is so hard as to simulate, not merely the body of a fibroid, but also its pedicle. The detection of contractions in the mass and its relaxation under full anesthesia may prove a valuable aid to diagnosis. The differentiation of the subjective sensations of the patient when the mass is touched is certainly of doubtful value. Through a very thin and much-relaxed abdominal wall under full anesthesia it may be possible to detect the depression or crater where the fundus should be (this was true in one of my cases, but not in the other), but where the ring is tightly contracted, filled with both round ligaments and both Fallopian tubes, and capped by the ovaries, there is no depression to be felt. When not in a state of contraction, the inverted uterus, if grasped and held by the examining hand, becomes distinctly diminished in size, and considerable bloody serum is expressed from the very edematous endometrium. In neither of my cases was there sufficient bleeding, as a result of examination and taxis, to be worthy of note.

As inversion may occur after labor without pain, hemorrhage, or pronounced shock, the favorable minutes for replacing may have elapsed before either patient or attendant is aware of the serious complication. Consequently, the obstetrician must always assure himself immediately after the delivery of the placenta that the spheroid of the fundus is convex, and this, fortunately, it is usually easy to do, because of the marked relaxation of the abdominal walls. Where the patient has complained of sharp pain during a forcible expression of the placenta, or where this event is followed by hemorrhage, if the uterus can not be outlined by abdominal palpation, a careful vaginal examination is indicated. It hardly seems necessary to reiterate the prophylactic proverb "do not pull on the cord." Further prophylactic

7. See illustration. Kelly: *Operative Gynecology*, New York, 1900, i, 536.

8. See illustration. Dudley: *Principles of Gynecology*, Philadelphia, 1904, p. 705.

9. Anderodias: *Bull. Soc. d'Obst.*, Paris, 1903, vol. vi, p. 97.

10. *Diseases of Women*, Philadelphia, 1875, p. 431.

11. *Clín. Chirurg.*, Paris, 1841, vol. ii.

12. Gooch: *Essay on "The Symptoms, etc., of Inversio Uteri,"* London, 1818.



measures are the avoidance of undue force in Credé's method, and the complete abstention from pressure on the fundus while it is relaxed. However, the possibility of spontaneous inversion some hours after the delivery of the placenta has been well established.

#### METHODS OF TREATMENT.

Peterson<sup>3</sup> gives a perfect summary of the methods of treatment,<sup>13</sup> and I shall detail in regard to treatment only sufficient to make clear my contention for the abdominal route.

In acute inversion, an immediate attempt to replace should be made, if the patient's condition permits. But if there be extreme shock, provided the hemorrhage can be controlled, it is advisable to defer all manipulation. The method of replacing by taxis is simple, but difficult to execute. The theory that the placenta, if still attached to the fundus, should be left as found until after reposition to avoid further hemorrhage, has many objections. Inversion is most apt to occur where the placenta is adherent, and such a placenta can be separated much easier before than after reposition. Further, the placenta increases the bulk of the mass, which is to be returned through the constricted os. After years of discussion there is to-day practical unanimity that the part of the uterus last inverted should be returned first. The patient should be given full anesthesia. The bladder and the rectum having been emptied, one hand passed into the vagina grasps the inverted fundus and compresses it so as to express serum and reduce its bulk. The fingers of the vaginal hand attempt alternately to dilate the cervical ring and to push through it that part of the uterus which lies just below the ring in the vagina. Meanwhile with the other hand, counterpressure is made through the abdominal wall, and where the wall is thin and thoroughly relaxed the fingers may enter the ring from above and aid in its dilatation. In view of the additional shock entailed by prolonged and forcible taxis, and the success of operative procedures, both the force and duration of taxis should be limited sharply. Rupture of the vagina and injury to adjacent organs is not a rare sequel of forcible taxis. When reposition has been effected, the uterus should be washed out with hot saline solution, and if it does not contract firmly, it is to be packed.

In chronic inversion, taxis should always be given a trial, particularly as it will usually demonstrate whether it seems advisable to attempt to replace the uterus intact by the abdominal method, or whether vaginal section of both cervix and uterus are indicated, because of the firmness of the ring and the solidity of the fundus. If taxis fail, the numerous older methods may well be passed by and either the vaginal or abdominal section may be chosen. These older methods were not without grave risks. They attempted reposition by taxis with the whole hand in the rectum or with the fingers in the bladder, by the use of prolonged pressure by means of air or water-bags or spiral springs. Where the conservative operative measures fail, recourse to hysterectomy or amputation is indicated.

Peterson divides the vaginal operations into four classes according to whether the incision is partial, from cervix to fundus, or complete, through the cervix to the fundus, and according to whether the incision is made in the anterior or posterior wall of the uterus.

The ideal vaginal method (known as Spinelli's operation) was used by Peterson. It is the complete an-

terior colpo-hysterotomy. The vesico-uterine peritoneal pouch is opened, the cervix is stretched from side to side, and an incision is then made through the cervix and uterus to within one-third inch of the fundus. The uterus is then easily reinverted, and the incision closed as in Cesarean section.

There are certain objections to the vaginal route. The tubes and round ligaments are exposed to vaginal contamination and then immediately turned free into the abdomen. As both tubes, round ligaments and sometimes a loop of bowel are packed tightly into the crater, there is the risk of injury to these organs in making the incision. If the vaginal incision is made posteriorly, there is apt to result an adherent retroversion; if made anteriorly, we have the undesirable vaginal fixation. Finally, there is the possibility of a rupture of the uterine scar in a subsequent pregnancy.

#### THE ABDOMINAL ROUTE.

In 1869, T. G. Thomas published an account of a case successfully treated by abdominal section and intra-abdominal dilatation of the cervical ring. This case was a chronic inversion of two years' duration. Subsequently he reported a second case of eight months' duration, in which reposition was equally successful, but the patient died of peritonitis some days later. Peterson collected fifteen cases of inversion treated by the abdominal route. Of these, eight were successful and seven complete failures. (It does not seem just to consider Thomas' second case a failure, although it resulted fatally.) Of the eight successes, three promised failure until the ring was incised. I have not been able to find any record of a similar operation since the publication of Peterson's paper. Counting Thomas' second case as a mechanical success, and adding my two cases, we have a successful percentage of 73 per cent. This compares poorly with the record of Spinelli's operation, performed six times with six successes. However, if due allowance is made for the small numbers on which these statistics are based, and for the constant recent improvement in abdominal surgery, I believe that the abdominal operation will be developed so that its record will be superior to the vaginal. I certainly do not advise the abdominal operation in all cases of inversion. In this, as in all other surgical diseases, the operation must be chosen after due consideration of the individual case.

*Details of Operation.*—The bladder and rectum are emptied. The vagina and uterus are thoroughly cleansed by prolonged washing with warm saline solution. After the usual preparation of the abdomen, it is opened by a median incision, the patient being in the high Trendelenberg position, and so draped with the sterile sheets as to permit access to the vagina. Immediately the bowels are pushed upward and "walled off" by a plentiful supply of gauze. If properly done this decreases greatly the shock and danger of the operation, as it limits sharply the extent of peritoneal exposure and trauma. If possible, the ring is dilated with the fingers, but if the constriction is so tight as to prevent this procedure, the ring is dilated first with a steel dilator of the Wathen or Goodell type, then with Reynold's dilator, which is peculiarly serviceable. In inserting the steel dilator and in dilating, care must be taken to avoid pressure on the tubes and round ligaments. Only moderate force should be used, and this must be regulated by the hand and not by any mechanical device on the dilator. In a few minutes it will be possible to partly withdraw the round ligaments and tubes, though no force is to be

13. Excellent bibliographies are given in the articles of Peterson and v. Winckel, already referred to.



employed in order to accomplish this, and no attempt should be made to reinvert the uterus by traction on the ligaments or tubes. An assistant places the hand in the vagina and begins to carry up that part of the uterus which descended last; as this rises it is caught and held with volsellum forceps. Thereon the process of dilatation, reinverting and holding are repeated until the operation is complete. No attempt at traction on the volsellum forceps is permissible, as it will result merely in lacerating the peritoneal covering of the uterus itself. Progress at first is very slow, but after a certain point is reached the fundus slides through the ring into position. Meanwhile the abdominal assistant has offered counterpressure against the ring. When the uterus has been replaced, it may be suspended, but as involution proceeds rapidly during the hours following reposition, it is better merely to support the fundus for a few minutes, during which the uterus will begin to contract and retract, and the tubes, if not too long or too severely constricted, will regain practically their normal appearance. The gauze is removed and the abdomen closed in tiers. The table is then lowered, the foot-piece dropped, and two nurses hold the patient's legs in the lithotomy position, while a hot intrauterine douche is given by the vaginal assistant who has not withdrawn his hand until the operator has felt assured that the uterus would remain in place. The operation does not require more than forty-five minutes from beginning to end. As the work of the vaginal assistant requires more skill and is more important than the abdominal manœuvres, the assistant should be chosen accordingly.

If this operation can be perfected so as to insure invariable mechanical success, there can be no doubt that it will be an ideal procedure for reposition of the inverted uterus, which is thus restored intact to its original position without violating the integrity of its peritoneal cover. Further, it permits an inspection of the tubes, which in an old case may require resection.

The two cases here reported were treated within thirteen months on the Gynecologic Service of the Boston City Hospital.

**CASE 1.**—Mrs. E. R., aged 29. American by birth; i-para. Family and past history negative. Five days before I saw her patient had given birth to a living baby after a rather long and difficult labor. The placenta was expelled naturally without unusual pain or other symptoms. Two hours later she had a moderate hemorrhage which was repeated at intervals until vaginal examination disclosed a tumor, when she was sent to the hospital. At entrance temperature 101.5, pulse 114. Pulse regular, good volume and tension. Abdomen normally tympanitic and not tender. What appeared to be a fibroid the size of a large pear protruded from the vulva and on vaginal examination was found to pass through the cervix. Leucocytosis of 17,800.

The patient was kept under observation for a few days until the sloughing perineum could be rendered clean. Then under ether, a final examination was made, which revealed the error in diagnosis. The sound halted when an attempt was made to enter the os at the side of the mass, and careful abdominal palpation revealed the crater. Attempts to reduce the inversion by taxis failed and after forty-five minutes of careful manipulation the patient was put to bed and prepared for laparotomy on the following day.

**Operation.**—Patient in high Trendelenberg position. The sterile sheets draped over each thigh separately so as to permit access to the vagina. The abdomen having been opened by a median incision, the bowel was carefully packed towards the diaphragm with gauze strips. The uterus presented the striking picture of complete inversion. Both tubes and both round ligaments were within the inverted cavity, the tubes were

deeply injected, purple, and thrice the normal size. The ovaries also wine-colored and tense, rested on the brim of the cavity. The ring was firm and could not be dilated with the fingers. The ring was then carefully dilated with Reynolds' dilators, which were inserted so as to avoid injury to the tubes. The assistant's hand in the vagina then began the process of reposition. The anterior wall was raised, and as it came up it was caught and held with volsellum forceps. As each centimeter was gained, another pair of forceps was applied. The traction from above was reduced to a minimum. As soon as possible the tubes were delivered. This gave more room, and after repeating the dilatation with the Reynolds dilators, the fundus slipped through the ring. The congestion of tubes and ovaries quickly disappeared. The uterus contracted and showed no tendency to invert. However, as the fundus tended to sink back into the fossa of Douglas, it was lightly suspended. When the volsellum forceps were first applied, some traction was made which caused them to tear out and leave a small nick in the peritoneal coat of the uterus. This was readily closed with one stitch of fine catgut.

The operation consumed less than half an hour. It was attended by very moderate shock. At the close of the operation a copious hot intrauterine irrigation of salt solution was given. Six hours after operation the pulse was 104, temperature 101.4. The subsequent convalescence was uneventful.

**CASE 2.**—Mrs. M. H., aged 37. Irish by birth; iii-para. Patient had an instrumental delivery at her first labor in 1901. Her second labor (1903) had been normal. Her third labor was terminated after twenty-one hours by a high forceps operation. Shortly after delivery the placenta was expelled, without aid, and was found still attached to the fundus, which had come down with it. There was little pain, only slight shock, and no hemorrhage. Attempts to replace by taxis having failed, the patient was sent to the hospital, where I saw her twelve hours after delivery.

Patient did not look anemic, but was pallid. The expression was anxious, the facies typical of shock. The pulse was small and rapid (130), the temperature 100. The abdomen was normally tympanitic, not distended, not tender. Protruding from the dilated os was a round, hard mass, the size of a fist. The examining fingers passed completely around this mass, which appeared to be attached by a thick twisted pedicle which passed through a tightly constricted internal os. Although no depression of the fundus could be felt, a provisional diagnosis of inversion was made, and, under ether, a short attempt was made to replace by taxis. As this did not succeed, even in part, and as the mass remained hard, I decided that I was dealing with a fibroid. There was no hemorrhage, but the patient's condition was such that all further procedure was deferred until treatment for shock had been instituted.

This was at night. The following morning the patient was greatly improved; under ether a slight depression could be felt in the fundus, and the vaginal mass soft, so that the diagnosis was obvious. Taxis having again failed, the patient was prepared and the abdomen opened.

**Operation.**—Median incision. The conditions were similar to those described in Case 1. The ring was readily dilated with the fingers, so as to admit the half hand; but it contracted again as soon as the hand was withdrawn, so that it was necessary to dilate the ring again and again. Reposition was accomplished with only moderate difficulty in the same manner that was employed in Case 1. The entire operation was completed in forty minutes. It was followed by slight additional shock. Six hours after operation temperature 99, pulse 126. Convalescence uneventful.

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**Alcohol Is a Poor Cardiac Stimulant.**—Dr. J. H. Kellogg of Battle Creek declares in the *Lancet-Clinic* that the theory that alcohol is a stimulant was long ago rendered thoroughly untenable by a multitude of carefully conducted experiments on healthy subjects, showing that alcohol is always and in all doses a narcotic, and not a stimulant; that it depresses, and does not excite the heart and other vital organs; that it lessens vital resistance to disease; and that it is a toxic agent which the body must cast out, and not a food to be assimilated or a source of energy or an aid to any vital organ or function.



# THE ROENTGEN METHOD AS A GUIDE IN OPERATING FOR LITHIASIS OF THE URINARY TRACT.\*

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It is one of the strangest phenomena in medicine that in the face of the most abundant proofs of reliability of renal skiagraphy, some of the best text-books still hesitate to recommend the method. Some others even openly warn the practitioner against it. This they do because authors have observed or heard of grave errors committed in its employment. Thus it is said, for instance, that skiagraphs taken by the "best experts" have shown renal calculi, while nephrotomy disclosed the absence of any concretion; and, on the other hand, that cases were reported, in which calculi were found at the operation after skiagraphy had failed to show evidence of their presence. None of these reports is well founded.

Whenever errors have been committed they were of the individual and not of the method, and this should not be held responsible. I have often admired the power of imagination of some novices in skiagraphic work, who demonstrated the outlines of calculi as well as of some abdominal organs to me, when I could only find the possible indications of a dense band of tissue or a spot in the plate or a button of the underclothing of a too modest patient.

Such visionary powers, while immensely useful in the art of Shakespeare or Goethe, can not be too strongly reprehended in the domain of science and in the field of the Roentgen rays.

Now, fortunately, skiagraphic technic is so much advanced to-day, that it stands in no need of the imagination. A definite diagnosis in suspected lithiasis can be made. In each and every instance, or in other words, a renal calculus must invariably show, provided calculus is there.

Lumbar exploration and similar procedures for suspected nephrolithiasis, advised in all text-books, are, therefore, no longer in order, the Roentgen method not only showing whether or not any calculi are present, but giving precise information as to their size, shape and number. It will also show whether there are any calculi in the ureter or bladder.

The revolution which the Roentgen method has wrought in this special field is as great as in that of the injuries and diseases of the bones, which, after years of struggling, thanks to the untiring efforts of a few imperturbable physicians, is gradually beginning to be appreciated by the profession at large.

The chemical composition of the calculi of the urinary tract determines the greater or lesser depth of their shadows. The greater their atomic weight, the greater their density, and consequently the more distinct the shadow. Thus, calculi composed of oxalate of lime show the most distinct shadows. Their shadows are even deeper than those of bone tissue. Next to them we find those consisting of phosphate of lime, while the uric-acid calculi give the faintest shadows.

In practice, however, we often find that calculi are not of one distinct type, and, if they are, layers of various

degrees of density are observed. Two types are generally present, then one or the other character predominating. So it frequently happens that there is a nucleus of uric acid surrounded by alternate layers of the other elements.

This explains why, at least, some dense areas are found in all cases of renal calculus; the same is true when the calculi are of small size. The question of composition, however, is of less importance than that of bringing the calculous area as near to the plate as possible, and keeping the field absolutely quiet.

These two requirements are attained by the use of a tubular diaphragm, which offers another great advantage, that of permitting the passage of the focal rays alone, excluding those rays which emanate from the tubal wall.<sup>1</sup> The disadvantage of the tubular diaphragms is that only small areas can be shown at a time. This disadvantage is little felt in the representation of joints, etc., but in renal or biliary skiagraphy it may be responsible for missing the seat of the calculi.

It is evident, therefore, that in skiagraphy of the urinary tract a general exposure must precede that of a limited area, since it can not be known beforehand whether the suspected calculi were situated in one or in both kidneys, or in the ureters. In other words, the Roentgen plate must *a priori* include an area which is bounded by the eleventh rib and the crest of the ilium on one side and by the vertebræ and the anterior axillary line on the other. For this purpose, plates of the size 10x12 or 11x14 are required. Corresponding with each side of the body, wire letters are placed which serve as landmarks for comparison, and at the same time indicate the side of the body. This is emphasized for the reason that cases are reported in which it has happened that on account of the changed relations of the negative, the wrong side was incised.

A few more wire letters may be placed in the renal region, also serving as landmarks for the special exposure. It is useful sometimes to attach the same wire letters to the body by means of adhesive plaster strips and to skiagraph them together with the wire letters on the plate, thus being able to compare the relations of the landmarks of body and plate for better localization.

Now, while with the general tentative exposure, only faint outlines of the calculi are obtained as a rule, they may be distinct enough to show at what area the diaphragm should be adjusted best to attain the most distinct outlines.

If the large plate proves to be negative, although other means of examination point to the presence of nephrolithiasis (hematuria), both renal regions must be separately examined with the aid of the diaphragm, several exposures sometimes being required. This, of course, is troublesome, but in view of the great importance of a correct diagnosis, it can not be omitted. It happens rarely, however, that so many exposures are needed, as a rule, the two sufficing for information. In this manner I have also been able to show calcareous deposits which were produced by renal tuberculosis.

The *modus operandi* in renal skiagraphy is as follows: The general exposure is preceded by a thorough evacuation of the bowels, followed by the administration of a moderate dose of opium. The patient is in the dorsal position on a large plate covering both lumbar regions. For localization, a few wire letters are distributed over the plate, the R. (right side) and L. (left side) being placed directly underneath the outer surfaces of the

\* This article was prepared to be read before the Section on Surgery and Anatomy of the American Medical Association at the Portland Session, July, 1905, but the author was prevented by sickness from being present.

1. Archives of the Röntgen Ray, etc., London, February, 1905.



lumbar regions, so that they appear on the integumental margins of the skiagraph. With a pair of calipers their distances from the spinal column and from the ribs are ascertained and transferred on the abdominal surface to be marked there for the proper adjustment of the diaphragm. The head and shoulder are elevated by a few pillows, while the chin touches the sternum. The knees, after being flexed, are well immobilized by sand bags. The exposure should last from five to eight minutes, in proportion to the thickness of the abdominal tissues to be penetrated. The vacuum of the tube should be soft. I prefer the self-regulating tube of Mueller for renal skiagraphy.

The criterion of a good plate is that the vertebræ, the eleventh and twelfth ribs and the outlines of the ileo-psoas muscle can be clearly defined. On the other hand, a plate which shows a number of calculus-like shadows, but fails to represent these points, must be regarded absolutely misleading, and should never be used as a guide for operation. The only thing to do is to try a second and if necessary a third or fourth time, the latter, however, seldom being necessary in the hands of a man of little experience.

If the plate is good and shows the indications of calculi, the tubular diaphragm is applied now in the same position as advised for the general exposure, with the difference that the shoulder of the exposed side is elevated somewhat more. It is best pushed below the rib arch in an oblique direction in such a manner that its center corresponds with the landmarks indicated on the large plate. The oblique direction permits of pressing the diaphragm deeply into the abdomen, thus reducing the distance between it and the plate to a considerable extent.

The time of diaphragmatic exposure should be two minutes in thin and from four to five minutes in stout individuals.

If the large plate is negative, I resort to a diaphragmatic exposure nevertheless, and if this shows the criteria mentioned above distinctly, I can most positively assure my patient that he does not suffer from nephrolithiasis.

It is not desirable, however, that the bones mentioned should show textural details. As a rule, the longer the exposure lasts, the clearer the bones show and the less marked the calculi will appear.

From this we also learn that rules for the time of exposure can only be laid down in general, the instinct of the operator being an important factor in determining details.

These views apply much more to the technic of biliary skiagraphy. As I have so often emphasized, the reason why so many surgeons have tried in vain to reproduce the calculi is due to the simple fact that they use hard tubes which penetrate them, so that they on account of their small degree of density are irradiated away, so to speak. In all my successful exposures for biliary calculi the bones appear dark and especially show no textural details.

The same principles apply to the skiagraphy of the urinary bladder. Vesical calculi, however, can be well shown without the aid of the diaphragm. In stout individuals the diaphragm may be useful sometimes.

The patient is skiagraphed in the recumbent position, the center of the tube to be directed to the upper margin of the symphysis. A good vesical skiagraph shows the structures of the coccyx well. The sacrum should not show any details. By oblique irradiation, the shadows of the vesical calculi are generally found just below

those of the coccyx. An oblique exposure should be made beside, because it may show whether the stone is free or encysted. If the patient bends slightly forward in the lateral position, the calculus, if free, sinks toward the anterior vesical wall and becomes conspicuous directly behind the anterior abdominal wall. If it is not free, it usually shows far back toward the sacrum, since encysted calculi are nearly always attached to the posterior vesical wall. If the stone is of very large size, or if a great number are present, the whole vesical space is filled up and displacement is not apt to occur.

So far as the diagnosis of the number, shape and position of the calculi is concerned, the Roentgen method affords more valuable means than the cystoscope, aside from the fact that a calculus imbedded in a diverticulum will escape the cystoscope, while the rays will always detect it. At the same time, it should be realized that skiagraphy is a far more comfortable procedure than cystoscopy. The time of exposure is two minutes in children and from three to four minutes in adults. A soft vacuum is just as desirable as in renal skiagraphy.

My experience with the Roentgen method has suggested to me that it is invariably necessary to skiagraph the renal regions whenever vesical calculus is suspected. Since I have made this a principle, I have found renal calculus whenever there was a concretion in the bladder. This is not strange, if we realize that most vesical calculi were originally formed in the kidneys. This also explains the frequent recurrence of vesical calculus after operation. Within the last year I have observed three cases in which I operated for recurrent vesical calculus. In all of them skiagraphy revealed the presence of nephrolithiasis.

The first case was that of a woman of 32, who submitted to lithotripsy a year before I saw her. She was greatly relieved at first, but nine months afterward began to suffer from frequent micturition and pain in the vesical region. Skiagraphy demonstrated the presence of a small calculus in the bladder and a larger one in the renal region. I removed the vesical calculus, but the patient felt so well afterward that so far she has not decided to be operated on for the nephrolithiasis. If the size of the renal calculi is such that they may pass the ureter, I do not regard the removal of renal calculi an imperative necessity, but advise antilithiatic medical treatment first, the effect of which is studied by the Roentgen method.

In another case, a man of 24 showed the same history. Suprapubic lithotomy two years before I saw him had brought complete relief, the symptoms of recurrence appearing a year afterward. Skiagraphy revealed a vesical calculus of moderate size and a triangular calculus of large size in the left kidney. The patient submitted to suprapubic lithotomy, and so far has not returned to me.

In the third case, that of a boy of 7, whose large vesical calculus was removed by suprapubic cystotomy three years ago, the relief was complete for about a year, when the patient again began to suffer from symptoms of vesical calculus. The parents at first were unwilling to permit of repeated surgical interference, and while hesitating, the patient became greatly emaciated, the symptoms of light urosepsis finally compelling the parents to give up their resistance. The skiagraph revealed the presence of vesical as well as renal calculi on the left side. Suprapubic cystotomy was performed at the Postgraduate Hospital, and gave immediate relief from



painful micturition, but had little influence on the pyelitic symptoms. The extreme exhaustion of the patient seemed to me to be a contraindication to immediate nephrotomy, wherefore I tried to keep the patient up with stimulation, at the same time giving hexamethylenamine internally. Three weeks afterward, when the vesical wound was thoroughly healed, I resorted to nephrotomy. The large triangular calculus was tightly imbedded in the parenchyma, so that it had to be mostly shelled out with the knife. The patient was discharged from the hospital four weeks afterward.

A small calculus was found near the lower surface of the large renal concretion. It would most probably have formed the nucleus for a third calculous formation in the bladder if it had been removed. The calculi consisted of oxalate of lime and the outer layer showed a smaller degree of density than the inner.

In another case of great skiagraphic interest, the patient was operated on at the Postgraduate Hospital. The patient, a woman of 36, began to suffer from violent pain in the right lumbar region thirteen years ago. Examination of the urine revealed the presence of pus. Nephrotomy disclosed the presence of a calculus of moderate size surrounded by pus. It was supposed, then, that the calculus was the source of the suppuration, and consequently a speedy recovery was expected. This expectation was not realized, a fistula remaining. The patient improved considerably, but the fistula did not close, so that after a year had elapsed, nephrectomy was advised, to which the patient, however, did not submit because her general condition had become very good in the meanwhile and the discharge had decreased.

About a year later the fistulous tract closed, more pus appeared in the urine and the left side became painful. Left-sided nephrotomy was done, a large abscess being evacuated. The patient again improved and the opening closed, but the pyuria continued, the patient's condition varying considerably.

When I saw her for the first time I suggested skiagraphic examination beside the other modern diagnostic means (cryoscopy, ureteroscopy), but the patient said: "There is no necessity for examining for nephrolithiasis, because the stone I had was removed by the surgeon." I mention this as an interesting and misleading argument. I, of course, insisted on my proposition, and the skiagraph showed the faint outlines of four calculi in the right lumbar region. A second exposure with the diaphragm showed them very distinctly.

The calculi had to be shelled out with difficulty, the irregular surface forming an impediment. The perirenal structures were matted and hardened, a natural consequence of the long-standing suppuration and inflammation. The adhesions were so dense that the kidney could not be lifted out, and great care had to be exercised during the whole procedure. This observation is another point against the formation of normal blood circulation after decapsulation. One stone had a sharp triangular edge. Recovery took place in two weeks, the patient being able to go around at that time. Three weeks after the operation febrile elevations began and the left side became painful. An abscess formed which was promptly discharged. Exploration of the abscess cavity revealed the presence of a long sinus leading to the opposite side just in front of the spinal column. The patient improved slowly and is up at the present writing, the thorough closing of the wound being expected in a short time.

The epicrisis of this case suggests that nephrolithiasis existed at the time of the first operation, when the

Roentgen method was unfortunately not yet available. The very able surgeon who operated at that time undoubtedly examined the kidney carefully, but was unable to palpate the calculi through the parenchyma. The advice given later, when the fistula did not close, suggests that he thought the kidney to be in a state of destruction rather than assumed the presence of the stone, which under the circumstances would have been most natural. Under the most careful wound treatment and the good care which the intelligent patient exercised, the fistula closed, but the pus became retained in the depth and probably found a way to the opposite side which necessitated the incision on the left side. It is evident that if the Roentgen method had been available at the time of the first operation, the remaining calculi which penetrated the whole kidney would have been recognized and removed at once, thus sparing years of suffering. It did not only reveal their number, but also their size and shape, and—last but not least—localized them. After the surgeon has removed the calculi, which are easily identified with those of the plate, no further searching is required, as it was imperative in former years, when the kidney had to be nearly dissected in order to ascertain whether there were any additional calculi left.

## INFLAMMATION OF THE EYE DUE TO THE TOXINS OF THE GONOCOCCUS.

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### IRITIS.

Under the name of metastatic ophthalmia, or some other such synonym, inflammation of the iris has long been recognized among ophthalmologists as a possible accompaniment of gonorrheal urethral infection. There is scarcely a treatise on diseases of the eye since McKenzie's time, but speaks of it in a more or less extended manner.

The iritis is commonly regarded by ophthalmic authorities, as a part of an intoxication which manifests itself under the form of rheumatism; at least, few cases have been reported which have not been associated with greater or less pronounced symptoms of a rheumatic nature—usually affecting the joints.

Whether the intoxication in these instances is from an entrance into the circulation of the gonococcus itself or from the product known as the toxins, has not been definitely settled to the satisfaction of all. Further investigation and observation along this line are needed. The fact of the association of the diseases with gonorrheal infection, however, is no longer disputed.

As to the frequency of gonorrheal iritis, all authorities are not agreed. By some it is considered as extremely rare. De Lapersonne<sup>1</sup> of Paris, for instance, who is one of the latest writing on the subject, states that he sees only one or two cases in every 7,000 new patients at the Hotel Dieu. Some others, however, seem to regard it as rather common. This discrepancy may be accounted for by the fact that the complication is more frequent in some localities than in others, or, what is more probable, by a failure on the part of some clinicians to inquire into the existence of gonorrhea in the cases of iritis which come under observation. It

1. *Archiv. D'Ophth.*, March, 1905.



is a fact not without bearing on the point of frequency, that from the large clinic for genitourinary disease at the Central Dispensary and Emergency Hospital, where my own clinic is located, there has not been a single case of gonorrheal iritis referred to my service during the last twenty-five years, while cases of iritis from syphilis have come to me from that clinic in large numbers. It may be of interest to know that the genitourinary clinic is largely recruited from the negroes, among whom gonorrhea is most rife.

The forms under which gonorrheal iritis may appear are various. It may be the so-called spongy iritis with a deep anterior chamber and dilated pupil, or any of the plastic varieties with various kinds of exudate, and even the hemorrhagic form has been mentioned. The so-called spongy iritis, such as was present in the case to be described, while one of the rarest forms of iritis to be met, generally finds its place here, I think, with greater comparative frequency than the other forms. As another distinctive feature of gonorrheal iritis may be mentioned its tendency to recurrence during the same or subsequent attacks of gonorrhea. The same holds true of the common rheumatic form. The disease may be very intense in its manifestation or mild and slow in its progress. Almost without exception, both rheumatism and iritis show themselves during the declining stage of the urethral disease, quite contrary to what would be expected. One or both eyes may be affected at the same time or in succession.

It seems singular and altogether quite unaccountable that while gonorrheal iritis finds at least a mention in practically every text-book of importance on diseases of the eye, it seems to be completely ignored in all the treatises on genitourinary diseases which I have been able to consult, with the exception of two American text-books.<sup>1</sup>

It is, therefore, not without justification that the subject is brought more closely to the attention of the general practitioner and genitourinary surgeons among whose patients the disease shows itself primarily, and in whom a correct diagnosis should first be made, and, of even more importance, a proper treatment promptly begun. A careless or not sufficiently informed practitioner, not being aware of the possibility of iritis as a complication of gonorrhea would naturally look on any redness or infection of an eye as a beginning conjunctivitis due to an external infection, and treat it as such with astringents and antiseptics, probably for some days, so that by the time the real condition becomes known irreparable damage would already have been

done. As is well known, it is more than usually necessary that in iritis the use of a mydriatic be begun early in order to secure at once as full a dilatation of the pupil as possible—since, otherwise, permanent adhesion to the anterior capsule of the lens or complete closure of the pupil is almost certain to occur. A day or two, or even a few hours' delay, may mark the line between the preservation of good vision and partial or even complete blindness. As a clinical contribution to the study of this form of disease the following history is offered:

*Patient.*—J. A. D., a young white man aged 22, came to me on Oct. 6, 1904, complaining of his eyes, which he said felt uncomfortable but not painful, and as he had been suffering from gonorrhea for some three weeks, he was fearful that this might be the beginning of a gonorrheal conjunctivitis, as he was aware that "gonorrhea often affected the eyes."

*Examination and Treatment.*—As the conjunctiva was clear and the pupils responded promptly to light, I assured him that there was no inflammatory trouble, but, as an examination revealed myopic astigmatism of 0.5 D. with the rule, he was ordered correcting glasses, which gave V=5/5 in both eyes.

*Subsequent History.*—On October 7 there was some slight injection of the right eyeball, the vessels being fine and coming up to the corneal edge; no mucus or pus. There was no pain and the pupil reacted well to light. He was ordered to make hot applications to this eye and to abstain from work. This condition continued about the same with clear media and a normal fundus until October 12, when the bulbar congestion increased, but with no complaint of pain. Atropin gr. ii to aqua 3i, was then ordered in addition to the hot applications.

October 13: When he awoke he found that his vision was almost entirely gone. An examination revealed great muddiness of the anterior chamber and a rigid but fair-sized pupil. The fundus could not be made out in any detail, only a dull diffuse redness being visible under the illumination. An examination with the binocular magnifier showed many fine fibers coming out from the pupillary space and reaching to the posterior surface of the cornea. The strength of the atropin was increased to gr. iv to aqua 3i, a drop in the eyelid three times a day, and dionin (ethyl-morphin hydrochlorate), 5 per cent., was used. The diagnosis of spongy iritis was made.

October 14: The mass in the anterior chamber had assumed its characteristic gelatinous appearance, filling the anterior chamber except for a small section above. The edge of the exudate, as is always the case in spongy iritis, was sharply marked and the mass could be seen to extend from the iris to the cornea, occupying the entire depth of the chamber. The size of the pupil remained about the same.

October 15: There was a still further diminution in the exudate, principally above, so that the pupil was somewhat uncovered.

October 16: All that remained of the exudate was a band about 2 mm. broad with sharp edges, occupying the center of the pupil from above downward. It had some fine offshoots connecting it with the pupillary edge above and below. The iris itself had a clean, unswollen look, the natural rugæ showing up plainly. The pupil was larger and vision was returning. There was still no acute pain complained of, only some slight frontal headache. The conjunctival injection, while pronounced, was not excessive and there was little or no chemosis.

October 17: The pupil was dilated *ad maximum* and the exudate was found to be all gone except a few spots on the anterior capsule of the lens. The fundus could be seen but rather dimly.

October 23: The lens was entirely clear and the fundus only slightly hazy, V=5/20. In the course of ten days more every vestige of the disease had disappeared and vision was normal. Since then there has been no further trouble in either eye. The patient's gonorrhea has also disappeared.

Special inquiry was made as to the manifestations of rheumatism and it was found that some days before the appearance of the uncomfortable feeling in his eye

1. An examination was made of all the treatises on genitourinary diseases to be found in the library of the Surgeon-General's office with the following result:

Morrow: "System of Diseases of the Genitourinary Organs," New York, 1894. No mention. Stokes, F. W.: "Diseases of the Genitourinary Organs," London, 1892. No mention. Taylor, R. W.: "A Treatise on Genitourinary and Venereal Diseases," New York and Philadelphia, 1904. No mention. Fuller, Eugene: "Diseases of the Genitourinary System," New York, 1892. Simply mentions it. Will-Ogilvie: "Lectures on Genitourinary Diseases," London, 1894. No mention. Acton, W.: "The Diseases of the Genitourinary Organs," Philadelphia, 1888. No mention. Belfield, W. S.: "Diseases of the Genitourinary Organs," New York, 1884. No mention. "American Text-Book of Genitourinary Organs," Philadelphia. No mention. Black, D. C.: "Diseases of the Genitourinary Organs," Philadelphia, 1872. No mention. Guthrie, G. J.: "Genitourinary Diseases," London, 1836. No mention. Morris, H.: "Diseases of the Genitourinary Organs," London, 1895. No mention. Hyde and Montgomery: "Syphilis and Venereal Diseases," Philadelphia, 1900. Quite a full account of eye affections occurring in gonorrhea under the heading of gonorrheal rheumatism—not, however, placed in the index separately.

E. L. Keyes and E. L. Keyes, Jr.: "Surgical Diseases of the Genito-urinary Organs," New York, 1903. A full account, similar to the above, of iritis and conjunctival affections in gonorrhea, considered under the heading of gonorrheal rheumatism. Not indexed separately.



he had a pain and some swelling in the joints of the big toe of the left foot. While not severe, these symptoms were present during the whole course of the eye affection.

#### CONJUNCTIVITIS.

The existence of conjunctivitis due to an endogenous infection of gonorrheal toxins is certainly rare, and is questioned in many quarters. Before the era of close bacteriologic study it is quite possible that cases of this kind may have escaped observation, since it would be only natural to refer any conjunctival inflammation with a mucopurulent or purulent discharge to an external infection. The case here reported might easily have been classed as an ordinary gonorrheal infection of the conjunctiva had I not followed my invariable custom of examining all conjunctival discharges as to their bacteriologic character.

*Patient.*—R. C., white, aged 25, came to me on May 22, 1905, with a double mucopurulent conjunctivitis.

*Examination.*—There was but slight swelling of the lids. The cornea was clear and the iris and other internal structures normal. He first noticed a discharge from his eyes two days ago. As he confessed to having a slight gonorrhea (a second attack), an external infection was considered almost certain. Nevertheless a smear of the discharge was taken. He was given a cleansing wash, to be used three times a day. An examination of the slide by Dr. Le Merle at the Lionel laboratory at the Emergency Hospital failed to reveal any organisms of any kind. The specimen was pure mucopus.

*Course of the Disease.*—May 24: There was quite considerable thickening of the conjunctiva of the lids. The eyeball itself was not entirely free from infection, and there were a few fine ecchymoses of the conjunctiva near the cornea in both eyes. The discharge was about the same—not creamy, but stringy and in rolls. On May 28 another careful examination of the discharge was made, with the same result as before—no organisms of any kind whatever were found. By May 30 the discharge was much less, and the infection of the ball quite gone.

*Remarks.*—By June 1 the eyes were practically free from discharge, though there yet remained some thickening of the conjunctiva of the lids, particularly the lower retrotarsal folds. An inquiry into his history revealed the fact that when he had his first attack of gonorrhea, two years ago, about three weeks after the beginning and when it was in the stage of decline, he was seized with rheumatism in the left foot which laid him up for three weeks. During his present attack he has had pain and tenderness of the patellar ligaments of the left knee—not severe, but sufficient to keep him reminded that he has a knee joint.

I am aware, of course, that it may be charged that there is little evidence, beyond that of coincidence, that the conjunctival inflammation was due to an endogenous affection. An external affection, however, I think, can be positively excluded, and we should at least learn from this the importance of a bacteriologic examination in every case of purulent conjunctivitis occurring in gonorrheic patients. If no gonococci are found, the prognosis is quite different from that when their presence is demonstrated.

External inflammations of the eye in gonorrheic infection have been observed and commented on by both ophthalmic and genitourinary authors. They have generally been described as of a mild type.

Taylor, who is one of the few who mention it at all, in his "Text-Book on Genitourinary Diseases," 1904, has characterized it as "serovascular conjunctivitis." Others evidently regard it as a form of scleroconjunctival affection. No author I have been able to consult has mentioned the pronounced mucopurulent form here described. While it is quite true that most of the

complications of general gonorrheal infection show themselves under the form of the so-called rheumatic inflammation, that is a plastic form affecting the fibrous structures, there are certain instances in which it assumes the purulent form, as in cases of endocarditis that have been reported. A more careful examination and observation of cases of purulent conjunctivitis in gonorrheic subjects would throw much needed light on this subject, which has an important pathologic, as well as a highly practical interest.

#### THE MEDICAL FEATURES OF THE PAPYRUS EBERS.\*

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This is an age of inquiry in researches and excavation, with a constant craving for some new development to assist us in our studies.

The last hundred years is the Niobe of civilization, not only in inventions and productions, but in the remarkable revelations which have materially assisted us in the wonderful development in science. However, whatever we have done to advance the history of civilization was not done by an easy task.

When we look through the magnificent works of discoverers and pioneers, the fruit of hardship, trial and labor, we can not fail to be infected with some of the enthusiasm which animated those who were endowed with superior intelligence and the gift of knowledge to bring forth hidden treasures from the inmost bosom of the earth, and to transmit them to future generations. Of one of these it may well be said: "From the Orient to the Occident," great be thy name (George Ebers).

The Anglo-Saxon nations, though renowned for deep thinking, and philosophizing in every branch of science and art, can not boast of a scholarship in bringing forth the first literature of the science of medicine. A third of a century has elapsed since George Ebers revealed the pages on medicine which were written some seven thousand years ago, and which were concealed for nearly four thousand years between the legs of a mummy. With the assistance of the learned Ludwig Stern and other Egyptologists, Ebers published the fact that Hippocrates of Cos, who for twenty-three hundred years has been known to the world as the "Father of Medicine," and as an original observer, no longer possesses this distinction. It has been wrested from the ancient Greek by the discovery of this papyrus of a date so remote as almost to place Hippocrates within the ranks of modern physicians.

However great the appreciation we may manifest, it is but strictest justice to do homage to the zeal, the remarkable ability and indefatigable activity of this German scholar, whose name is attached to that elaborate work, the "Papyrus Ebers."

The revelation of this important document merits assuredly all praise. In the Ebers Papyrus we have a monument of ancient culture before us, whose medical and historical value is inestimable, as may be seen from the description of its contents.

In this compilation we have the most important medical treasure of the Egyptians before us, in a more complete form than any other known work. We learn much, too, of the anatomic, physiologic, pathologic and pathologico-anatomic conception of that time. Further-

\* Delivered before the Thirtieth Annual Session of the American Academy of Medicine at Chicago, 1905.



more, it gives us information concerning the methods of the examination of a patient and diagnosis of the Egyptian physicians, of methods of teaching and learning, as well as of the medical standing at that time.

#### DISCOVERY OF THE PAPYRUS.

No better history can be attempted than the one given by the illustrious Ebers<sup>1</sup> himself, which possesses all the characteristics of a romance.

In the winter of 1872-73, George Ebers and his friend, Ludwig Stern, of the University of Leipsie spent several months at Thebes in quest of rare documents. For some time the two scientists made their dwelling place in one of the tombs of Abd-el-Gurnah, and associated daily with the Arabs of Luxor. A wealthy citizen of that place showed Ebers the antiquities which he, little by little, had obtained from a fellah, on the other side of the Nile. One day he exhibited one of those texts that are known under the name of "shai-en-sensen," and a wooden Osiris statuette in which a papyrus was well concealed. As an Arab did not trust himself to unfold the perishable manuscript, Ebers bore in mind the "shai-en-sensen," and let its high-priced possessor know that similar texts known had been found, and that he could not consider its purchase without seeing the contents of this papyrus, but that if he had anything really valuable or rare to offer him, he would not hesitate to pay him well for it. The next day the Arab sent for Ebers and took from a tin case a well-preserved papyrus roll. According to the statement of the Egyptian possessor, the papyrus was found in a tomb in the so-called Il Assiût part of the necropolis of Thebes, between the legs of a mummy. Since the finder of the latter was dead, it was impossible to refer to the exact tomb that formerly contained the treasure.

The costly manuscript was unfolded and on close inspection Ebers made the startling discovery that it was a document of great value and in an unusual condition of preservation. Ebers says he can with difficulty describe the impression that the precious, delightfully written and undamaged memorial made on him. The first lines on which his eyes fell belonged to a fragment of a calendar that he had known for a long time. This little document, so very important to the Egyptian chronology, was years ago shown to the renowned Egyptologists, Dümichen, Naville, Brugseh, Eisenlohr, and in 1870 to Ebers himself, in a copy belonging to a Mr. Smith, an American inhabitant of Luxor, who maintained that he was the possessor of an extensive medical papyrus. Because of an affection of the eyes contracted while copying inscriptions, Ebers could not study the Smith copies; hence Professor Eisenlohr of Heidelberg succeeded in obtaining a drawing (by means of tracing) of the fragment of calendar which was then regularly advertised in a periodical devoted to the Egyptian language and archæology, but without success.

Outside of the already-mentioned fragment of calendar, not a line of the papyrus was known. Mr. Smith claimed to have possessed a roll from which he had copied the fragment of the calendar, while, in reality, he possessed only a copy, which was the product of his own handwriting.

Thus Ebers knew the true possessor of the precious memorial, and he resolved from the first to obtain it. The required price was high, but not higher than that paid for less handsome papyri. The same winter an Englishman of the British Museum was traveling through Egypt, and being aware of the treasure at

Thebes, intended to purchase the same from Mr. Smith, whom he believed the true possessor. Ebers longed to possess the document himself, but had not the means to meet the demands of the owner, who was not altogether aware of its full value. However, receiving the financial assistance, graciously advanced to him by Max Günther, privy councilor of commerce at Leipsie, then visiting the Egyptian monuments, Ebers purchased the treasured papyrus.

With the newly acquired treasure on board, they sailed for Cairo, where they had an opportunity to glance over the contents of the fragile roll. His friend, Professor Stern, remained behind. Ebers traveled homeward, and ended the work which he later showed and explained to His Majesty, the lamented King John of Saxony, a man of letters in the broadest sense of the term. It was finally turned over to the University of Leipsic for safe-keeping.

In order better to preserve the valuable antiquity, and so that it may be shown to the many visitors, it has been cut into twenty-nine pieces of different sizes. Each piece lies under a glass, so as to avoid pasting. Those written on both sides are placed between two glasses.

#### DESCRIPTION OF THE PAPYRUS.

When Ebers came into possession of the papyrus, it consisted of a single, tightly rolled piece of the finest yellow-brown papyrus. The width of the document was 30 centimeters, and the length of the written part 20.23 meters. No other papyrus known to Egyptologists is better preserved.

The text of this perfect ancient record is divided into columns, each of which is numbered. The column numbers are placed over the first line in the middle of each column, which contains either twenty-one or twenty-two lines. With the exception of columns three to twenty-one, which are considerably smaller, the columns are 22 centimeters in width, and run from 1 to 98, and in the back from 99 to 110. Singularly, the numbers 28 and 29 are missing, although the text continues uninterruptedly. The omission is explained on the ground that the Egyptians considered 110 to be a perfect number, and by this means the writer was enabled to complete his book with the required number of pages.

Dr. von Oefele believes the writer was a very fine calligraphist, but evidently a very ordinary and careless subject, and therefore carelessly skipped from number 27 to 30.

There is no lack of figures in the text, and only a few that are repeated time and again, and they are written in red to denote the quantity of the medicament to be used, while the prescriptions are in black. Another particular feature of the pagination is that up to column sixty the same hand paged the papyrus, while another scribe continued in the pagination in a different manner, although the text shows that it was wholly written by one person only. The second pagination may be the work of the physician who added his (ⲉ) signature after many a prescription, or the purist, who wisely added his signature in paler ink, when that of the physician was omitted.

*Script.*—The script in which the Ebers Papyrus is written is extraordinarily regular, partly in black and partly in red ink. This form of writing is known as the hieratic, and is one of the three forms used by ancient Egyptians. The others are the hieroglyphic and the demotic. The hieratic is the cursive form of Egyptian writing, and is used chiefly on sacred and medical papyri and on wooden coffins. How early the hieratic came into

1. Papyrus Ebers, vol. i, Leipzig, 1875.



use is unknown, but fragments of papyri in script with those characters have been traced to the I. dynasty. The characters are usually written from right to left. The invention of this script was attributed to Thoth (the Greek Hermes), and was in constant use up to about 100 B. C.

About 300 A. D. all knowledge of the meaning of the characters had died out, and it was not until the discovery in 1799 of the Rosetta Stone (by Boussard, a French artillery officer) that any real progress was made in their decipherment.

Rubie or red occurs in almost every heading throughout the papyrus. Also in the statement of the disorder for which a medical prescription is to follow. Those headings, or rubrics, as they are called, show the use of red colors for such purposes in the most remote antiquity. Dr. Christen,<sup>2</sup> in a chemical analysis of this red coloring, found it to contain red lead.

*Synonyms.*—In the Ebers papyrus there exist a great many synonyms which are so much like the Semitic vernacular, both in expressions and pronunciations, that one is almost led to believe that the ancient Egyptian belongs to the group of Semitic tongues. The language of the papyrus with all its richness of primitive forms possesses such organic arrangements that a single word can be easily recognized, for if a branch of the same is lacking, it may be readily supplied by one from another dialect. Sometimes an abstract conception or a mental function is combined with different things or actions, perceptible through the senses; ordinarily, therefore, things are easily explained; substances of either material or spiritual character are represented according to their characteristics. Each noun contains one of those characteristics; therefore, there exist as many nouns for the same thing as there are characteristics in it. One of the characteristics of the Egyptian, as well as of the Semitic tongues, is that they had different ways to arrive at the expression of the conception, which, however, were not identical in meaning. It is difficult, therefore, to differentiate the co-existing synonyms. Philologists regard the various shades in order to explain the origin of a conception from different sides.

*Age of the Papyrus.*—The exact date of the writing of this papyrus has not yet been established. Various opinions exist. The calendar which is on the outside of the papyrus refers to the eighteenth dynasty, in the sixteenth century B. C., and bears the following inscription: "In the ninth year of His Majesty the King of Upper and Lower Egypt, Amonophis I, the Everlasting." Before the last epithet is the framed name of the king.

*The Date of Transcription.*—According to Lenormant,<sup>3</sup> a royal library was established at Thebes 1670 B. C. (near the place where the Ebers Papyrus was found), under the direction of Amen-em-an, who took great pride in transcribing fragile papyri, which was at that time falling into decay. Therefore, it is possible that the Ebers Papyrus was either compiled, revised or rewritten in 1552 B. C., or 118 years after the establishment of the library. There is still another important supposition concerning the Ebers Papyrus. According to the discoverer's opinion, it is identical with the hermetic books *Περὶ φαρμάκων* which are quoted by Clemens Alexandrinus.<sup>4</sup>

The latter is said to be the greatest of all works deposited in the tomb of Osymandias at Thebes, which, according to Diodorus Siculus, contained 20,000 vol-

umes. Among these were the forty-two hermetic books described by Clemens Alexandrinus, six of which were medical works, on the structure of the body, on diseases, on instruments, on medicine, on the eyes, and on women.

*Hermetic*, which means compiled, or inspired by Thoth, was any work which was written by a priest according to the inspiration of the god, which would correspond excellently to the Ebers Papyrus. However, Lüring<sup>5</sup> believes that the Ebers Papyrus is much older than the book, and argues that there are certain remarkable differential points between them. Whatever may be the truth, the value of the Ebers Papyrus is the same, be it the hermetic work or a compilation from writings of prominent physicians of the earliest ages.

That the writer of the Ebers Papyrus wrote in 1552 B.C. can be proved in three ways, as Ebers<sup>6</sup> shows, namely, first, by the peculiar shape of the letters in which the manuscript is written; second, by the names of kings occurring in the papyrus; and third, by the calendar which we find at the back of the first column of the roll.

The name of the king in whose reign the Ebers Papyrus was transcribed, compiled or written was Amenophis I of the eighteenth dynasty.

von Oefele<sup>7</sup> calls attention to the fact that the language from columns 103 to 110, which are written on the back of the papyrus, is different from that of the rest of the roll, although the handwriting is the same and shows that there existed different dialects in the land of the Pharaohs, the same as exist to-day in many countries. Dr. von Oefele further states that while the style of writing in the Ebers Papyrus does not go back beyond 1600 B. C., yet the text, in other words, the idioms of the language, belong to a much older period, and that the oldest portions of the Ebers Papyrus very likely reach back into the time of the first Egyptian dynasties.

Lepsius<sup>8</sup> and Meyer<sup>9</sup> believe that it was not only written, but also compiled under the government of an unknown Hyksos king. It is thus generally accepted that the Ebers Papyrus is a copy. Moreover, the many corrections made by strange hands and the many critical, marginal notes found throughout the papyrus show that the document was worked on.

#### CONTENTS OF THE PAPYRUS.

A large proportion of the diseases known to modern medical science are carefully classified and their symptoms minutely described.

Mention is found of the following diseases, with their treatment:

*Diseases of the Abdomen.*—Abdominal tumors and swellings, obstructions of the abdomen, swellings in the inguinal region, affections of the stomach, esophagus, pylorus and small intestine, obstruction of these organs, inflammations, diseases of the liver, affections of the intestines, intestinal worms, belching, cramps, jaundice, and chlorosis—*Ægyptiaca*.

*Diseases of the Bladder and Urinary Organs.*—Obstruction of the urinary passages, cystitis, retention of urine, polyuria, hematuria, diabetes mellitus, blood in the urine, hypertrophy of the prostate, stricture, dysuria, and strangury in children.

*Diseases of the Rectum and Anus.*—Tumors, inflammatory abscesses, prolapsus, affections of the vessels, inflammations, obstructions, diarrhea, dysentery, constipation, and pain.

*Diseases of the Chest and Respiratory Organs.*—Diseases of

2. Ebers: "Die Maasse u. d. Kap. ü. Augenh., p. 71.

3. Manuel d'Histoire Ancienne, vol. i, p. 425.

4. Strom. vol. vi, p. 785, Section 634, ed. Potter.

5. Die ü. d. med. Kennt., etc., p. 13.

6. Pap. Eb., Leipzig, 1875.

7. Prag. Med. Woch., 1905, No. 11, p. 143.

8. Ægypt., Zeit., 1875, p. 145.

9. Gesch. d. Alt. I, section 402.



the bronchi, affections of the lungs, asthma, phthisis, general diseases of the chest, and sequels to diseases of the stomach.

*Diseases of the Heart.*—Fatty degeneration, dilatation, endocarditis, angina pectoris, hypertrophy, thrombosis, and anasarca.

*Diseases of the Eyes.*—Conjunctivitis, iritis, blear eyes, hyperemia, granulations, albugo leucoma, vascular cicatrix of the cornea, corneal opacity, staphyloma of the cornea, inflammation, myiodesopsia, hypopyon, stenosis, contractions, strabismus, xanthelasma, fatty degeneration, abscesses, chemosis, suppuration, amaurosis, amblyopia, cataract, paralysis, blepharitis, injury, calcification of the Meibomian glands, distichiasis, and trichiasis.

*Diseases of the Ears.*—Impaired hearing, inflammation, viscous humor, suppuration, fetid pus, and foreign bodies.

*Diseases of the Nose.*—Tumors, coryza, influenza, and mucus.

*Diseases of the Head and Neck.*—Tumors, migraine, neuralgia, shooting pains, and vertigo.

*Diseases of the Scalp.*—Tumors, alopecia, superfluous hair, and eruptions. There are also prescriptions to prevent hair from turning gray, to produce its growth on bald heads, to promote the growth, to make it grow on cicatrices, to depilate the scalp, to prevent white hairs from coming in the eyebrows, and to dye the hair.

*Facial Diseases.*—Sunburn, freckles, wrinkles, discoloration, roughness, and blotches.

*Diseases of the Tongue and of the Teeth.*—The ailments of the tongue are not specified, but for the teeth there are prescriptions to strengthen them, to make them grow, to heal ulcers of the gums, swelling of the gums, and bloody congestions of the teeth.

*Diseases of the Skin.*—Pains, pustules, prurigo, swellings, tumors with fetid suppuration, lesions, fistulas, leprosy, eczema, scabies, rashes, itching, burning, cankers, boils, carbuncles, and furuncles.

*Diseases of the Blood, Arteries, Veins and Nerves.*—*Distoma hematobium*, extravasations, congestion, coagulation, numbness of the vessels, loss of suppleness, and weakness of the nerves.

*Sores and Wounds.*—Blows that have cut the flesh, blood in the opening of the wound, gangrene, eschar formation, pus, contusions, cuts, pricks, bites of man or beast, thorns, splinters, etc., and their treatment.

*Burns.*—Sores which result from burns, poisonous burns, spots or white cicatrices which such sores leave, and alteration of the hair on the burnt surfaces.

*Diseases of the Limbs.*—Trembling, pain, swellings, stiffness, bent limbs, itching, tumors, lesions, *Filaria medinensis*, tired limbs, perspiration of the feet, sore toes, corns, bunions, callosities of all sorts, and falling nails.

*Diseases of the Female Genitals.*—Tumors and abscesses in the vagina, inflammation of the vagina, twinges in the vagina, chafing due to inflammation in the vagina, ulceration of the womb, pain in the labia, abscesses of the labia, menstrual disturbances, *fluor albus*, affections of the mammary glands, etc., and their treatment.

*Maternity.*—Methods to induce abortion, to prevent abortion, to replace a prolapsed uterus, to deliver a woman, to perform version during delivery, to deliver the placenta, to restore the vagina to its normal condition, to prevent retention of urine, and to stop hemorrhage.

*Hygiene.*—Deodorizations, fumigations of dwellings, perfumes for women to render odor of the house, clothing and breath agreeable, to destroy insects, reptiles, plant lice, to prevent wasps and mosquitoes from stinging, to prevent mice and rats from gnawing things, to prevent birds from eating crops, to prevent rodents from devouring corn in the granary, and to destroy lizards and scorpions.

Not only diseases producing suffering to mankind claimed the physician's care in those days, but he had also to consider the toilet. Seventy-four prescriptions pertain alone to hair washes, dyes, oils and depilatories. After duly reflecting on important anamnestic facts, on the subjective disturbances or disorders, and the objective or demonstrable changes, the physician prescribed the treatment, and a remedy which was either aimed at the principal subjective disturbance of the patient, or at the most striking objective manifested symptom, and

often symptoms of the disease were regarded as the disease itself. It is not improbable that in difficult cases consultations were held.

In this papyrus are mentioned over 700 different substances from the animal, vegetable and mineral kingdoms which act as stimulants, sedatives, motor excitants, motor depressants, narcotics, hypnotics, analgesics, anodynes, antispasmodics, mydriatics, myotics, expectorants, tonics, dentifrices, sialogogues, antisialics, refrigerants, emetics, anti-emetics, carminatives, cathartics, purgatives, astringents, cholagogues, anthelmintics, restoratives, hematics, alteratives, antipyretics, antiphlogistics, antiperiodics, diuretics, diluents, diaphoretics, sudorifics, anhidrotics, emmenagogues, oxytocics, ecbolics, galactagogues, irritants, escharotics, caustics, styptics, hemostatics, emollients, demulcents, protectives, antizymotics, disinfectants, deodorants, parasiticides, antidotes and antagonists.

Medicines are directed to be administered internally in the form of decoctions, infusions, injections, pills, tablets, troches, capsules, powders, potions and inhalations; and externally, as lotions, ointments, plasters, etc. They are to be eaten, drunk, masticated or swallowed, to be taken often, once only—often for many days—and the time is occasionally designated—to be taken mornings, evenings or at bedtime. Formulas to disguise bad-tasting medicaments are also given.

The Ebers Papyrus contains numerous other subjects pertaining to the practice of medicine, which the reader will find in the text.

#### TRANSCRIPTION FROM HIERATIC TO HIEROGLYPHIC.

In 1874, two years after the discovery of the papyrus, at the Orientalists' Congress, held in London, a method of transcribing hieratic texts into hieroglyphics was devised. Ebers, in working on the papyrus, has followed this method in general, still he transcribed a few signs, especially those which seem to indicate vowels, independently of the London method. The latter, accepted in the main by all orientalistes, has been modified in its details by all Egyptologists, so that in every work on this papyrus we meet with various interpretations of the written characters.

In 1875 Professor Ebers, with the financial support of the Royal Saxonian Ministry of Education, had reproduced *fac simile* photo-lithographic plates in size, dimension and color, in two magnificent volumes, in large royal folio, illustrated after the hieratic text.

Volume I contains an introduction written by Ebers himself, a general index of the titles of all the subjects, with explanatory notes and plates I-LXIX. Volume II contains an hieroglyphic and Latin glossary of all Egyptian words alphabetically arranged, with reference to the columns and lines where they are found, and plates LXX-CX. Much credit is due both George Ebers and his traveling companion and assistant, Ludwig Stern, librarian of the vice-royal collection of manuscripts in Egypt, for the reproduction and the translation from a language of which so little is known. The study of Egyptian literature, as a whole, is hardly more than three-quarters of a century old, and too much praise can not be given Prof. Ludwig Stern for his labor and the pains taken in the compilation of the special glossary annexed to this beautiful work, which will ever remain an honored testimonial and a monument to both immortal names.

#### OTHER PAPYRI AND MEDICAL ANTIQUITIES.

There are now in existence seven papyri on the subject of medicine, those at Berlin (large and small), Lon-



don, Leyden, Turin, Bulak and Leipsic, the last being the Ebers Papyrus, which, because of its rich contents, the distinctness of its script and its completeness is foremost in importance.

In order to fill the vacuum between Ebers Papyrus and the writings of Hippocrates, we must not overlook the inscription on one of the "Mastabas," or tombs of Egyptian grandees, which surround the pyramids of Sakkarch, that of Sekhet-enankh, chief physician of the Pharaoh Sahura of the fifth dynasty, 3533 B. C. It describes how he healed the king's nostrils, for which his majesty wishes him "a long life in holiness"; and the compilation of medical works assigned by tradition to one of the most ancient kings, Teta, the successor of Menes of the first dynasty. Manetho,<sup>10</sup> the Egyptian priest and historian, tells us that this king wrote treatises on anatomy and surgery and performed surgical operations with flint flakes. About 3300 B. C., during the reign of Cheops, the builder of the great pyramid, a medical papyrus containing anatomy was found by a priest in a temple. We also know that the Egyptians

Another relic of Egyptian medicine is the domestic medicine chest (Fig. 1) of the wife of the Pharaoh Mentu'hotep of the eleventh dynasty, 2500 B. C. It contains six cases, one of alabaster and five of serpentine, with dried remnants of drugs, two spoons, a piece of linen cloth and some roots, enclosed in a basket of straw-work. It was found in the queen's tomb (Fig. 2).

Beginning with the earliest chronology on the existence of Moses, or his five books in the Bible, and considering the doubtful authority and the most accepted authority, namely, Josephus, who believed that Moses wrote Exodus about 1985 B. C., and Bunsen, who stated that Moses died 1523 B. C., we observe a difference of 462 years in the dates assigned to the life of Moses, hence between the two authorities we naturally come to the conclusion that the five books of Moses must have been written between 1985 B. C., and 1523 B. C. Hence, as between the oldest and the latest parts of the Ebers

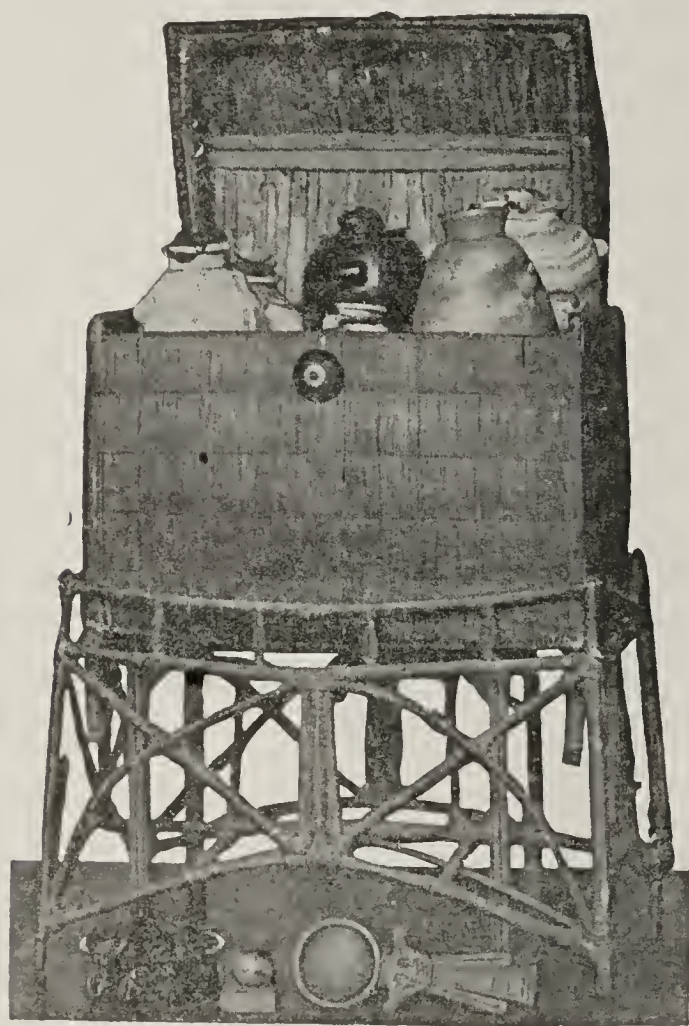


Fig. 1.—A domestic medicine chest of an Egyptian queen.

practiced embalming for over 5000 years B. C., and their process surely necessitated a knowledge of anatomy. There can be no doubt, therefore, that this ancient people knew the structure of the body, and without that knowledge they could not have understood even the symptoms of the different maladies enumerated in the Ebers papyrus.

Pliny (XIX, 5) tells us that the Egyptians examined the bodies after death, to ascertain the nature of the diseases of which they died. There may have been a prejudice against it, perhaps, just the same as there is to-day, but the Egyptians did not shrink from human dissection, consequently the study of anatomy was a matter of course. However, they may not have attained the degree that we might expect in comparison with their other medical knowledge.

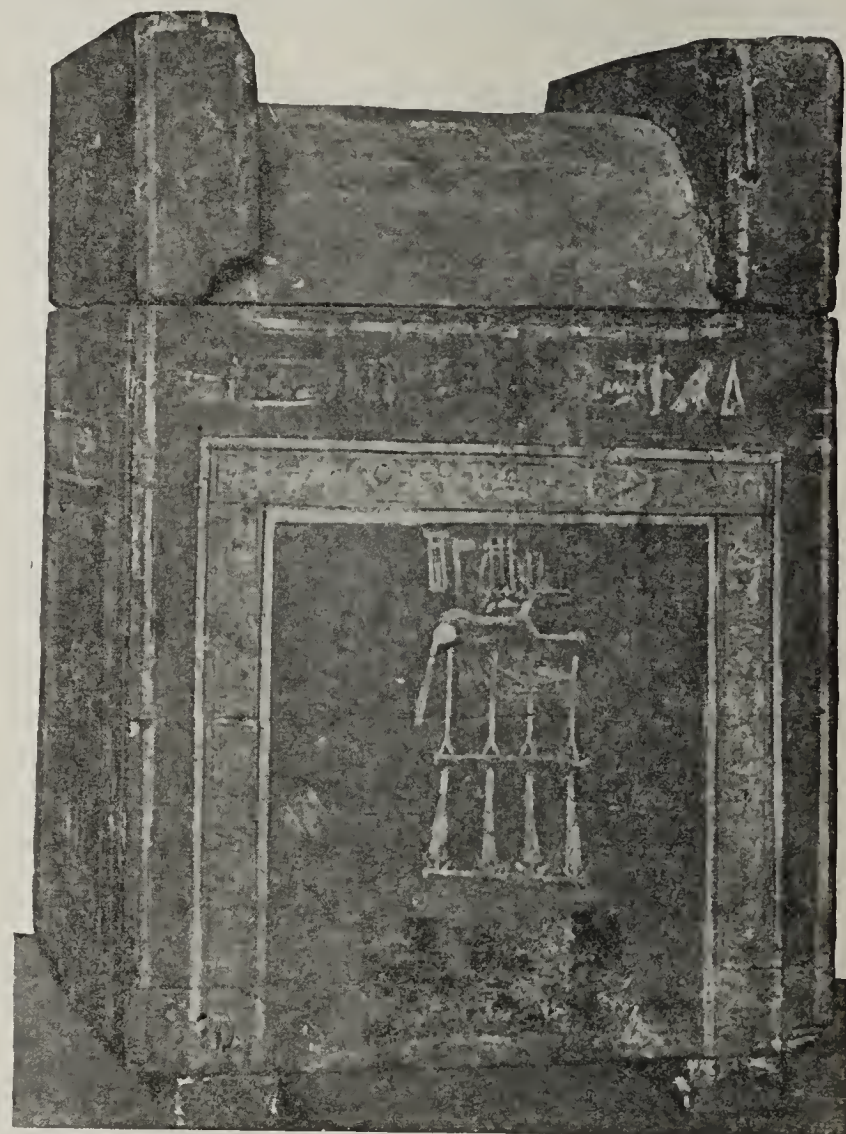


Fig. 2.—Stone case in which medicine chest was found in queen's tomb.

Papyrus lies a vast space of time, over 3,000 years, the whole dating from various epochs between 4688 B. C. and 1552 B. C., it appears reasonable to conclude that Moses knew Egyptian medicine. Medical literature was considered sacred, and therefore was carefully guarded from the profane eyes of the laity, and was only open to members of the priest class and their matriculants.

#### EGYPTIAN AND MOSAIC MEDICINE.

Moses, in whatever period he existed, was known to have resided at the court of Pharaoh, and to have received his collegiate education among the wise men of Egypt, and in the same school in which the Ebers Papyrus was written. The immortal Ebers, in his "Aegypten und die Bücher Moses," Berlin, 1868, has already shown the existing similarity of the Bible and Egyptian writings.

10. Ap. eund, p. 54 c.



Biblical botany no doubt originated with the Egyptians and found its way into the Mosaic writings. The same source led to the knowledge of the plant world and the most remarkable phenomena of plant life.

We find the Bible not poor in the designation of different plants and their various parts. In the very beginning (Gen. i, 11) we read: "And God said: Let the earth bring forth grass, the herb yielding seed and the fruit tree yielding fruit after his kind," etc.

*Biblical Medicine.*—Moses, who evidently borrowed from the writings and teachings of the Egyptians, gives us in his "five books" information of their anatomic knowledge. In the narrative of the twin birth of Esau and Jacob it is related that the latter grasped the former's heel (Genesis xxv, 26); and in the description of Jacob wrestling with the angel it is remarked that the angel touched Jacob's hollow of the thigh, and put it out of joint (Genesis xxxii, 25); and in the same chapter, verse 32, the "sinew that shrank" is spoken of.

In Exodus (xxviii, xxix) the heart, brow, shoulder, breast, lobe of the ear, hand, finger and thumb are mentioned. In Exodus (xxix, 17) dissection is mentioned, "and thou shalt cut the ram into sections"; some of the visceral portions are also mentioned, such as inwards, caul, liver, fat kidneys; skin also occurs. In Deuteronomy (xxxii, 10) the apple of the eye is mentioned, the lids (Ps. xi, 4), and eyes (Exodus xxi, 24); bones (Gen. ii, 23), and sinews (Gen. xxx, 32); teeth (Gen. xlix, 12); palate, temple (Cant. ii, 3; vi, 7). In Job (xvi, 13) we read of pouring out his "gall" on the ground.

The Bible tells us of physicians (Gen. i, 2): "And Joseph commanded his servants, the physicians, to embalm his father." Isaiah (iii, 7) mentions particularly a healer: "I will not be a healer." We also find that the Jewish prophets, as well as the Egyptian prophets, practiced the art of healing. This may be seen from the narration of a man of God who restored the paralyzed hand of King Jeroboam (I Kings, xiii, 4-6). Elijah brought to life a child, apparently dead (I Kings xvii, 17-22); and his disciple, Elisha (II Kings iv, 18-20, 34-35) performed similar miraculous cures. Isaiah (II Kings xx, 7) cured King Hezekiah of an inflammation by applying a plaster made of figs.

The Bible likewise mentions surgeons and surgery of wounds and injuries in different parts of the body, caused by various weapons—sword, arrow, hammer, etc. (II Sam. ii, 23; iii, 27; iv, 6; xviii, 14; xx, 10; Num. xxv, 8; Judges iii, 21; v, 24; I Kings, xxii, 34; II Chron. xxxv, 23; and many other places). Inflammation and abscesses (Deut. xxviii, 25, 27) are also mentioned. Wounds were treated by the application of wine or oil, bandages or sutures (Isa. i, 6; Jer. viii, 22; xlvii, ii; li, 8; Deut. xxviii, 27). Gangrene and putrid discharges (Ps. xxxviii, 6; Prov. xii, 4; xiv, 30; II Macc. ix, 9) are spoken of.

It is also evident that Moses acquired a knowledge of chemistry from the Egyptians. As Boerhaave aptly remarks, the fact that Moses knew how to reduce gold to powder so as to render it miscible with water, and by this means potable, shows he had acquired a knowledge of chemistry only to be attained by the highest masters of science and art.

The fact that apothecaries (*Rakha*) are mentioned in the books of Moses (Exodus xxx, 25-35, "after the art of the apothecary"; Exodus xxxvii, 29, "according to the work of an apothecary"; Ecclesiastes x, 1, "the ointment of the apothecary"; II Chronicles xvi, 14, "prepared by the apothecaries' art"), and the compounded prescrip-

tions in the Ebers Papyrus, furnish us evidence that a distinct class of apothecaries existed among the ancient Egyptians, who were cultivated pharmacists.

Certainly more competency was required of the ancient pharmacists than of those of our day, for the former had to make their own pills, extracts, infusions, etc., as we can find no proof that there existed manufacturing chemists. Their prescriptions were composed of many ingredients and many remedies. Of the 108 columns in the Ebers Papyrus, seven were devoted to tænia alone.

There can hardly be a doubt that the Ebers Papyrus existed prior to the exodus of the Israelites, and that the Biblical medicine embodied in the so-called Torna shebacsab (written law) had its origin in the valley of the Nile.

*Post-Biblical Medicine.*—Beginning with the post-Biblical history of medicine, we have the script, which was discovered 623 B. C., but which may have been handed down by oral tradition for many centuries before, and which is called Torha shebalpæ, or oral law. In this work is found a book on medicine (*saphar raphout*), containing classifications of plants, trees, etc., and their habitations.

We also know that another Egyptian monarch, Nakhepsus of Sais, in the seventh century B. C., wrote on medicine. It is said that he was the first to observe the wonderful virtues of green jasper, which when engraved with a dragon with rays, and hung around the neck, was considered a cure for digestive disturbances.

The employment of numerous drugs in Egypt has been mentioned by both sacred and profane writers; and the medicinal properties of many herbs which grow in the deserts, particularly between the Nile and the Red Sea, are still known to Arabs, though their application has been but imperfectly recorded and preserved.

Homer<sup>11</sup> speaks of the great number of medicinal plants and herbs produced in Egypt, some of which grew naturally, while others were cultivated.

The fame of the Egyptian physicians was spread throughout the ancient world. Homer described them as the "sons of Pæon, skillful above all men." In the third book of Herodotus is the following passage: "Cyrus sent to Amasis (500 B. C.) and bade him for an oculist—the best in the whole land of Egypt." Darius also sent hither for a body physician, and in the time of Tiberius and Nero, Egyptian physicians regularly came to Rome, usually to heal skin diseases. The science of medicine among this ancient people was in the hands of specialists, who were called *Snu*. Homer, and later Herodotus (ii, 37) tell us that there was a specialist for each single disease, and what records we now possess of the Egyptians after thousands of years of continued destruction corroborate the statement of the latter when he says that Egypt swarmed with physicians. They concealed their medical knowledge under the most mysterious formulas, and therefore used a writing or language not understood by the laity. The Latin prescriptions of our modern physicians appear to be an echo of the secret doings of our ancient colleagues.

The subdivision of the medical profession which prevailed among the Egyptians must have had a tendency, in some respects, to advance medical knowledge by specializing it. If we review the contents of the Papyrus, we can not but admit that the Egyptian physicians were well advanced in ophthalmology. The collection of Hippocrates, edited 4,000 years later, did not contain more

11. Odyss., vol. iv, pp. 228-230.



eye diseases, but they were more clearly and more agreeably described. The number of diseases mentioned in the Ebers Papyrus, as well as the profusion of medicines prescribed, is a source of wonder to modern physicians. The ancient Egyptians must have been experienced diagnosticians. All physicians, however, were required by law to employ the prescribed remedies, and in no case to resort to others unless, as Aristotle (iii, 10) states, the regularly authorized prescriptions proved unavailing. Any transgression of this rule of practice, if followed by the death of the patient, was a capital offense. This may have been but a nominal law, or one, as Finlayson says,<sup>12</sup> "held in reserve to check abuses, for the complicated formulas and large choice of alternate remedies indicated in the Ebers Papyrus would seem to show that no great weight was attached to strict adherence to special methods, deviation from which was fatal."

Up to a recent period our knowledge of Egyptian medicine was gathered solely from scattered passages from great writers. Praxagoras (though from Cos, the town where Hippocrates was born, and where the temple of Esculapius was built, lived in Egypt), of whom Galen speaks as the greatest symptomologist and diagnostician, and quotes his treatment for acute diseases, and especially gymnastics, was the teacher of Herophilus (400 B. C.), the first anatomist who made postmortems on cadavers. The former went to Egypt for his medical learning, and established a school for Greek physicians; the latter went for the same purpose and founded a system of pathology.

We have a continuous history of Egypt to the extent of about 5,000 years B. C., and a prehistoric account of 2,000 and a continuous culture known to us to cover about 2,000 years more, hence our continuous knowledge probably extends back to about 9000 B. C.

The Ebers Papyrus, therefore, opens a new era for the history of medicine and pharmacology. The work discloses an astonishing knowledge of a great variety of remedies, and shows that four or five thousand years before Christ there were learned men in Egypt who could make intelligent observations of disease, combine complicated prescriptions and use them with judgment. It is hardly possible to exaggerate the literary, scientific and historical importance of this wonderful papyrus, the most complete compendium of Egyptian medical science that is left to us, and we must acknowledge the fact that the copy of the Ebers Papyrus is the genesis of medicine.

#### TRANSLATION.

My sole purpose in translating the "Papyrus Ebers" into the English language is identical with that of the illustrious Ebers himself, namely, to bring out the origin and to cultivate the prehistoric knowledge of medicine, and to show that there existed in ancient Egypt nearly 7,000 years ago a civilization in which medical knowledge was in a high state of cultivation and in which the foundation of our present system of medicine was established. A careful study of this papyrus will convince the student that the medicine of to-day is essentially the medicine of the ancient Egyptians. Certainly it was in a crude state and on the same footing as our wearing apparel, both in custom and in fashion. Man has always covered his nakedness from the day that Adam ate of the apple. Garments have developed from the leaf covering to our present style of dress. In our latest advancement of civilization we have doffed the turban and donned the hat; we have cast aside the chiton and have

clad ourselves in the frock; we have dispensed with the kilt and adopted trousers; we have thrust aside the sandal and have replaced it with the shoe. A similar evolution has taken place in medicine. New garbs adorn anatomy, physiology, pathology, botany, chemistry and materia medica in general, but the fundamental principles of curing disease still remain the same. Even the various methods in the practice of medicine have not changed. From all historical accounts and from the contents and language of this papyrus, we have evidence that the ancient Egyptians had three different classes of physicians—the regulars, the priest physicians and the conjurers, just the same as we have to-day. Our advancement consists merely in a greater variety. We have regulars, irregulars, faith healers and many others, too numerous to mention.

In my translation I have added commentary notes, the aim of which is to establish the fact that medicine up to, and from, the time of Hippocrates until the present day has been built on the foundation of that of the ancient Egyptians.

It was with great hesitancy that I entered on this very difficult task, by reason of a real distrust of my own ability. My knowledge of Egyptology is but superficial, and yet I have been greatly encouraged by medical men in various parts of the world, to whom I had communicated my intention. On their advice, therefore, I venture to offer this work, not only to fill a hiatus in our medical history, but to bring forth for the first time in the English language the ancient treasure of medical knowledge, namely, "Papyrus Ebers," translated from the original, utilizing the labors of Ebers, Stern, Brugsch, Chasbas, Dümchen, Ermann, Lüring, Lieblein, Joachim, von Oefele, Hirschberg, Scheuthauer, Schäfer, Proksch, Lange, Piehl and many other renowned Egyptologists.

The assistance of the above-named scientists, whose labors cover a period of over thirty years, and their criticisms of one another have enabled me to produce probably the best translation in a modern tongue. I have borrowed from these eminent minds not as a plagiarist, but as a kleptomaniac, who steals for the benefit of others. In no place have I failed to acknowledge the theft by a footnote; therefore, I can only appeal for mercy to those who are always ready to engineer some method of criticism, be it just or unjust. I have spared no pains to render the translation as accurate as possible. In a work involving such an infinity of details and interpretations, doubtful to even more scholarly Egyptologists, it would be unreasonable to expect that no errors or misinterpretations would occur.

While the outline of my work is as crude as that of a pioneer, I trust it will serve the labors of others who are more accomplished.

I now come to that which is to me the most painful part of my duty; that is, to inform you that the immortal Ebers had worked on a translation for a period of twenty-five years. His death, however, unhappily cut short his labors. On opening his last will and testament it was found that in case of death the manuscript was to be burned; accordingly, his will was carried out.

In conclusion, gentlemen, allow me to acknowledge my sincere gratitude to Baron von Oefele, the greatest living medical Egyptologist and ancient medical historian, for his consent to review and to correct my translation of the "Papyrus Ebers" before its publication. I also wish to express my thanks to my daughter, Edith.

12. British Med. Jour., April 8, 1893.



who for seven long years has labored by my side, inspired not merely by the devotion of filial love, but also by the same interest and purpose as that of her father, namely, to cultivate medical history and to elevate the standing of the humane and noble profession of medicine.

70 Bellevue Place.

## THE WATER SUPPLY IN SHIPS FROM ITS BEGINNING TO THE PRESENT TIME.\*

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Medical Instructor U. S. Navy.  
WASHINGTON, D. C.  
(Concluded from page 1852.)

### CHANGES IN OUR PRESENT METHOD OF STORING AND DISTRIBUTING WATER, RECENTLY PROPOSED.

Certain well-marked sanitary defects inherent in our present methods of storing and distributing water on shipboard must have been noticed by every thoughtful naval surgeon, no matter how brief his experience at sea. These defects concern the water tanks, the pipe connections and the scuttlebutt. To begin with, one fundamental difficulty about the water tanks, located as they are, near the bottom of the ship, is, that it is at times almost impossible for a man in the hold to distinguish the one containing merely feed or other utility water from the one containing distilled water for drinking. Since much might depend on this under certain circumstances, measures should be taken to prevent such a mistake from occurring. A radical remedy has recently been suggested by Couteaud and Girard,<sup>12</sup> who recommended the establishment of two separate holds, one in the forward part, the other in the after part of the ship; one for utility water, the other for distilled water. Again, the danger of drinking water becoming mixed with utility water on board ship is not alone dependent on a mistake in the tanks; it may likewise be traced to faulty pipe connections, as was shown in a recent experience of mine in this instance, the drinking water, as well as the salt water, were circulating in one system of pipes, separated from one another only by certain cut-out valves. The consequence was that neither sweet water nor salt water could be drawn without taking part of the other into the bargain. Since the quantity of salt water thus added to the sweet water in both kitchen and pantry was very large; and since, moreover, the salt water, in this instance, was in fact undiluted sewage drawn from the harbor of one of our navy yards, it could not help being quickly discovered and remedied. One such experience ought to suffice to show the great necessity for the widest possible separation of both tank and pipes carrying utility water from those carrying distilled water. Each should circulate in its own separate system of pipes and be independent of cut-out valves.

Dr. Le Méhauté, in the article referred to above, has placed the whole subject in an entirely new light before the naval medical profession. He has clearly pointed out present defects and suggested means to remove them. The objects to be aimed at are: (1) The protection of the water from impurities that may originate in the present reservoirs and pipes themselves; (2) its protection from the impurities liable to get into it from the outside; (3) the providing of a method for the disinfection of tanks and pipes.

The measures which Le Méhauté suggests to meet these various demands are as follows: (1) Simplify the pipe system and remove all unnecessary parts of it; (2) hermetically seal the entire system and make the water circulate in a closed system of vessels; (3) protect the metallic sides of the system against attacks by water; (4) provide a method to disinfect the system which shall be simple, efficacious and always at hand; (5) adopt steam under pressure as a means for disinfecting the pipes.

It certainly would seem obvious that by reducing the length of the distributing pipes and by removing all unnecessary parts of the system the danger from inside impurities can be materially decreased. Since, perhaps, the greatest danger from impurities lies outside the system, the hermetic sealing of the entire system, from the tanks to the fountains, would almost suggest itself. The dangers lurking around the water tanks from outside contaminations must have suggested themselves to every inspecting officer who has seen them and appreciated them but once. The changes recommended by Le Méhauté as regards the construction of these tanks, in view of these dangers, would seem to be most opportune and very much to the point. They are: (1) Place the manholes on the side instead of at the top of the tanks; (2) provide every tank with a metallic aspirating tube permanently fixed to one of its sides and closed outside by a screw plug; (3) ventilate the tanks through an L shaped pipe, provided at the lower outside end with a tampon of absorbent cotton to filter the air; (4) keep the upper surface free, closed and unencumbered; (5) slightly incline the bottom surface to allow of the accumulation of any deposit of possible iron rust and provide a purging spigot at the most dependent part of the bottom of the tank for an easy removal of the solid impurities collected there. Another suggestion deserving attention in this connection is the one made by Couteaud and Girard.<sup>13</sup> These authors would reduce the large number of small tanks, at present in use, into a small number—say three or four—of large reservoirs or cisterns, containing up to 14 or 15 tons of water each and place them between the two protective decks. They are also in favor of placing the manhole on the side instead of on top.

These suggestions are sound, and every naval sanitarian will endorse them without much hesitation. The hermetic sealing of the pipe system would naturally make disinfection sometime a necessity and hence provision must be made for it. Since it would involve a great deal of difficulty to take the system apart for such a purpose, the method of steam disinfection suggested is the one practically applicable method. For the purpose of disinfecting the tanks, the soldering lamp is no doubt the best means. Whether it is that the pipes are choked up mechanically with iron rust or coal dust, or, whether infected water has passed through them, the method of steam disinfection is equally applicable.

Thus, it will be seen, that hygiene has become exacting. It cannot rest content with half-way measures because these do not meet her ends. It is due to half-way measures that some much useless time and money-wasting experimenting has been done in the past, as we have seen, without producing the desired results. It is also evident that the hermetic sealing of the whole water circulating system and the modifications in the construction of the tanks, as recommended by Le Méhauté, must insure a faultless product inside of them.

\* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

12. *L'Hygiene dans la Marine de Guerre*, Paris, 1905.

\* Read in the Section on Hygiene and Sanitary Science of the



Having thus far obtained a perfect water inside of our tanks and pipes, we must aim to get it inside the sailors' stomachs in the same uncontaminated condition. To this end, the scuttlebutt system is the next detail to be improved.

#### DISTRIBUTION OF WATER.

The problem involved in the process of conducting drinking water from the tanks to the individual in an absolutely pure and uncontaminated condition has never until recently been approached courageously and seriously. It is held by some that the greatest and gravest danger lies in the manner of distributing water on board ships; that infectious diseases are more often transmitted and epidemics spread and kept alive through the common drinking cup than in other ways. Even the individual drinking cup appears to have proved a failure and has been abandoned where it was used formerly, because, if the men did not lose it, they would loan it to one another and thus defeat its very object.

To-day, men in most of our ships get their drinking water from what is called the "scuttlebutt." This is a wooden barrel-shaped vessel, somewhat broader below than above, provided with a brass spigot near the bottom and varying in size with the size of the ship and in number with the number of men on board. On large ships several of these are placed in convenient places. A common drinking cup of some metal is attached to the spigot by a small chain and this the men use to get their water. At one time the interior of the scuttlebutt was divided into an upper and lower carbon, spongy iron, etc., and the lower compartment containing filtered water. At one time, a long stationary metallic tube was inserted, the lower end being immersed in the water, the upper bent into a right angle and terminating in a mouthpiece through which the men were obliged to suck up their water. This method was in general use in the French navy from 1819 to 1850, when the order was passed for mouthpieces to be made of glass; these breaking too easily, the mouthpieces were ordered to be made of iron, of lead and still others of wood. None of these ever proved entirely satisfactory. In 1809 Lefèvre says of the custom of using the mouthpieces, then in general use: "Besides the repugnance which such a method must inspire of being obliged to take into your mouth a nozzle which was a moment before in that of another, does not this practice open the way for the transmission of contagious diseases from one man to another?" And indeed Fonessagrives had already then recommended that these mouthpieces be made detachable and that they be immersed in water before being used. Bressanin likewise recommended immersion in water. Others recommended a detachable mouthpiece, one that could be increased in the suction pipe of the scuttlebutt and was attached to each person by a cord so as to prevent the wearer from either leaving it attached to the mouthpiece or losing it, or even lending it to another. According to Couteaud and Girard, the scuttlebutt in use in France is made of iron, lined with rubber; it has a spigot to which the common metallic drinking cup is attached with a chain. They recommended the substitution of a *biberon à bec* for the cup. These *bees*, after being used, to be put into a basin where a jet of hot water may disinfect them. The particular mouthpiece they refer to is made of iron and was designed by chief mechanic Estève of the *Jena*. According to Belli,<sup>14</sup> Dr. Carbone has actually succeeded in getting the individual cannula adopted on

board the *Pisani*. On this ship every man is provided with a mouthpiece of bone which he attaches to the scuttlebutt whenever he wishes to quench his thirst. An arrangement of three small elevations around the opening of the pipe at the scuttlebutt obliges the man to use his own mouthpiece to get water. While Belli is convinced that this method is theoretically a good one, in practice, it has shown to have several disadvantages.

The cannulas become clogged easily from dirt in the pockets of the men; they also can be passed from one to another, just as the individual drinking cup. Belli raised the question as to the necessity of all men being obliged to get their water by suction. Indeed, since the necessity for so great an economy, as was practiced in former years, on long voyages, has entirely made way for a more liberal distribution of water, this question is very much in order. Belli wants these suction arrangements abolished and thrown on the scrap heap. In the U. S. Navy this arrangement has never been popular, but the common drinking cup is in general use.

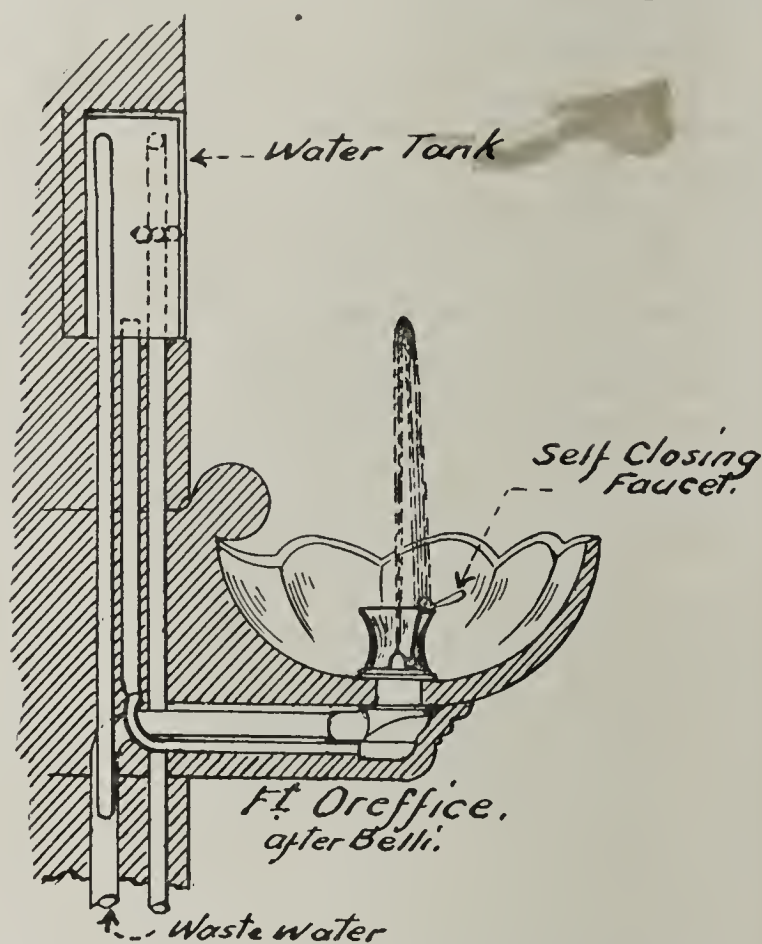


Fig. 7.—Showing water tank and self-closing faucet.

Within recent years, water fountains have been recommended for use on board ship to take the place of the old scuttlebutt. Since, with these fountains alone, the question of the common or individual drinking cups remains the same, only special fountains can come up for consideration. The need for a hygienic distribution of water on board ship is very much the same as it is in the case of public schools and other public places. In 1894 an Italian engineer named Torelli exhibited a fountain at the National Exposition at Milan. This fountain is in actual use in the public schools of Milan. It consists of several little spouts fed by water under pressure and arranged in a circle inside of a basin. Each orifice is protected by a funnel, 15 cm. in height, perforated at the bottom and not permitting the drinker to touch the orifice with his mouth or with his fingers. In drinking the boys simply lean over the spout and allow the water to flow into their mouths. A similar fountain has been constructed by Dr. F. Accorimboni for the normal schools at Foligno in which the jet projects horizontally (Fig. 8) and in which the nozzle is protected from contact with the drinker's lips by a metallic screen.

14. M. Belli, *Innovazioni igieniche sulle navi da guerra*—ann. di mod. navale. Annovifasc, vol. III, 1900.



The fountains of Milan and of Foligno, however, are without a regulator and the water flows constantly. Such a regulator is found on the fountains designed by the engineer, Orefice, and introduced by him into all the public schools of Padova and Venice (Figs. 7 and 9). The little jet is provided with a spring lock which the drinker opens at will and which closes automatically, thus avoiding unnecessary waste of water. The little short orifice is protected by a conical cup, the upper margin of which is armed with a metallic fringe which

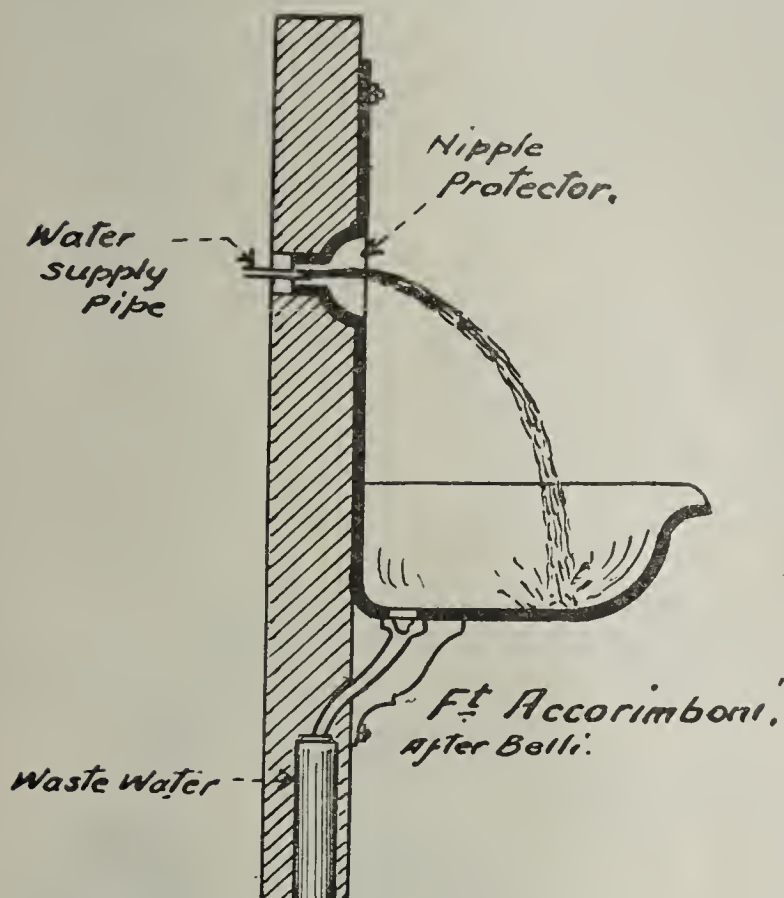


Fig. 8.—Drinking fountain designed by Accorimboni.

does not permit the drinker to approach it with his lips. The slight overflow rinses the walls of the cup and passes directly into the waste pipe.

Belli suggests that the advantages of these two fountains combined might, perhaps, be adapted to ship's use. A proper combination, no doubt, would do away with the risk of infection and at the same time insure the economical use of drinking water.

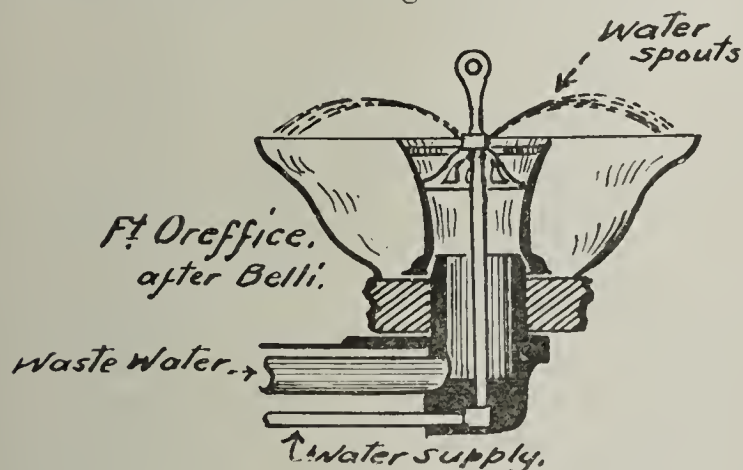


Fig. 9.—Drinking fountain devised by Orefice.

It certainly has become highly desirable that the old-fashioned scuttlebutt with the common drinking cup as now in common use in the navy be displaced by some form of reservoir of distribution, answering to the present requirements of personal hygiene. Since it has become recognized beyond question that the common drinking cup is one of the worst means of spreading contagious diseases on board ship, efforts are now being made in almost all the navies of the civilized world to do away with it.

Le Méhauté is very strongly in favor of the individual pipette. The fountain which he prefers is shown in the adjoining Figure 10, which shows the pipettes in place. He proposes that a number of these pipettes, duly sterilized, be placed in a vessel near the fountain where any man may take one, put it in place, drink and then put it into another vessel, where it remains until again sterilized by boiling in soda.

#### DISTILLED OR STERILIZED WATER.

An important sanitary question has only recently been raised by Le Méhauté<sup>15</sup> of the French navy. The question asked by Dr. Le Méhauté is whether it shall be distilled or sterilized water that is used on vessels of the navy or whether both be used under a given set of circumstances and conditions. This question is important and destined to receive considerable attention by naval sanitarians in the near future.

It is, of course, of fundamental importance to hygiene to furnish such a water as shall in composition correspond as nearly as possible to a natural, unpolluted drinking water. There is no longer any doubt about

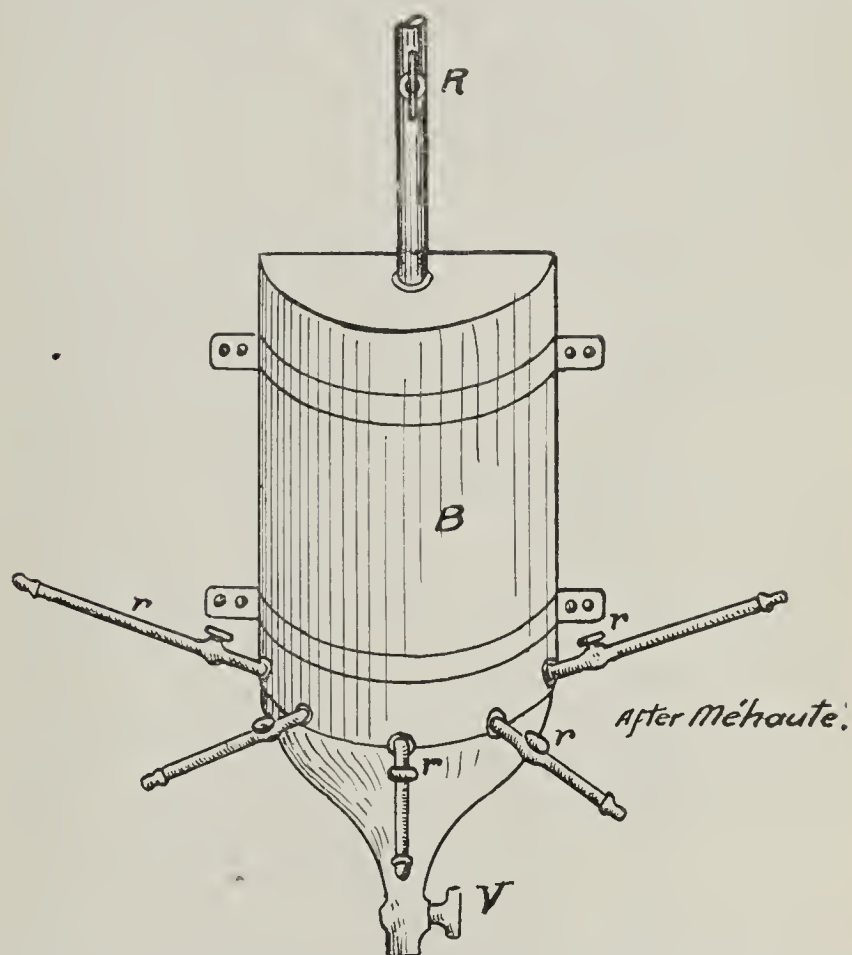


Fig. 10.—Drinking fountain favored by Méhauté, showing the pipettes in place.

the fact that distilled water for ship's use is no such absolute necessity as it was in years gone by. Since the wooden casks have been generally done away with and a cement lining for iron tanks was adopted, water put into them no longer putrefies, but keeps sweet for an almost indefinite length of time. Most of the large passenger steamers have, for many years past, taken their water supply directly from the water mains of the port in which they happened to be and filled their tanks and double bottoms with it. Steamers rarely resort to distillation, though legally obliged to carry distillers on board, on account of the short duration of the voyages they make. Although vessels of war invariably carry distillers, they, too, fill up with sweet water before leaving port and distill only on long voyages and after their sweet water supply has begun to give out.

15. Arch. de Médecine Navale, Nos. 9 and 10, 1904.



It must be admitted, perhaps, that a sterilized water is more nearly a natural water than is distilled water and as such deserves the preference. The general desire on the part of all civilized governments at present is becoming more and more evident, namely, to make every effort to surround their men-at-arms, whether ashore or afloat, with the most sanitary conditions possible. Already the French war department has begun to introduce water sterilizers in large numbers into the soldiers' barracks, and naval stations are being supplied with them. Le Méhauté strongly urges the introduction of sterilizers into the navy, arguing as follows: "Certain vessels of the navy are destined to remain for a long time on foreign stations and others are obliged to make long cruises, visiting places in which the supply of water is not always good. For such ships distilled water is a necessity. Many other ships, however, stay on the home station or visit places in which the water supply

not. (2) Distilled water is not a natural water; sterilized water answers more nearly to that description than does distilled water and should, therefore get the preference. (3) Distilled water is often offensive; sterilized water is never offensive and always safe, being germ free. Certain objections have, however, been raised against the introduction of sterilizers by Couteaud and Girard,<sup>12</sup> the principal ones of which are the following: (1) The inconvenience of having on board two systems of water purification, since distilling can not be done away with and must remain the last resource; (2) the sterilizers have not worked well either in France or China, where they were used during the campaign of 1900-1901, on account of the hard Chinese waters (Jaquemin). It is also not inconceivable that the different parts attached to the sterilizer might become sources of infection.

According to Le Méhauté, the sterilizer Salvator can be made to produce one ton of water at 7 centimes in French money. Professor Vaillard, at Val de Grace, has calculated that two kg. of coal furnished 2,000 liters of sterilized water, while the quantity of distilled water cost 7 francs the ton. According to Couteaud and Girard, Chief Engineer Danoy has made some calculations on the Iena that would not seem quite so favorable. He calculates that one kg. of coal burned in the furnace would sterilize  $\frac{5176 \text{ cal.}}{170 \text{ cal.}} = 30 \text{ kg. of water.}$  This same kg. of coal would produce 5 kg. of distilled water; that is, 1/6 the quantity of sterilized water. The actual daily expenditure in sweet water on board

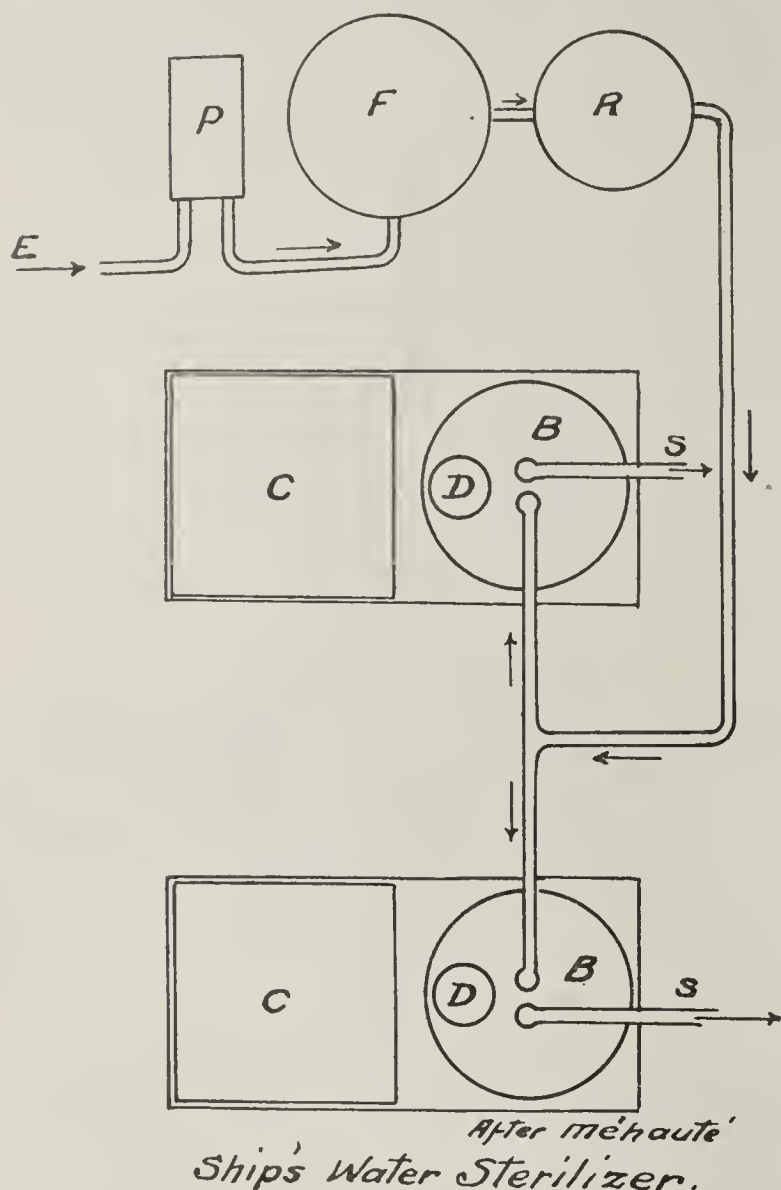


Fig. 11.—Showing the principles of the sterilizer which Méhauté proposes for adoption. P, water reservoir; F, pressure filter; B, where hot water gives off heat to incoming cold water; C, the heater; D, apparatus where precipitates are removed; E, where water enters; S, where sterilized water makes its exit.

leaves nothing to be desired and where, consequently, these ships may supply themselves with all the water they need. Such water, to eliminate the last possible chance of doubt, need only be sterilized." Méhauté, moreover, says of sterilized water that it bears the same relation to distilled water as does natural food to unnatural or canned food and that it would be both unwise, uneconomical and unhygienic to drink distilled water or to eat canned food when the more natural products were available.

The principal reasons for substituting sterilized for distilled water, in which we must all agree, are three: (1) Distilled water is expensive and sterilized water is

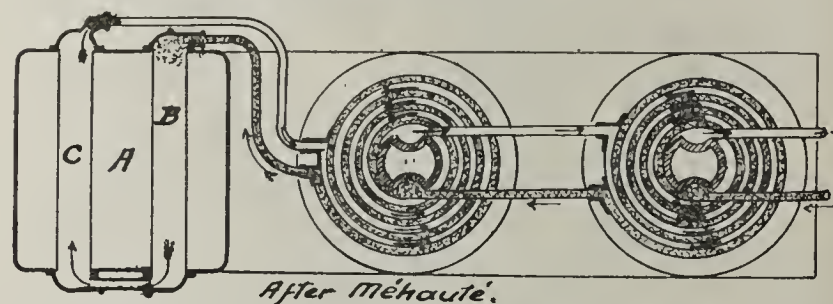


Fig. 12.—This represents schematically the circulation of the water in the recuperator.

the ship was 9,000 liters, of which 800 liters were distilled water used for drinking. These last cost the state  $\frac{800}{5} = 160 \text{ kg. of coal.}$  If it was necessary to sterilize all the 9,000 liters of sweet water, the cost in coal would amount to  $\frac{9000}{5 \times 6} = 333 \text{ kg.,}$  or just twice the amount required to distill the 800 liters of drinking water.

The adjoining diagram (Fig. 11) is intended to show the principles of the sterilizer which Le Méhauté proposes for adoption. In this scheme P represents the water reservoir, F the pressure filter, R the accumulator, B where the hot water gives off its heat to the incoming cold water, C is the heater, D is an apparatus in which the precipitates are removed, E shows where the water enters, and S where the sterilized water makes its exit.

Providing a double sterilizer is installed, each one working independently of the other, no check in the process need be apprehended. The heat required for sterilizing comes in the form of steam from one of the main boilers.

The only part of this sterilizer needing special description is the recuperator (B), in which the sterilized hot water parts with its heat, transporting it to the incoming current of cold water. This piece of apparatus it is intended for the adjoining diagram to illustrate and make intelligent.

Figure 12 represents schematically the circulation of



the water in the recuperator. The white spiral shows the course which the water takes that is cold and to be sterilized; the shaded spiral contains the warm sterilized product. In order to give back to the sterilized water its refreshing taste, a very ingenious apparatus has been employed.

This apparatus is made of spirally arranged metallic plates, inclosing spaces about 26 cm. high and 5 mm. broad and absolutely tight. These spaces are divided into two separate and distinct channels: The one for the cold and the other for the hot water. The cold water takes the direction toward the heater, the sterilized water passes on the inverse sense; the one goes from the periphery to the center, the other from the center to the periphery. In this circuit the heat is exchanged.

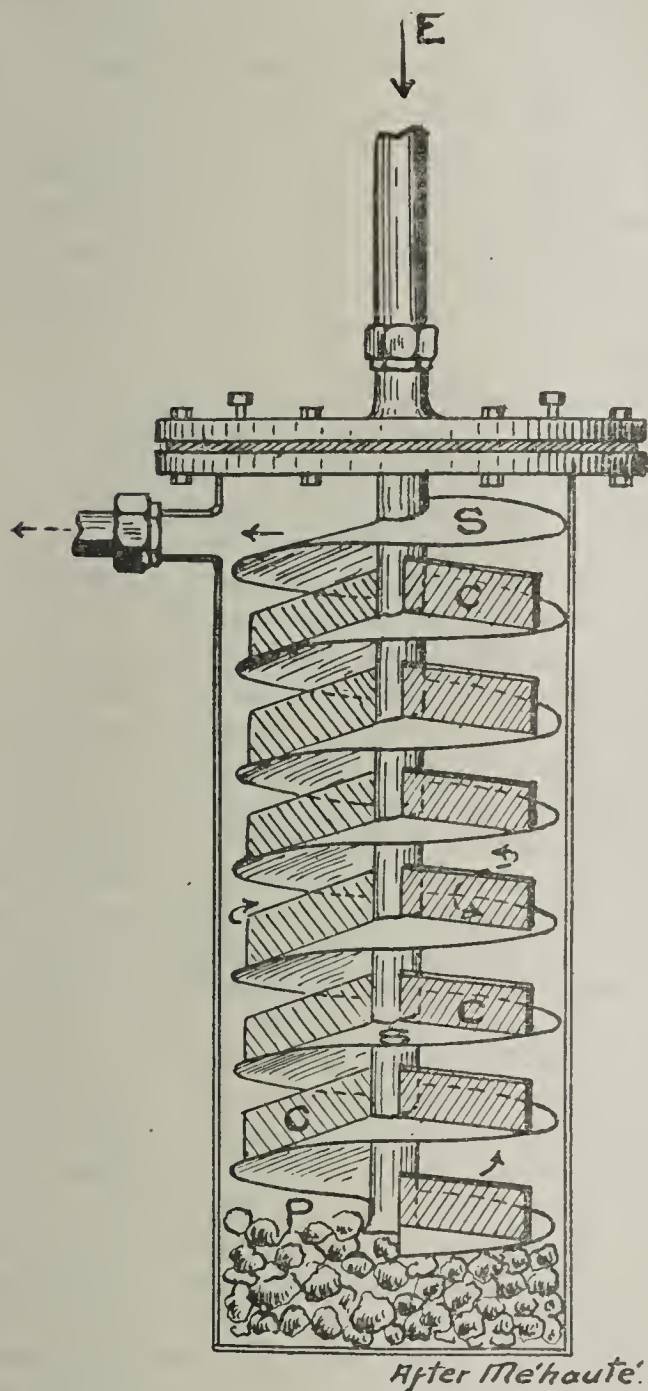


Fig. 13.—Apparatus for removing precipitates from hard water.

When the sterilizer *Salvator* was tried on board the *Caledonian* and the *Couronne* it did not give entire satisfaction. Preliminary trials demonstrated the necessity of a filter and an attachment in some form for the removal of the precipitates formed during the boiling of an especially hard water. Both these desiderata having been met, the sterilizer works without a fault.

The more interesting part of these two additional pieces being the "detartarizer," a brief description will be of interest.

This apparatus (Fig. 13) is intended to remove the earthy precipitates from hard water that formed during boiling. The water enters at E, passes through the central tube to the bottom of the apparatus, where it en-

ters a pile of rough stones, it then gradually rises along the spiral S which carries the vertical plates C intended to retard its progress, and thus compelling it to leave its suspended solid particles behind. The cleaning of the apparatus is very simple. It suffices to remove the cover, to take out the screw-like central part and clean it with a solution of HCL in water, 1/50.

With these two improvements attached, the French ministry of marine has made new trials which have proved unusually satisfactory, according to Le Méhauté, and the report made to him by Dr. Plagneux, the medical director at the depot at Cherbourg. According to these, the sterilizer has worked already for six months without needing any cleaning.

The preceding summary of the water question on board ships contains all the more important features of hygienic interest to-day. The proposed substitution of sterilized for distilled water may seem new to some of us, but it is a question which can not be evaded and which must be answered squarely in the near future.

With such a system as has been proposed by Le Méhauté, we might even question altogether the necessity of sterilization, except perhaps when the water in the tanks or in the pipes or fountains had from some cause been subject to infection or was under suspicion of being infected. With tanks lined with cement, closed on top and connected with a closed and clean system of pipes, pouring their water into a fountain provided with individual and sterilized pipettes, the chances of any possible infection of the water, as well as its transmission from man to man, seems infinitesimal and reduced to a negligible minimum. It is, however, just this negligible minimum which an exacting and consistent hygienist must try to eliminate.

There is no subject within the whole range of naval hygiene in regard to which the prospects for the near future appear as bright and as promising; none concerning which we are as near a satisfactory solution as with the water question on shipboard. At the same time there is no other problem the study of which would lend itself so well for illustrating the slow but sure and progressive influence of hygiene and sanitation on human affairs, near and remote, as does the story of the gradual evolution of the water question on shipboard from the earliest to the present time.

#### DISCUSSION.

DR. DENSLOW LEWIS, Chicago, referred to the fact that distilled water may become distasteful, and at times even repulsive and somewhat injurious. He asked if attempts have been made to dissolve any of the normal constituents of water in distilled water with a view of obviating any unfavorable effect on the gastric mucous membrane.

DR. H. G. BEYER replied that Fonssagrives, the famous French naval surgeon, recommended the addition of small quantities of salines years ago, but the practice did not become popular. Water that is distilled from salt water under ship's conditions is not an absolutely pure product. Chlorin and a few other things were found present constantly at the time Dr. Beyer was engaged in making daily analyses for months.

DR. C. E. WOODRUFF, United States Army, said that in hospitals he had tried the use of salts in distilled water. There is great trouble in getting good water at a number of places, but the use of salts has never been tried to improve the general water supply of the post; it is entirely too big a problem for that. But for patients Dr. Woodruff thinks it is easy to put up salts to imitate any mineral water, making it, say, by the gallon. This will obviate all gastric irritation, but it is entirely too big a problem for an entire post.

DR. L. M. POWERS, Los Angeles, Cal., remarked that a great deal of the trouble with distilled water is due to its not being



entirely aerated rather than to its want of mineral contents. He thinks aëration very important.

Dr. H. G. BEYER agreed that aëration has a great deal to do with it, but he declared that, strange to say, the modern idea seems to be that these air injectors which were in use formerly, have been entirely eliminated. Some say they are dangerous; they want them eliminated because they introduce millions of germs and other things, which make a filter necessary, and which it is the modern aim to do away with. Another reason for doing away with the aëerator is that the water may be depended on to aërate itself, and this is actually the case. Unless the filter is carefully watched it will become a source of infection rather than a means of the prevention of infection. Dr. Beyer said that the water aëerator and cooler which he mentioned is a very excellent device for small ships in which the tank capacity is not sufficient to keep the water long enough in the tanks to cool it after being distilled, and if the distilled product is properly protected from impurities by strainers, a distilled water can be produced that is free from dust. The fact remains, however, that the water ought to be aërated to make it palatable.

Dr. M. L. PRICE, Baltimore, referred to aëration by sterilized air. There is a surgical instrument used to sterilize air, which seems to be very practicable, and he wondered if it could be used to sterilize air for aëration of water.

Dr. L. M. POWERS, Los Angeles, Cal., referred to a milk evaporating plant in which the air is forced through a pipe into the vat and trays of cotton batting are placed in the stack so that the air has to pass through the cotton and is thereby filtered. Dr. Powers knew of a fish commissioner who used an atomizer so as to mix air with the water to a great advantage. He thought that a method could be devised for sterilizing the air before using it to aërate the water and thereby supply the necessary oxygen without infection.

Dr. H. G. BEYER said that the object of admitting the air into milk during the process of evaporation is more to facilitate evaporation than to aërate it. In distilling water, if air is allowed to pass through the water while it is evaporating in the distiller twice the amount can be produced, and a similar result follows aëration of milk.

## PSYCHOSIS OF MORPHINISM.\*

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All writers have mentioned the general defective conception of truth and the relation of right and wrong which appears to be a prominent symptom in all persons who use morphia. It is difficult to understand whether this is a veritable paralysis of the higher reasoning centers or a defect of the senses by which distorted conceptions of facts are not recognized. In all probability both conditions exist, and what is termed moral paralysis is a symptom of some condition of degeneration which is common to these persons in the later stages. This symptom practically describes a defect in the reasoning faculties and inability to recognize the value of truth and honesty, also a disposition to conceal the facts and distort them, no matter what their relation may be.

I shall attempt to group some of these symptoms which may be termed the psychosis of morphinism. The first is a palsy of the consciousness of right and wrong and the inability or indisposition to discriminate between the real and the false. The second is an intense anxiety and zeal to explain and to give reasons for a certain conduct and an explanation of why this or that was done. Third, there is noted some local irritation and disorder of the language centers in which thought

is expressed in the most extravagant and impulsive way; or in the most secretive, hesitating and doubtful words. A fourth psychosis is a morbid impulse to deceive, to take advantage, or a keen delight in swindling, misrepresenting, and acting out new characters while under the influence of morphia. This condition was first described by me some years ago, and has been confirmed in some marked criminal cases since then.

The first grouping, called moral palsies, is an impulse to live under a mask for the purpose of concealing their exact condition, or taking advantage of circumstances that appear to be favorable to some personal interest. Many of these persons show this paralysis only in connection with the use of the drug. On all other matters they are frank, honest and exceptionally truthful, but in regard to the use of opium and its alkaloids they practice the worst kind of deception and unreasoning prevarication. They often show extraordinary childishness in denying the use of the drug and manifest indignation on being suspected. Sometimes this denial is followed by intense zeal and anxiety to explain the conduct and motives. In many instances great ingenuity will be apparent to trace it to some particular cause, generally to objective things. This I call the second symptom.

In the first the drug taker is pleased stoutly to deny the implication that he is using drugs. In the second his denials are less emphatic, but his explanations of motives and conduct are so faulty and strained as to convict himself. Often these explanations refer to acts that are associated with the use of opium and not with matters outside. Some patients will be scrupulously honest and exact on matters of observation and in opinions concerning the surroundings, but in securing and using opium they are falsifiers of the boldest class.

There seems to be in many instances a growth and an increase of this particular psychosis, which begins first with mild denials of the use of the drug, then going on to shrewd explanations and reasons, and finally culminating in profound deception and general demoralization on every topic and subject relating to themselves and environment. Generally, long before this stage is reached, changes of appearance, eccentric conduct and indifference to the opinions of others with general degeneration become prominent. The stage of profuse explanation is sometimes very childish and lacking in skill to conceal the real condition. In others it is bold and ingenious, with unusual cunning and apparent frankness. Running through this is a vein of intense egotism and pleasure to convince others of great honesty and an apparent good judgment and sagacity to discriminate as to the value of certain impressions. Thus, in one case, a concealed morphin taker, who detected the slightest suspicion in other persons concerning his conduct, would drop everything and take infinite pains and care to disarm this suspicion.

A clergyman, who had reached this stage of morphinism that attracted attention, spent a large part of his time in explaining to his friends that he was innocent and was misjudged. Each new explanation, by its intensity and minuteness, failed in a degree and required other efforts and explanation. This man was able to go on with his professional work in the pulpit without comment, but eventually resigned and disappeared. Often this stage is associated with a general failure of vigor and previous mentality. He is duller, sleeps in the daytime, is awake at night, blunders in business affairs, makes mistakes in correspondence, forgets proper names

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



and neglects to pay bills, together with the great variety of marked psychical changes. In business he may be more acute and accurate in collecting bills and contracting debts, or the opposite. A certain irregularity of thought and conduct and a suspicion of others are all typical of his condition.

In a third psychosis, marked from the beginning or only seen in the later stages, is paralysis of the language centers. The manner of expression is changed. Whether loquacious or taciturn, the words that are used to express the thoughts are strange and unusual. Often they consist of expletives and forcible exclamations, low figures of speech or low slang words uttered in a reckless way, or the opposite, viz., formal, precise, symbolic expressions that seem rather to conceal than express the feelings of the author. This psychosis is frequently seen in literature, particularly in the variable styles noted in a single article or book, suggesting at once the influence of morphia on the language centers.

A slangy, dogmatic, jerking expression followed by a stiff, pedantic style indicates two stages of morphinism. At the beginning the effects of the drug obscures the consciousness of the value of language and the meaning of the terms used. Later when this wears off, conservatism and secretiveness come on, and the language changes; misty, high-sounding words are used to express the feelings. A great variety of peculiarities in speaking and writing and the sudden change of topics, with apparent inability to keep the mind concentrated on one subject, is very significant of this form of addiction.

DeQuincy had language exaltation, or delirium, but when under the influence of opium he was able to write good English, and careful students of his writings will discover lapses and changes which are clearly due to this cause. One author has described these as defects of consciousness. Another has called them disorders of the sensation, such as hyperesthesia or anesthesia.

There is a marked mental change associated with these symptoms. With it is noted an exaggerated egotism and confidence in the patient's ability to understand the relation of events and shape his conduct so that the real condition may be concealed. In some instances the secret use of morphia exalts some of the senses and depresses others. This may account for some of the confusion states which follow. Probably taste, touch and smell are more or less affected, and the impressions from these disordered senses have much to do in perverting the reason and lowering the consciousness. In the latter stages these conditions are apparent.

A fourth psychosis may be practically called a delirium and morbid impulse to deceive, to take advantage of others, acting out a new character, enjoying the pleasure of taking advantage of others' credulity and the ability to conceal and misrepresent.

It has been noted for a long time that kleptomania was so common that many chronic cases were unable to resist the opportunity to take things. In the police courts it has been noted that some of the shrewdest swindlers, pickpockets and confidence men are addicted to the use of morphia. Under the influence of morphia they exhibit an acuteness of intellect and audacity never seen in the ordinary law breaker, but when the morphia is withdrawn they display the greatest weakness and childishness of manner and conduct.

An example of this kind was that of a man very highly educated and of good social standing who became addicted to the use of morphia and entered on a career of swindling and deception. It seemed to be his greatest delight to go about following the crowds at watering

places, hotels and the steamers, making the acquaintances of strangers and securing loans on fraudulent checks, brass jewelry and false diamonds. He had no confederates and never mingled with anybody of the same class. To his friends he represented that he was in the brokerage business, making and placing loans. He used morphia constantly, and after long journeys would return home and remain concealed for days. He carried with him various disguises and changes of clothing, and had a number of cheap crystals set in elegant rings and pins. These he would leave as security for loans made him by strangers. He had numerous letters of introduction and bill heads of prominent firms which he used on all occasions to raise money. His manner was that of great frankness and honesty, and his evident earnestness made friends wherever he went. At times he would solicit loans, giving worthless checks and references or watches and jewelry as security. Then he would pay bills for clothes, jewelry, books or board at the hotel by forged checks, receiving in return balances of money. He would call on leading business men on various plausible pretenses and secure their signatures, which he would copy so accurately on checks that the maker was unable to detect whether they were his own or forged ones. Several times he was arrested, but his great honesty and earnestness of manner completely baffled all investigation. Finally he was detected, deprived of his morphia, and the real condition discovered.

Another man of this class was a sanitarium swindler, and for many years he visited different institutions and was apparently treated for this addiction, but in every instance swindled the proprietor in fraudulent checks and loans on false securities, then disappeared. In a short time he would enter another institution, pay in advance, secure the confidence of the manager, draw back most of the money and deposit checks as securities, then have a telegraphic call to visit a dying mother. This same man traveled on the ocean steamers for two years, making many victims, assuming all sorts of disguises, but finally was arrested and convicted.

A third example was the case of a man who came under my observation charged with larceny. I found it impossible to keep him from the use of morphia. On the trial he was acquitted, but consented to remain with me. I found that he was an excellent type of the Hyde and Jekyll class while under the influence of morphia. His intelligence seemed to be of the most acute character. He reasoned quickly and accurately, was an excellent judge of human nature and adroit to take advantage of every opportunity. If accused of sinister motives, he manifested the honesty and frankness of a saint and could make his accusers regret exceedingly that they misunderstood him. When arrested by a detective he quickly convinced him that he had made a mistake, and his injured innocence seemed so clear that the detective was overwhelmed. He left me to make a visit to a neighboring city, and soon after was arrested in the act of receiving cash for a forged note. He sent for me to confirm his statement that he could not have had such a note and that he was only a patient under my care. So shrewdly did he defend himself that the judge released him.

I found that the criminal instinct to forge notes, sell gold bric-a-brac and do other most adroit pieces of swindling was a veritable delirium and one which he enjoyed when under the influence of morphia. The drug gave him a certain amount of confidence in himself and made him fearless of any results. Of course, he was a moral paralytic. The morphia rendered him more in-



sensible to every consideration of duty of right and wrong, and he was able to judge of the weakness of others and take advantage of their circumstances in the most skillful way. He received a yearly annuity from his father's estate, was independent and not engaged in any business. His swindling operations were undertaken as a pleasure, and any gains he received from them were always used to enlarge his sphere of acquaintance and help him enjoy the pleasure of his avocation. He was a total abstainer and used morphia regularly every day, and was finally arrested, sent to state's prison and died a year later from consumption.

No doubt all such persons are moral degenerates at the beginning before the drug is taken. The use of the drug gives a certain courage and shrewdness which for the time being is an exact representation of the real condition; therefore, it is accompanied with evidence of honesty and frankness and disarms all critics. Of course, a career of crime of this class is of short duration, because the use of the drug can not be kept down to the minimum amount. The stimulating stage grows shorter and shorter and the narcotic stage longer.

One of these criminal morphinists was registered in three different hotels in a certain city. At each place he appeared in a different disguise and could so thoroughly conceal his identity and voice that he was not recognized. In each hotel he swindled the proprietor and several of the guests, and then went away without being discovered. Later he tried the same thing in another city, but for some reason his morphia failed to help him out and he was discovered. This psychosis is fortunately not a common one, but it exists and is recognized among detectives more frequently than elsewhere. A physician who belonged to this class for many years has done much to destroy the good will and confidence in the profession of a certain city. He was continually the storm center of slander, dishonest practices, public libels and other thoroughly disreputable acts. His death and the complete subsidence of all discontent and conflict showed that he was the cause of all the deception and intrigue.

The moral paralysis and ethical failures of morphinists show lesions and defects of the higher centers of the brain which undoubtedly may either be inherited or acquired. A study of a number of persons suffering from this form of addiction shows that both the psychical and the physical suffer alike. We have paid great attention to the latter, but the former has received little or no study.

The gross changes seen in loss of pride and degeneration of personal appearance and sharp denials of the use of the drug are common, but the failure of the higher mentality to recognize duty and obligation to others is not studied. This contribution is along these lines. It aims merely to outline a field that is largely neglected, the study of which will enable us to apply therapeutic measures with far more exactness than ever.

A summary of what I wish to make clear may be stated as follows: The psychosis or psychical symptoms common to morphinism are, first, palsy of the consciousness of right and wrong and inability and indisposition to discriminate the ethical principles or responsibility and obligation; second, a delirious stage of profuse explanation and efforts to conceal and explain the reasons for his acts and conduct; third, a special exaltation or depression of the language centers, with a change in the manner of expression and the use of words; fourth, a veritable insanity to deceive, to misrepresent and to take advantage of the credulity of others, not for any

purposes of gain, but for the satisfaction of being able to defraud and mislead, also to act in different characters and to elude the efforts of persons who would discover the condition.

#### DISCUSSION.

DR. JOHN PUNTON, Kansas City, Mo., said that the psychopathic features of the morphin psychosis are factors that should be of interest to all because of the medicolegal aspects of the subject. There are two features in reference to this that makes it all the more interesting to the practitioner. One is the ethical and the other is the legal side of the question. Some time ago a man went to Dr. Punton's office and stated that he was taking three grains of morphin daily, and that as a result he thought he was losing his reasoning power. Dr. Punton asked his occupation, and the man said that he was a train dispatcher. Dr. Punton wondered whether or not the patient was a responsible man for such a position. Ethically speaking, Dr. Punton has no right to divulge secrets given him in confidence, but he asked a leading lawyer what would be the probable outcome of the case if he should divulge such a professional secret and be sued for it. The lawyer told him that legally he would be held responsible. Only a short time since the *British Medical Journal* reported a similar case, and the newspapers commented on it and declared that under such circumstances the physician's duty to humanity was greater than to his patients. Soon after this patient's visit to Dr. Punton several serious accidents occurred on the railroad, and he has wondered whether the morphin did not have something to do with their occurrence.

DR. G. R. CLARK, Dearborn, Mich., asked Dr. Crothers if he had ever thought of placing those cases that were due to morphinism alongside of the cases of minor epilepsy and studying them together for six months at a time. Dr. Clark thinks that the same principles are at the bottom of each. The application of morphin in a case of epilepsy, plus the condition of the mind that always goes with that condition, would be very likely, Dr. Clark said, to create this condition of the mind.

DR. T. D. CROTHERS said that without doubt in many of these cases there is evidence of an epileptoid taint. Why the continued sedation of the sensory centers should produce exaltation of reasoning and mental activities along certain lines is a phenomenon yet to be explained. The chief of one of the large detective offices of New York City told Dr. Crothers that the most dangerous and difficult cases to detect are criminals who used morphia. He referred to an instance of a man who for over four years traveled about the central cities of the country committing the same kind of crime and eluding the sharpest detectives. One day by accident the morphia was withdrawn, when his usual shrewdness failed and he was arrested. He had a large circle of friends, came from a good family and was highly educated. After a prolonged study it was decided that he was insane and he was permitted to go out under the care of his friends. Within a very short time he entered on another scheme of swindling by making contracts for lightning rods. His great skill consisted in ability to disguise himself and to go back over the same section of country, repeating his swindling schemes more successfully than ever. So long as the man was using morphia regularly he succeeded. These patients develop symptoms of insanity on removal of the drug and are placed in asylums. At present their recognition before this stage is reached is exceedingly difficult, and this study calls particular attention to a new class of psychoneuropaths who are criminals in acts unknown before.

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**The Great Black Plague.**—Tuberculosis has been designated as "the great white plague"; with equal fitness venereal infection may be termed the great black plague, since it most aptly typifies "the pestilence that walketh in darkness." It infects unseen the social body; the vast mass of disease and misery thus engendered is concealed from observation so that there exists on the part of the public the densest ignorance respecting the ravages of an infection which, working in disguise and darkness, ramifies through every rank and order of society. At the present advanced stage of preventive medicine, it may be considered a reproach to sanitary science that this large and important class of diseases is absolutely neglected by the sanitary officials.—*Charities*.



## COMPARISON OF THE QUICK AND THE SLOW METHODS OF THE TREATMENT OF MORPHINISM.\*

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Perhaps an explanation of the title of my paper would make it a little more clear. We will call all forms of treatment where the morphin is withdrawn at once, or where it is withdrawn within five or ten days, a quick method, and where the reduction is gradual and slow and extends over a period of several weeks or months we will term a slow method.

There has, within the past few years, been much advertising of quick cures for morphinism. Nearly every newspaper and magazine, and I am sorry to say some medical journals, contain one or more of these advertisements, and as it has been for the past dozen years my exclusive business to treat narcotic and alcoholic patients I have been much interested in searching for the best method of treatment. I have investigated several of the so-called three, five and ten-day cures. At none of these so-called quick cures do they do anything like what they advertise to do. The morphin is withdrawn within the specified time in some instances, to be sure, but the patient is far from being restored to his normal condition. Often they are in a very much worse condition than as though they had never taken any form of treatment. Hydrobromate of hyosein is probably the remedy used in all these so-called quick cures. When the remedy is given to certain individuals in proper doses it apparently does remove the desire for morphin. The patient recovers from his hallucinations after five to ten-days, soon begins to have an appetite and makes a fair recovery within a few weeks' time, but unfortunately this favorable ending is not the rule but the exception. It appears impossible to decide in advance which patients will tolerate the remedy and be so favorably influenced, and which may be permanently injured by the use of it. While I believe that death from the use of this drug is rare, mental derangement is common. I have known four patients where the mental equilibrium was not restored for several weeks and one patient that was in the insane asylum for six months, when she had somewhat improved and was discharged, but she has never yet returned to her normal condition, and it has been now more than three years since she was released from the asylum.

I have a patient under treatment at the time of writing this paper who was taken to an institution where they advertise to cure the morphin addiction in from 24 to 30 hours. Two weeks later his friends were notified by the physician in charge of the institution that the patient was insane and that he would probably die, and they had better take him home. He was brought to my place and two nurses were required to care for him for two weeks, and he had to be constantly watched for over a month. He was taking as much morphin when he came to me as he did before he took the hyosein treatment. Now, at the end of two months, he is free of the morphin and seems in a fair way to regain his mental balance.

Dr. Crothers reports having tested the effects of hyosein in several cases of morphinism and also in alcoholics and always with bad results. In each case delirium with hallucinations and delusions, came on after

the second or third dose and continued from two to four weeks. In three instances the delirium lasted two months, and in one instance the mind did not recover and the patient was placed in an insane asylum, where he still remained two years later. Two alcoholics never recovered fully; while not drinking, they have become mild cases of dementia, with great prostration. He also reports a case of a physician who treated himself with large doses of hyosein, who died suddenly, and that there were reasons for believing that this drug was the cause of death. Also another case treated by a physician with large doses of hyoscine and the morphin removed at once; the delirium lasted for two weeks, then suddenly terminated in coma and death.

Dr. Wagner reports several cases that he treated in the Cleveland City Hospital with hyoscine hydrobromate. He says that this treatment is not devoid of danger, and it is most important that no case be attempted without a special nurse day and night during active treatment, so that the patient is not alone for a minute during this period.

Dr. John Punton says that the treatment of morphinism with hyoscine is unsatisfactory and always contains an element of danger. A large percentage of patients treated after this method regain strength very slowly. One physician, with whom I am acquainted and who had been, up to the time of taking the hyoscine treatment, a strong, healthy man, was unable, after eight months, to attend to his professional duties, and I have known several similar cases.

This method of treatment is irrational and unsafe, and while, as I have previously said, there are some patients treated satisfactorily, the large majority are made only worse by the treatment. There has, as yet, been found no substitute or antidote for morphin, while with the gradual adaptive method we have a perfectly safe and sure form of treatment. Every patient not afflicted with some painful complicating malady who desires to be cured and will co-operate with the physician can be cured, and with very little discomfort. There is no class of patients who shrink from pain and discomfort as do morphinists. There is no other class that has so little fortitude. Why are not these unfortunates entitled to our consideration in making their recovery as painless as possible, just as much so as are surgical patients? There is no class that is more desirous to be relieved of their affliction than is the better element in the bondage of opium, remembering that among the many thousands of addicts there are very, very many of the best educated and most brilliant minds, many with a finely organized, highly developed nervous system, who have worked on a high tension, who have either through their own or some other person's indiscretion or carelessness become the slave of morphin. Others who have been unfortunate in having a long and painful illness, when it seemed almost impossible to endure the suffering, have been given the drug until they have not had the necessary will power to discontinue the morphin after they had recovered from such afflictions. These patients are entitled to our very best efforts to relieve them and with as little suffering as possible.

Thousands of persons are to-day enslaved with the morphin habit that would have taken treatment and become free of the addiction did they not have such a dread and horror of the suffering that they anticipate they must endure in being relieved of it.

There have been several forms of slow withdrawal advocated by different men, such as withdrawing a small

\* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.



fraction of the daily dose each day or withdrawing a certain amount every third or fourth day. Also the adaptive slow withdrawal.

No patient can be kept anything like comfortable where a certain amount of his daily dose, or a certain part of a grain is withdrawn at a certain time or at fixed periods. Such a plan would assume that every day was the same, that is, that a person felt the same every day and there were no headaches, no neuralgias, no indigestion, and a thousand other causes that will produce extreme discomfort if the quantity of the drug is lessened at such times. Such a system will be necessarily more or less of a failure, unless the reduction is so very slow and is made to extend over a very much longer period than would be required by the adaptive plan. When the above plan is practiced there is sure to be so much discomfort, nervousness and nausea that there will be little or no physical improvement during the period of withdrawal, and consequently there will have to be a longer period of convalescence than as though the patient had been kept more comfortable by the adaptive plan and had been regaining health and strength during the entire time, as a large majority of patients will do.

The adaptive plan, as I practice it, I have described in papers previously read in this section, so that it is unnecessary to go into details. It may be well, however, to give the outlines of the plan of reduction. When the patient comes for treatment he is probably taking from two to four times as much morphin as he requires to keep him comfortable. This surplus may be withdrawn at once. He is also very likely taking one or more other drugs which may be discontinued at once. Perhaps it may require four or five days to find out just how much reduction can be made and still not make him too uncomfortable. We may have reduced the quantity too much and the dose have to be increased a little before we get him started just right. When the quantity has been found that will keep him almost comfortable from one dose time until the next, we make no change in this amount for three or four days, or until the patient is feeling very well, when another small reduction is made, so small that he will hardly be conscious of it. When we are again sure that the amount then being given is going to keep him comfortable, we make another small reduction. These are made only when the condition of the patient has so improved that the reduction will not make him too uncomfortable. Thus we continue the reduction until the quantity used is so small that it can be withdrawn without the patient's knowledge of it. This amount will seldom be more than 1/120 gr. In this way the large majority of morphinists can be kept more comfortable during the entire withdrawal period than while taking the drug themselves. Of course they will require a supportive and tonic treatment, combined with a nourishing diet, during the withdrawal period, which should be continued for some time afterward, depending on their condition.

One of the most difficult and important problems in the management of all cases of morphinism is after they are free of the morphin. Usually within three to ten days after the morphin has been entirely withdrawn they are feeling well and are anxious to get home, and in the large majority of cases it is impossible to get them to stay as long as they should to insure them as much as possible from relapse. For some time after the desire for the drug has been entirely removed there is an unstable, weak and eccentric mental condition,

and during this time slight pain, trouble, grief or insomnia will often be sufficient cause to induce him to take a dose or two for temporary relief. Each dose weakens his resistance and the mania is quickly recontracted and is sure to happen if he allows himself to take the first dose. As much time as is necessary to secure a good physical and mental condition should be spent under the personal care of his physician. This is a case where if there is a mistake to be made it is profitable to make it on the safe side.

To recapitulate. The quick cure by hyoscin is irrational, unsafe and unsatisfactory. The diarrhea and vomiting which always occur after the sudden withdrawal of morphin, whether the hyoscin is given or not, which lasts from two to ten days, is very distressing, and the hallucinations, which last for an uncertain length of time are unpleasant, to say the least, and from which the patient may never recover. Relapses, I believe, are much more frequent and convalescence is usually greatly protracted.

The adaptive slow withdrawal is rational, safe and satisfactory. No diarrhea, vomiting, extreme nervousness or any of the severe symptoms shown with sudden withdrawal are ever produced. Convalescence is well advanced when the last small amount of morphin is withdrawn and nearly always rapidly completed. Relapses are much less likely to occur.

900 Fairmount Street.

#### DISCUSSION.

DR. T. D. CROTHERS, Hartford, Conn., said that the subject of morphinism has a personal interest to every physician, because it is one of the most frequent addictions among active workers in the profession. From some studies which he made five years ago and which have since been fully confirmed, he is convinced that at least from 15 to 20 per cent. of physicians in active practice are victims of morphia and spirit-taking. Dr. Pressey's outline of the methods of treatment is very suggestive and demonstrates the efficiency of certain drugs when given with care and skill. Of course, there can be no specifics because the addiction is both a psychosis and a neurosis. All physicians have seen patients make a good recovery by use of hydropathic measures, and often persons recover from the exclusive use of some particular drug. It would not do to reason from this that all patients will recover by the same means. Each case is a law to itself and must be treated individually. There are no rules and no special classes of remedies which will apply to every patient.

DR. H. G. BRAINARD, Los Angeles, declared that he was astounded at the statements made by Dr. Crothers and thinks that it is a sad reflection on the condition of the physician. Dr. Brainard said that he knows that in California there is no such proportion as 10 or even 5 per cent. of physicians who are victims of the morphin habit. He is sure that such conditions do not obtain in the profession throughout the country. He is sorry for the people of Connecticut if there is such a condition of affairs there.

DR. A. J. PRESSEY said that the figures given by Dr. Crothers must be an estimate, as he does not understand how any one could get exact and reliable statistics on such a subject. Dr. Pressey does not think that there is any such proportion of morphin-users among physicians in any part of the country. More than half of the patients he treats are physicians, but that does not mean that half of all the morphin habitués are physicians. Too many physicians take this drug, but Dr. Pressey does not think there is quite 2 per cent., perhaps about 1 per cent. He does not know just how to get the exact figures.

DR. T. D. CROTHERS, Hartford, Conn., said that the facts may be startling, but the evidence on which they are based fully sustains them. A general study of the habits of physicians in four of the largest cities of the country showed that from 10 to 15 per cent. were drug and spirit-takers. In one city a prominent daily paper made inquiries and concluded that at least 15 per cent. of all persons practicing medicine, includ-



ing members of all the schools, were spirit and drug takers. In other cities the percentage has been estimated as high as 20. In one city over 11 per cent. of all physicians were known or reputed to be using drugs. Dr. Crothers said that he was not prepared to defend any exact statistical percentage as indicating the use of drugs and spirits among the profession, but the discussion of this subject for the past five years since his first study of the habits of 3,500 physicians which were made at that time have amply confirmed the original conclusions. One of the reasons for this is the failure of teachers in medical colleges to make prominent the dangers from both alcohol and opium. The young graduate seldom has any knowledge of the risks and perils from indiscriminate use of these drugs, and as a result many of the profession become victims at first secretly, then openly. This is one of the great personal dangers confronting the profession that should be studied and removed in the near future.

## LAWS CONCERNING TEACHING HYGIENE.\*

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PROVIDENCE, R. I.

It has recently been my work in another medical society to compile and analyze our present laws relating to the teaching of hygiene, 45 state and 1 federal, all more or less elaborated. This time-consuming task was undertaken with ideas that I have been compelled to alter radically in the progress of the study. My anticipations were based on certain general—somewhat pessimistic—statements in lay, scientific and medical current literature; but the exact details now reported should be known to all physicians interested in preventive medicine.

It is not my intention to discuss this legislation further than to give the facts as they stand in the present laws.

The laws existing in 1903 (none have been altered since then) are published in the *Bulletin of the American Academy of Medicine*, April, 1904, as a preliminary report of the committee to investigate the teaching of hygiene in public schools. The details of all the statistics I shall give can be found in appendix A of the first installment of the committee's report published in the *Bulletin*, June, 1905.

It is well known that the initiator of public sentiment that has resulted in this legislation extending over all territory under our jurisdiction, was the Woman's Christian Temperance Union. Its immediate aim has been and is to have hygiene, in connection with instruction as to the nature and effects of alcohol, tobacco and other narcotics, taught on a scientific basis in public schools as thoroughly as is arithmetic or any other branch required by law. We find accordingly in all the laws the phrase "physiology and hygiene with special reference to the nature and effects of alcoholic drinks and other narcotics." There are several variations in this wording, the reasons for which it is not necessary to discuss at this time. The general interpretation of this clause is that physiology and hygiene shall be taught, including the special topic indicated.

The nine other chief details occur irregularly, most of them appearing first during the five years after the original law of 1882 in Vermont. Their *raison d'être* is that it seemed necessary to specify them in order to secure enforcement of the spirit of the law. Any physician who has had experience in our political methods can easily imagine the evasions these laws have met, in consequence chiefly of the opposition of one of the largest commercial interests, as well as from certain social

influences; from the indifference or ignorance of many, and from teachers' lack of preparation for teaching science. Without going further into their history, let us now examine these nine legal specifications.

### I. SPECIFICATIONS CONCERNING WHAT SCHOOLS SHALL TEACH HYGIENE.

The federal law specifies all public schools, including Indian and colored, in the territories and District of Columbia, and military and naval academies.

Twenty-three state laws specify "all public (common, free) schools."

Twenty-two specify "all schools supported wholly or in part by public money, or under state control," Illinois and New York adding all normal schools, teachers' training classes and institutes, and schools connected with reformatory institutions. Private schools having special charters are "under state control," but the law is not generally interpreted to include them. The law of Michigan, however, specifies all such schools, and the law of Massachusetts all private day schools except those solely for instruction in particular branches. Alabama specifies colleges; Indiana, Maryland, Minnesota, Ohio, Pennsylvania, Utah and Wyoming specify "all educational institutions" aided by state funds. This would include state universities, colleges and normal schools, certain institutions for study of special subjects, schools for defectives (blind, crippled, deaf mutes, feeble-minded); schools for the neglected, destitute and incorrigible; schools in reformatory and penal institutions. I do not know how literally these seven laws are enforced. As a matter of fact, many of the 22 laws specifying simply "public schools" are interpreted to include normal, reformatory and some others.

This detail of the 46 laws differs little anywhere in actual intent, and the same is true of the next.

### II. SPECIFICATION CONCERNING PREPARATION OF TEACHERS.

Fifteen states have only the general school law requiring examinations of teachers in all subjects ordered by law to be taught. Thirty specify examination in this branch as in others, Idaho excepting primary teachers; New Jersey, teachers of music, drawing, manual training, etc. The federal law does not mention examination of teachers in military and naval academies.

### III. SPECIFICATIONS AS TO WHAT PUPILS IN THESE SCHOOLS SHALL RECEIVE INSTRUCTION.

Fourteen laws do not specify what pupils shall receive this instruction, and 23 specify "all pupils." California specifies all grades, in all classes, during entire school course; Connecticut, "above third grade and below high school;" Illinois and New York, "below second year of high school;" New Hampshire, "above primary grade;" South Carolina, "as far as practicable."

This detail as to teaching hygiene in primary and grammar grades is influenced by the fact that in round numbers out of five million pupils entering the lowest primary grade only one million go on to grammar grades, and only one-quarter of a million enter high school. Nineteen-twentieths of the pupils, and they of the poorer classes, would receive no instruction in hygiene if it were confined to high schools; sixteen-twentieths, none if it were confined to grammar schools.

### IV. CONCERNING METHODS AND THOROUGHNESS OF INSTRUCTION.

Fourteen laws make no specification as to whether the instruction shall be oral or by text-book. Nine laws specify "text-books in the hands of pupils;" nine specify

\* Read at the Thirty-third Annual Meeting of the American Public Health Association, Boston, September, 1905.



text-books for those able to read and oral instruction for those unable to read. California and Indiana require oral instruction only, but in fact have text-book instruction also.

Twenty-five laws specify that instruction shall be as thorough as in any other branch required by law.

#### V. SPECIFICATIONS CONCERNING TEXT-BOOKS.

Only 14 laws out of the 46 make specifications concerning text-books.

Eight of these specify that they shall be approved by certain authorities; North Carolina, by the state text-book commission; New Hampshire, by the superintendent of public instruction; Nevada and Michigan, by the state board of education. Michigan's original law (1883) also included approval by the state board of health. This has been eliminated, and now Wisconsin is the only state requiring approval by its health officials. Minnesota requires approval of text-books on hygiene by the superintendent of public instruction and presidents of normal schools; Colorado, by the board of directors of the school district.

Four laws specify the minimum number of pages for instruction as to the nature and effects of alcoholic drinks and other narcotics.

Illinois, Michigan, New York and North Carolina require at least twenty pages in high school volumes, i. e., about one-twentieth of the volume. Below this grade Michigan and North Carolina require at least one-fourth of the volume; Illinois and New York, at least one-fifth, also adding that the pages in a separate chapter at the end of the book shall not be counted in this minimum. This provision was introduced, it is stated, to discourage the attempt to place in the schools old text-books to which a "temperance appendix" had been added to conform with the law requiring instruction in hygiene to include instruction in this special subject.

For the same reason the laws of 14 states specify that temperance instruction shall be given "in connection with the several divisions of the subject of physiology and hygiene;" i. e., that when studying the circulation, or the nervous or respiratory systems, pupils shall at that point be given instruction as to the effects of alcohol and other narcotics on each.

The laws of two states, New York and Illinois, specify that text-books shall be graded to the capacities of pupils of fourth year, intermediate, grammar and high schools.

#### VI. CONCERNING TIME TO BE USED FOR INSTRUCTION.

Three only out of 46 laws have specifications concerning length or minimum number of lessons in hygiene.

North Dakota has a minimum for oral instruction to those unable to read; at least 15 minutes daily, 4 days each week. This means an hour's weekly instruction in hygiene, including temperance, or a possible 24 hours yearly, the minimum school year being 6 months.

Illinois and New York, in the lowest three primary grades, require, respectively, three and two lessons each week, each year. If these are 15 minutes long they amount to  $7\frac{1}{2}$  hours and 5 hours oral instruction yearly for three years.

Illinois and New York require for text-book instruction four and three lessons weekly, respectively, for ten weeks each year from the fourth primary year to the second year in high school. Text-book lessons are usually 20 minutes. This amounts, therefore, to a minimum of  $13\frac{1}{2}$  and 10 hours yearly for six years; somewhat less for eleven-twelfths of the pupils who do not

go through all grammar grades nor continue in high school.

We see from the above that the greatest requirement of any of the three laws is 24 hours minimum oral instruction yearly in physiology and hygiene, including temperance instruction; the other two states not exceeding a minimum  $13\frac{1}{2}$  hours for either oral or text-book teaching. The usual minimum time given to either reading and writing, geography or arithmetic is not far from 40 hours yearly. Therefore the laws of Illinois, New York and North Dakota can not justly be said to make undue claims for the subject of health. Certain other states in some schools give even more time to the subject.

#### VII. PUPILS' EXAMINATIONS IN HYGIENE.

Illinois, Iowa, Ohio and New York specify that pupils must pass the same tests in this as in other branches.

#### VIII. ENFORCEMENT OF LAWS.

A law, whether good or bad, is not infrequently futile because no one is interested in enforcing it or because, if interested, he has no means of overcoming the hostility or inefficiency of some official. Experience has proved the wisdom of providing a model law with three powers. The duty of enforcement must be definitely placed, the method of enforcement detailed, the penalty for non-enforcement indicated, and provision for complainants is sometimes made. In the legislation under discussion experience seemed to indicate that these provisions were sometimes desirable.

The duty of enforcing these laws is specifically assigned by 31 states, usually to certain local school authorities, occasionally adding the state superintendent or county board.

#### IX. REPORTS AND PENALTIES IN CASE OF NON-ENFORCEMENT.

Special reports from special sources are stipulated by 13 of these 31 states. They may be from teacher or other local official, or from any citizen or head of family, to some local or state official, or by the state superintendent in his annual report to the public. The report is frequently made to the official who pays out school money.

Penalties for non-enforcement of laws are specially mentioned by 19 of these states. They vary from removal of any guilty official from office, or revocation of teacher's certificate temporarily or otherwise, to loss of salary, or fines from \$5 to \$200 against any guilty official, or loss of all or part of state appropriation to school, city or district.

Delaware and Washington specify the officer of the law who shall recover the fines. Ohio and Washington specify what shall be done with said fines.

In states where no special mention is made of the enforcement of this law there is the general school law requiring teachers' compliance, subject to dismissal, etc.

I now beg to call your attention to the opportunities which these laws offer for the introduction of any alterations in the present teaching of hygiene. It will be observed that:

1. No law states what shall be taught as to the nature and effects of alcoholic drinks and narcotics; nor that total abstinence shall be taught.

2. No law prevents the teaching of hygiene through "domestic science," physical training, biology, medical inspection; nor from other viewpoints than physiologic, as economic, or sociologic. All these methods have be-



gun and are progressing along with our growing acquaintance with the subjects.

3. No law requires indorsement of text-books by the Woman's Christian Temperance Union.

4. Forty-two laws do not stipulate the space for temperance instruction in text-books on hygiene. Forty-three laws do not specify the number and length of lessons in hygiene (including temperance).

Or, in other words: These laws making the study of physiology and hygiene mandatory, as are other essentials of common education, provide opportunity to introduce text-books, methods, teachings, for any interested in hygiene who have the capacity to do it. They evidence in their details the intention that, so far as the law can secure it, the teaching of health shall be on a par with the teaching of mathematics, language, and physical environment. Certainly it ought to be. The laws are not hindrances, but proffer openings—more than proffer, they command the work to be done.

It is not the province of this paper to discuss the kind of work now doing, nor the kind of work that ought to be done, nor how a change, if desirable, can be effected; but whoever wishes to make a change must accomplish it not by expending vitality and time in altering laws, but by convincing school authorities that some other text-book or method will produce better results than those already in use.

## A CASE OF BRAIN TUMOR.\*

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CHICAGO.

*Patient.*—M. M., a Lithuanian laborer, aged 28, entered Cook County Hospital March 14, 1905, and was assigned to the care of Dr. Kuh. The following April he came under my service and remained under my observation until April 28, when a transfer to the surgical side was recommended. Dr. Schroeder performed an operation May 4, 1905, and the patient died May 5, 1905.

*History.*—Family and personal history are negative and syphilis is denied. He states that his habits were always good and that he never sustained an injury. Three weeks previous to admission the patient began to complain of severe headaches, which were constant and generalized. At about the same time spells of vomiting appeared which seemed to have no relation to the gastric functions. A feeling of nausea always accompanied these vomiting spells, but sometimes there was nausea without vomiting. Somewhat later in the course of the disease attacks of vertigo came on whenever the patient attempted to stand or walk. Then progressive generalized weakness of the entire muscular apparatus became a marked feature. The before mentioned symptoms soon inhibited any kind of work and compelled the patient to lie in bed most of the time.

*Examination.*—He is a man of medium height and weight, with well-developed muscles, but staggers in attempts at walking. The face appears slightly asymmetrical, though no paralysis or paresis can be detected when the muscles are at rest. The skin is somewhat muddy; there are no eruptions, but a few insignificant scars from a burn can be seen on his back. The panniculus adiposus is fairly well developed. Glandular enlargements can not be detected. Heart and lungs appear normal in outline and function. Liver and spleen are not palpable. The pulse is rather slow and full, with fairly high tension. The secretions and excretions yielded negative results, with the exception of the stomach contents, which were deficient in free hydrochloric acid, but which did not

show the presence of lactic acid, Boas-Oppler bacillus nor sarcinae.

*Nervous System:* A slight difference in the innervation of the two halves of the face in favor of the left half becomes evident when the patient attempts to uncover his teeth, blow up his cheeks or move his jaw from side to side, but there is no difference on the two sides in transverse and longitudinal wrinkling of the brow and in the function of the orbicularis palpebrarum muscles. The tongue is somewhat tremulous and when protruded deviates slightly to the right. Although there is no paralysis or paresis of any muscles, the grip is rather weak in both hands, but slightly better on the left side. Strength is not appreciably diminished in the lower extremities except that the right leg is not as strong as the left. Coordination is normal in both upper and lower extremities, but the patient at times presents a peculiar staggering gait which is neither of the tabetic nor the cerebellar type.

The superficial reflexes are normal and equal on both sides. The upper reflexes are somewhat brisk, slightly more so on the right side. The left knee-jerk is about normal, the right is slightly in excess. Ankle clonus is barely indicated on the right and doubtful on the left side. There is no Babinski, Oppenheim nor Gordon reflex. Sensation is unimpaired in all its qualities.

*Eyes:* The range of vision is normal. There was no diplopia, ptosis, strabismus, exophthalmos nor Argyll-Robertson pupil. The optic fundus findings were considered within normal limits by Dr. Brown Pusey.

*Mentality:* The patient is mostly depressed and worries greatly over his disease and about his family. He never indulged in flippant talk, the so-called *Witzelsucht* of German writers. His speech is rather slow and labored and is quite unintelligible, perhaps partly because of his ignorance of English.

*Course of Disease.*—The course of the disease was comparatively rapid. At no time was there a temperature, except immediately before death. The pulse ranged from 64 to 90 and only became frequent toward the end, when 150 to the minute was registered.

March 22, 1905, it was noted that the left palpebral fissure was wider than the right and that the left pupil was somewhat dilated and reacted sluggishly to light.

On April 15, 1905, I could easily make out a double optic neuritis. Dr. Brown Pusey, at my request, examined the patient April 18, 1905, and he kindly reports the following: Double papillitis very distinct on left side; not so well marked on right side. No hemorrhages or exudates. Pupils react to light and in accommodation.

The patient frequently groaned from pain and would place his hands over the frontal region as though to indicate the exact location of his pain. Slight physical or mental strain, such as walking or being interrogated about his symptoms, always aggravated the headache. No bruit could be heard over any portion of the cranium and percussion failed to elicit the cracked-pot resonance occasionally noted in brain tumor.

Somewhat toward the end the right-sided weakness previously mentioned became more pronounced, without, however, developing into distinct loss of power. Not even at this time did Jacksonian or other convulsions make their appearance. The patient became more apathetic and was even stuporous at times, but even now he could be sufficiently aroused to answer questions. A skiagraphic picture taken by Dr. Fischkin of the Cook County Hospital showed nothing of value from a diagnostic point of view.

*Diagnosis.*—Here is a patient with headache, vomiting, vertigo, general weakness, optic neuritis and gradually deepening mental apathy with staggering gait. In addition there is a slowly developing weakness of the right half of the body, objectively demonstrable in the face and arm, but not so well in the lower extremity.

Following the usual rule of dividing symptoms of brain pressure into general and focal symptoms, we can find both sets of symptoms in this case. Among the general symptoms must be counted headache, vomiting, vertigo, optic neuritis, generalized weakness. Of localizing value was the difference in the muscular strength on the two sides of the body, pos-

\* From Cook County Hospital.



sibly the more pronounced papillitis on the left side, and the mental apathy and tendency to somnolency. In the absence of symptoms pointing to cortical irritation, such as Jacksonian fits or muscular twitchings of any kind, I considered the neoplasm to be most probably subcortical in location. The right-sided weakness in arm and face determined me to locate the tumor on the left side of the brain in the region of the anterior central convolution bordering the Rolandic fissure and probably extending from about the junction of the upper with the middle third down near to the base, but not involving the base of the brain. This diagnosis was made largely on a consideration of the recent findings of Krause of Berlin, which were published in the *Deutsche Klinik*. In his article Krause states emphatically that our old schemes of cerebral localization have become obsolete and are inadequate for practical needs in brain surgery. In his experience the face, arm and part of the leg center were found principally in the ascending frontal convolution, anterior to the Rolandic fissure, and not, as heretofore taught, in the postcentral convolution. He arrived at his conclusions by his routine method of stimulating the brain with faradism before operating. In his efforts to localize the motor centers he uses the unipolar method instead of bipolar faradization, and he has been able to get uniform results. The motor centers in man, according to his experiments, are situated anterior to the Rolandic fissure, notwithstanding the experiments made on the monkey and with the bipolar method which place these centers principally in the postcentral convolution.

*Treatment.*—The patient was from the first placed on mixed antisyphilitic treatment. He was given injections of mercurial ointment and large doses of potassium iodid, but without any benefit.

As the patient was becoming more stuporous and as internal treatment had failed to produce the slightest change in his condition, I recommended a transfer to the surgical side. On April 28, 1905, the patient was assigned to Dr. Schroeder for surgical treatment, who concurred with me in the diagnosis and the advisability of an operation. It was evident to all of us, judging from the patient's condition, that an operation was indicated as affording the only possible chance of prolonging life. It was my opinion that the tumor was subcortical, and probably situated on the left side in the ascending frontal convolution. The symptoms in this case did not justify an expression of opinion regarding the pathology nor whether the growth was circumscribed or of the infiltrating kind.

*Operation.*—Dr. Schroeder, assisted by Drs. Quick and Dyas, performed the operation May 4, 1905. For the following notes I am indebted to Dr. Schroeder, who has taken an unusual interest in this case:

"A large osteoplastic flap was turned down on the left side of the head, as follows: A horseshoe shaped incision was first made through the skin, then a small trephine hole through the bone on either end of the incision, which openings were then united by means of the DeVilbiss forceps. The bridge was only partially cut across and the flaps elevated. The dura was then incised and reflected to either side. When the brain was exposed no sort of pulsation could be seen or felt. The soft membranes appeared normal, but a dense resisting mass could easily be felt just anterior to the Rolandic fissure, which appeared to be at some depth from the surface. It was decided to cut into the brain mass with a view of exploring the tumor. A dense mass of brownish tissue was encountered which seemed to extend rather deeply and did not appear to be clearly defined from the surrounding normal tissue. At this step of the operation it became evident that the tumor was not removable and after cutting out a piece for microscopic examination, the operation was abandoned. A drain of iodoform gauze was introduced to guard against pressure from hemorrhage and the dura was sutured with catgut. Marked paralysis of the right arm and leg appeared within a few hours after the operation. The patient was in great pain, moaned constantly and never entirely recovered consciousness. His condition kept growing worse, pulse and respiration became rapid and irregular, until toward the end 160 beats to the minute could be counted. The temperature rose to 106.8 just before death, which occurred on May 5, 1905."

*Postmortem Findings.*—The examination was made by the resident pathologist and internes at Cook County Hospital. Omitting unimportant details, I find recorded the following anatomic diagnosis:

1. Tumor in the left cerebral hemisphere.
2. Purulent right-sided bronchopneumonia.
3. Acute parenchymatous myocarditis.
4. Tracheobronchial adenitis.
5. Parenchymatous degeneration of liver, pancreas and kidneys.

Owing to a misunderstanding the cord was not removed and, therefore, no report could be rendered.

The brain weighed 1,500 grams and showed no abnormal changes in the membranes. An operation wound in the left hemisphere revealed a tumor at some depth from the surface, situated in the region of the ascending frontal convolution. The neoplasm was not sharply defined from the surrounding brain tissue, except that it was more reddish in color and had a denser consistency. Approximately it was three inches in length, two inches in its widest diameter and it seemed to extend from above downward for a distance of about one and one-half inches. Microscopically it showed the following: With low magnification an immense number of nuclei was the most striking picture. With the high power lens many filamentous processes could also be observed to radiate in all directions without any apparent regularity. The cells are mostly small and have round or slightly oval nuclei. The macroscopic and microscopic appearance of the growth leaves no doubt of its being a glioma.

The case just reported illustrates, among other things, that, no matter how ill-defined, focal symptoms must be present before a localizing diagnosis can be attempted. Without some such signs as unilateral weakness, paresis, or exaggerated reflex, slight aphasia, etc., it would have been impossible even to guess at the location of the tumor.

One symptom of localizing value had not been properly appreciated in our case, owing to the patient's imperfect knowledge of English. I refer to his mental dullness early in the disease, which would have been of distinct value in attracting attention to the frontal lobe as the seat of the neoplasm, had we been certain of his former mental state.

An interesting negative symptom was the absence of Jacksonian fits or muscular twitchings of any kind throughout the disease. Its value consisted in excluding cortical involvement and enforcing strict conservatism from a surgical point of view. Even if epileptic fits had occurred late in the disease, their significance as a focal sign would have been doubtful, as spasms often occur in tumors that originate in the white substance of the brain and gradually grow outward, irritating the cortex.

The indefinite symptoms are easily explained by the fact that gliomata of the infiltrating type are usually of slow growth, and the brain tissue gradually accommodates itself to new conditions. It is not rare for patients with brain tumor to masquerade as subjects of neurasthenia or hysteria on account of their supposed functional symptoms until some one discovers a choked disc or until the patient develops more typical signs of brain tumor.

That the topical diagnosis was correctly made was proved on the operating table and postmortem examination. It is true that we have learned something about cerebral localization, but all we know definitely refers principally to the so-called motor area of the brain. And it would appear that even this supposed definite knowledge must be considerably modified in the light of recent acquisition. Heretofore the motor area was considered to be principally situated in the ascending



frontal and ascending parietal lobes, but principally in the latter. Now it develops that Sherrington,<sup>1</sup> by his recent experiments on the chimpanzee, has found that the motor area was not as extensive as previously supposed, and that it lies entirely in front of the fissure of Rolando, i. e., entirely within the frontal lobe.

Campbell,<sup>2</sup> in his histologic researches, was able to claim the same situation for man. Bolton<sup>3</sup> unqualifiedly accepts the view of the before-mentioned authors. It was reserved, however, for surgeons of the stamp of Krause<sup>4</sup> to demonstrate the truth of these statements on living human beings, anesthetized and ready for operation.

A point worthy of mention in connection with this case is our utter inability to make a positive, or even probable, anatomic diagnosis of brain tumor; viz., whether we have syphiloma, tuberculoma, glioma or sarcoma.

In conclusion, this case offers an additional example of the well-known fact stated by Oppenheim,<sup>5</sup> Starr,<sup>6</sup> Gowers,<sup>7</sup> and others, that glioma must almost always be considered an inoperable tumor, because of its tendency to infiltrate and because it is usually deeply situated in the white substance of the brain.

In the same sense G. L. Walton and W. E. Paul<sup>8</sup> are worth quoting. They say:

The prevailing skepticism among pathologists regarding the operability of gliomata seems well founded. Such tumors involve a tendency to faulty growth inherent in the brain substance itself, a tendency to which no boundary can be set, and which can no more be checked than the tendency of fruit to decay after removing the portion obviously decayed, a comparison already rather too favorable for the brain, because the difficulty in determining the extent of brain destruction in case of a glioma by exploratory operation is, as a rule, much greater than that of determining the limit of decay in the fruit.

100 State Street.

## THE MANAGEMENT OF TYPHOID FEVER.\*

J. F. JENKINS, M.D.

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As soon as a diagnosis of typhoid fever is made, or even in a suspicious case, it is better to place the patient in a recumbent posture, and to keep him in that position throughout the whole course of the disease.

Positive orders must be given to the nurse to change the position of the patient from side to side, or from the back to the side, every two or three hours. One should examine the heart and lungs, as well as the abdomen, from day to day, as long as the patient is under observation, and he should not assume the erect position at any time during the continuation of the fever, either for the purpose of taking nourishment or drink; and, however obstinate the patient may be, one should insist on his using the bed-pan on all occasions when it is necessary.

It is a well-known fact that the diet in typhoid fever is of the utmost importance, and that solid food should

not be permitted under any circumstances from the beginning of the fever until ten days after its termination. It is well known that beef tea and broths make an excellent culture medium for the typhoid bacillus, and therefore it is well to omit them from the diet list. This error in diet doubtless accounts for the excessive diarrhea often observed in patients who are allowed to have these broths. Milk, from a quart to a quart and a half, preferably given with pepsin and hydrochloric acid, and two soft-boiled eggs every twenty-four hours, make a very efficient diet during the whole course of the fever. Frequently, barley water or rice water may be given for a change. In the later stages of typhoid fever, a stimulant in the form of old whiskey may be added to the milk, especially if there is a flagging pulse. In the early stage of typhoid fever, fractional doses of calomel, followed by a small dose of Rochelle salts or soda phosphate, is indicated; in many cases the above preparations may be repeated from time to time during the first and second weeks.

The gate of entrance of the typhoid bacillus is the alimentary canal, and Peyer's glands, situated in the small intestines, appear to suffer from their attack more than any other portion. Intestinal antiseptics are prescribed by many physicians, but they do not destroy the typhoid bacillus in the intestinal canal, or in the circulatory system, which they frequently invade even before one has had an opportunity of examining the patient. Bacteriologists state, however, that antiseptics do destroy the non-specific bacteria that invest the intestinal canal, combat fermentation to a certain degree and lessen the foul odor emanating from the discharges of the intestinal canal. By their antiseptic influence they lessen the diarrhea, as well as the tympanitis; therefore, they are useful and should be prescribed.

Among the many remedies exerting an antiseptic influence in the alimentary canal, one may mention salol, turpentine, sulphocarbolate of zinc and acetozone.

The temperature in typhoid fever rises from 100 F. to 105 F., and upward. When the temperature of the patient continues up to 102.5, antipyretic remedies are indicated. We have in cold water a remedy that fulfills every indication, either in the form of the sponge bath, the cold pack or tubbing. The cold sponge bath will reduce the temperature, although it may be necessary to repeat the bath every hour or two; occasionally, ice cold water is required to reduce the temperature. Cold drives the blood to the internal organs; hence it is advisable to follow up the bath by vigorously rubbing the surface with a coarse linen or crash towel. Frequently a small quantity of stimulants is indicated after the bath. When delirium, restlessness or coma is a prominent feature, the ice cap continuously applied to the head—although it will be necessary to change its position from time to time—will greatly relieve the patient and often produce a natural sleep. During convalescence a tepid sponge bath of equal parts of alcohol and water two or three times a day has a beneficial effect on the patient. One should insist on the nurse giving the patient from a quart to a quart and a half of boiled water every twenty-four hours, for the typhoid patient does not usually call for water, even when his temperature is high.

In a large proportion of cases diarrhea is excessive; frequently it is aggravated by an excessive quantity of food, or by food which is not assimilated. A change in the quantity and quality of the food will have much to do in lessening the diarrhea. Bismuth subnitrate in large doses frequently repeated will usually check the

1. Sherrington and Gruenbaum: Proc. Royal Soc., vol. lxi.

2. A. W. Campbell: Liverpool Medico-Chirurgical Journal, 1903, p. 430.

3. Jos. Shaw Bolton: Brain, 1903, p. 215.

4. Krause: Deutsche Klinik, vol. viii, article on "Gehirnchirurgie."

5. Oppenheim "Gehirngeschwülste," second edition.

6. Starr: Organic Nervous Diseases.

7. Gowers: Manual on Nervous Diseases.

8. G. L. Walton and W. E. Paul: Journal of Nervous and Mental Diseases, August, 1905.

\* Read before the Lenawee County Medical Society, at Tecumseh, Mich., Oct. 10, 1905.



excessive discharge from the bowels. Subsultus tendinum in the terminal stage of the disease is usually accompanied with great restlessness; for which in recent cases I have found Hoffman's anodyne, as recommended by Hare, a very useful remedy.

In the later stage of typhoid fever, the feeble heart's action calls for support; and one must instruct the nurse relative to the necessary stimulants to sustain the circulation. During convalescence the urine is loaded with the typhoid bacillus. Hexamethylenamin in 5-grain doses, repeated three times a day, well diluted with water, and continued for a week or ten days, will destroy the bacillus in the urine.

## Special Article

### THE PHYSICIAN AND THE PHARMACOPEIA.

#### CHAPTER II.

##### EXPECTORANTS.

The prevalence of coughs and "colds" in the winter months is sufficient evidence of the importance of this class of agents. Their use in domestic practice—largely as "patent medicines," so called—probably exceeds that directed by the physician as ten to one.

Physicians are supplied liberally with literature by manufacturers of proprietary remedies, but the pharmacology of this literature is not always worthy of the faith that some physicians place in it. As an example we quote from a circular distributed exclusively to physicians: "In severe and frequent cough, when little mucus is secreted, as shown by the scanty viscal sputum, morphin, or, better, its derivative, ethyl-morphin, is indicated, which increases secretion and lowers excitability of the respiratory center." For comparison with this interested statement by the manufacturers we quote from the article on opium in Wood's Therapeutics (11th ed., p. 716): "Its tendency to check secretion forbids its use, however, in a very large proportion of cases, notably in those in which there is persistent dryness of the bronchial mucous membrane." Sollmann, Cushny and others state that morphin possesses the same property, though to a lesser degree than opium.

In such circulars manufacturers usually advocate the use of some certain remedy for all coughs, but we may be pardoned if we again quote Wood for comparison: "It is plain that the medical practitioner must study in each individual case the relations between the cough and the amount of work required."

The discovery of a medicinal agent is the signal for a host of imitators whose product may differ, if at all, merely in the substitution of an ethyl for a methyl group, or of one harmless acid radical for another. These are presented in increasing numbers to the physician, who can by no possibility remember them all. Or some well-known drug, whose length of service, if not merit, entitles it to some respect, is seized on to serve as a basis for fabulous claims, perhaps long since voiced, disproved and forgotten.

There is still another interesting phase connected with these various nostrums. Many of us pride ourselves on the fact that we use only "ethical" preparations and also that we insist on knowing just what we are prescribing or using. It must be rather embarrassing, therefore, to find that even the public is more exacting in this respect than we are and that the manufacturers of popular medicines, when they do advertise the composition of their particular mixture, publish a full and complete formula and not an incomplete one such as we frequently find in the advertising pages of medical journals, or in the circulars that come to our desk.

#### Ayer's Cherry Pectoral Versus Pruni-Heroin.

Concrete examples, however, are so much more effective than mere generalities that we select—almost at random—two advertisements for comparison. Surely no physician of our day would prescribe "Ayer's Cherry Pectoral." How many prescribe the much-vaunted "Pruni-Heroin?" Let us compare these formulas, the one from the lay press, the other from nearly any medical journal. Note that the advantage of com-

plete publicity lies with Ayer; whether correctly or not, the quantities are all given.

**AYER'S CHERRY PECTORAL.**  
Each fluid ounce<sup>1</sup> represents  
Wild cherry .....6 grains.  
White pine .....4 grains.  
Terpin hydrate....4 grains.  
Blood root .....2 grains.  
Heroin (!).....1/6 grain.  
Grindella robusta..4 grains.  
Senega .....4 grains.  
Rio ipecac .....2 grains.  
Glycerin.  
Alcohol .....80 m.  
Syrup.  
Water.

**PRUNI-HEROIN.**  
Each fluid ounce represents  
Wild cherry bark.  
White pine bark.  
Terpin hydrate....4 grains.  
Blood root.  
Heroin .....1/6 grain.  
Ammon muriate...16 grains.  
Spikenard.  
Glycerin.  
Solvents.  
etc.

If Ayer's "shotgun" Pectoral ought to be considered obsolete, what shall we say of Pruni-Heroin? If a physician prescribe Pruni-Heroin and condemn Ayer's to a patient who has taken Ayer's, what will the patient think of the advice if he learns the composition of Pruni-Heroin?

#### Expectorants in the Pharmacopeia.

The expectorants official in the United States Pharmacopeia afford a great variety of choice. Innumerable combinations are possible, but we shall merely suggest a few of these, in connection with some of the drugs and preparations available.

It should be remembered that coughing serves to remove mucus from the respiratory tract and usually requires no treatment. If this becomes unduly severe, it may require alleviation; if the secretion is scanty it may be increased or rendered more liquid.

Acute bronchitis may be divided into two general stages, with certain expectorants useful in each stage, but this is not to be taken as a rigid classification.

The first stage—that of dryness of the mucous membrane, with considerable cough—calls for sedatives; the second—that of free secretion—requires stimulant expectorants.

##### SEDATIVE EXPECTORANTS.

Among the official sedative expectorants to be used in the first, or dry, stage of cough we have the following:

##### *Ipecac.*

**IPECACUANHA.**—U. S.—Ipecac is the dried root of *Cephaelis ippecacuanha* (Brotero), A. Richard (Fam. *Rubiaceæ*). It is known commercially as Rio, Brazilian or Para Ipecac, or the corresponding portion of *C. acuminata*, Karsten, known commercially as Carthagena Ipecac, yielding, when assayed by the process given in the Pharmacopeia, not less than 2 per cent. of ipecac alkaloids. Ipecacuanha was first described by Piso and Markgraf, in 1648, in their natural history of Brazil. The drug appears to have been well known to the natives of Brazil and to have been much prized for a variety of therapeutic purposes. It was introduced into Europe, about 1675, by John Helvetius, of Paris. The Carthagena variety of Ipecacuanha is a comparatively recent introduction, being first noted as a distinct variety, about 1870. Ipecacuanha is official in all pharmacopeias, but up to the present time the Pharmacopeia of the United States is the only one to recognize the Carthagena variety as being the equal of the Brazilian.

**PULVIS IPECACUANHÆ.**—U. S.—Average dose: Expectorant, 0.050 gm. (1 grain); emetic, 1 gm. (15 grains).

**FLUIDEXTRACTUM IPECACUANHÆ.**—U. S.—Fluid extract of Ipecac.—Extractum Ipecacuanhæ Liquidum Br. should contain 1.75 per cent. of alkaloids.

Average Dose: Emetic, 1 c.c. (15 minims); expectorant, 0.05 c.c. (1 minim).

**PULVIS IPECACUANHÆ ET OPII.**—U. S.—Powder of Ipecac and Opium. (Dover's powder.) This contains 10 per cent. of ipecac, 10 per cent. of powdered opium and 80 per cent. of sugar of milk.

Average Dose: 0.500 gm. (7½ grains); used chiefly as a diaphoretic.

**SYRUPUS IPECACUANHÆ.**—U. S.—Syrup of Ipecac. This contains 7 per cent. of Fluidextract of Ipecac and 1 per cent. of Acetic acid in a mixture of glycerin, sugar and water.

Average Dose: Expectorant, 1 c.c. (15 minims); emetic, 15 c.c. (4 fluidrachms).

**VINUM IPECACUANHÆ.**—U. S.—Wine of Ipecac. A mixture of 10 per cent. of Fluidextract of Ipecac, 10 per cent. of alcohol and 80 per cent. of white wine.

Average Dose: 1 c.c. (15 minims).

<sup>1</sup> We give ounces instead of drams to facilitate comparisons.



When the bronchi are inflamed and the secretion is scanty or thick and tenacious, nauseants, such as ipecac, lead to increased secretion which secures its removal by coughing. The choice of nauseants is guided by the general condition of the patient, ipecac being preferred to Antimony and Potassium Tartrate in those cases (children and weakly persons) in which great depression would be dangerous. The active principle of ipecac is not usually employed in the pure state as an expectorant, the syrup of ipecac being preferred, as the tannin present retards absorption and prolongs the action.

The expectorant dose of the nauseants is always very much less than the emetic—approximately one-tenth in the case of ipecac. The average doses given are approximate and the expectorant dose is to be repeated every two or three hours; the emetic dose is to be repeated half-hourly until effective.

For croup in small children few remedies enjoy a greater reputation than syrup of ipecac, which is given alone in doses of from ten to thirty drops, repeated at intervals of thirty minutes until vomiting occurs.

#### A Typical Ipecac Prescription.

The preparations of ipecac are seldom used alone as expectorants, but are usually added to mixtures of allied use.

The following may be considered a typical prescription for ipecac to be used in teaspoonful doses every two hours; for the syrup of ipecac a corresponding amount of fluidextract or wine may be substituted. When an opiate is imperatively demanded 15 c.c. (4 drachms) of camphorated tincture of opium may be added without other change:

℞. Syrupi ipecacuanhæ ..... 3vi 25|  
Ammonii chlorid ..... 3iiss 6|  
Syrupi tolutani, q. s. ad..... 3iii 100|

#### Senega.

SENEGÆ.—U. S.—Root of *Polygala senega*—Radix Senegæ—is one of the few drugs of American origin that has found a place in every recent pharmacopeia. It contains a saponin which is locally irritant, but which is not absorbed; hence, the drug is not depressing. It is almost invariably used in small amount as an addition to other expectorants. It has the disadvantage of an unpleasant acrid taste. The official preparations are:

FLUIDEXTRACTUM SENEGÆ.—U. S.—Average dose, 1 c.c. (15 minims), and

SYRUPUS SENEGÆ.—U. S.—This contains 20 c.c. Fluidextract of Senega in 100 c.c.

Average Dose: 4 c.c. (1 fluidrachm).

See also Syrupus Scillæ Compositus.

#### Sanguinaria.

Another irritant nauseant more notable for its abuse than use is:

SANGUINARIA.—U. S.—Rhizome of *Sanguinaria canadensis* (bloodroot). This drug, usually omitted by modern therapeutists or dismissed with a line, contains sanguinarin, belonging to the morphin group, and causing depression of the respiratory center. It is mentioned here more particularly because of its widespread use by the nostrum makers. The common name—bloodroot—appears to possess considerable psychical effect. The Indians, perhaps, displayed more wisdom in its use than we do; they only applied it externally, as war paint. The only official preparation is:

FLUIDEXTRACTUM SANGUINARIÆ.—U. S.

Average Dose: 0.1 c.c. (1½ minims).

The "Compound Syrup of White Pine" of the national formulary represents the "popular" expectorants. It is not recommended, however, as it is too complicated.<sup>1</sup>

1. The following is the formula for the Compound Syrup of White Pine:

White pine bark (pinus strobus).....	3iiss	75
Wild cherry bark .....	3iiss	75
Spikenard root.....	3iiss	10
Balm of Gilead buds .....	3iiss	10
Sanguinaria root .....	3ii	8
Sassafras bark .....	grs. cv	7
Morphin sulphate .....	grs. viiss	
Chloroform .....	3iiss	6
Sugar .....	3xxvss	750
Alcohol		
Water		
Syrup (U. S.), of each. to make.....		Oil 1000

#### Antimony.

Antimony and potassium tartrate is a more depressing nauseant than the drugs above mentioned. It may be used on robust persons, but not with safety on children or the infirm. Its mode of action is similar to that of ipecac, and here, too, we have a variety of official preparations.

ANTIMONII ET POTASSII TARTRAS.—U. S.—Antimony and Potassium Tartrate; Antimonium Tartaratum Br., Tartarus Stibiatus Ger., Tartar Emetic. Colorless, transparent crystals or a white granular powder, soluble in 15.5 parts of water, insoluble in alcohol. It was discovered in 1631 by Mynsicht, whose process of manufacture was subsequently improved by Glauber. It has long been the most popular and widely used of the medicinal compounds of antimony, and is now official in all recent pharmacopeias, the official nomenclature differing widely, however.

Average Dose: Expectorant, 0.005 gm. (1/10 grain); emetic, 0.03 gm. (½ grain).

VINUM ANTIMONII.—U. S.—Wine of Antimony. This contains 0.4 per cent. of Antimony and Potassium Tartrate in solution in 1 part of alcohol and 5 parts of white wine, and enters the well-known compound mixture of glycyrrhiza—a deservedly popular expectorant.

Average Dose: 1 c.c. of the wine (15 minims).

MISTURA GLYCYRRHIZÆ COMPOSITA.—U. S.—See Glycyrrhiza.

Tartar Emetic is an ingredient (0.2 per cent.) in the Compound Syrup of Squill, which see below.

For the administration of Antimony and Potassium Tartrate, the official Compound Mixture of Glycyrrhiza (6 per cent. Wine of Antimony, —0.024 per cent. Antimony and Potassium Tartrate) is used alone or with 4 gms. (60 grains) Ammonium Chlorid to 60 c.c. (2 ounces). A typical prescription follows:

℞. Vini antimonii ..... 3iv 15|  
Aquæ chloroformi, q. s. ad..... 3iii 100|

A teaspoonful every two hours.

#### Apomorphin.

APOMORPHINÆ HYDROCHLORIDUM.—U. S.—Apomorphin hydrochlorid.—The hydrochlorid of an alkaloid prepared from morphin by the abstraction of one molecule of water. Soluble in 40 parts of water, in the same proportion of alcohol, practically insoluble in all other solvents.

Apomorphin is much less useful as an expectorant than as an emetic, its action being brief.

Average Dose: Expectorant, 0.002 gm. (2 mg. or 1/30 grain); emetic, 0.005 gm. (5 mg. or 1/12 grain).

#### Ammonia.

AMMONII CHLORIDUM.—U. S.—Ammonium Chlorid Br. Ammonium chloratum Ger. A white crystalline powder, without odor, having a cooling saline taste, permanent in air, soluble in 2 parts of water and in 50 parts of alcohol.

As sal ammoniac, this substance has been known from a very early time. It is popularly supposed to have been first obtained from the neighborhood of the Temple of Jupiter Ammon, in Northern Africa.

Ammonium Chlorid was known to the Arabian physicians and was described by Geber. It is now official in all recent pharmacopeias. Wood recommends this salt in the stage just before secretion becomes free; for this purpose the following may be used:

TROCHISCI AMMONII CHLORIDI.—U. S.—Each troche contains 0.1 gm. (1½ grains) Ammonium Chlorid and 0.2 gm. (3 grains) Extract of Glycyrrhiza.

Ammonium chlorid is much used as an addition to Compound Mixture of Glycyrrhiza in the proportion of 4 gms. (60 grains) to 60 c.c. (2 ounces), and it may be added to nearly any expectorant mixture which is not strongly alcoholic.

#### STIMULATING EXPECTORANTS.

##### Tolu.

BALSAMUM TOLUTANUM.—U. S.—Br.-Ger.—Balsam of Tolu, a balsam obtained from *Toluiifera balsamum*, a yellowish-brown, plastic solid that has a pleasant aromatic odor and a mild aromatic taste. It is readily soluble in alcohol, nearly



insoluble in water. Balsam of Tolu was first described by Monardes, a Spanish physician, about 1574. The drug, it is said, was collected in a district near Carthage, called Tolu, and appears to have been well known to and used by the natives of Northern South America. Balsam of Tolu, at the present time, is a widely used and popular drug and is official in all of the leading pharmacopeias.

Average Dose: 1 gm. (15 grains).

SYRUPUS TOLUTANUS.—U. S.—Syrup of Tolu, containing the water-soluble principles of 5 per cent. of Tincture of Tolu in Syrup.

Average Dose: 15 c.c. (4 fluidrachms).

TINCTURA TOLUTANÆ.—U. S.—Tincture of Tolu, a 20 per cent. solution of Tolu in alcohol.

Average Dose: 2 c.c. (30 minims).

The mildest of the stimulant expectorants is Syrup of Tolu, if, indeed, this can be considered as anything more than a flavored syrup. The balsam is not infrequently used in medicine, but may be given in the form of an emulsion made with acacia and water and sweetened with sugar.

The benzoic acid and volatile oil in the balsam give it the advantage of being mildly antiseptic, the syrup, however, being too weak to be effective in the dose usually employed.

BALSAMUM PERUVIANUM.—U. S.—Balsam of Peru may be used in the same dose and for the same purpose as Balsam of Tolu.

Attention is called to the fact that the urine of persons taking such amounts of these balsams gives a precipitate with nitric acid which may be mistaken for albumin, but the precipitated resins dissolve in alcohol, while albumin does not.

#### Benzoin.

BENZOIN.—U. S.—This balsamic resin is also a harmless stimulant, useful in bronchial irritation.

TINCTURA BENZOINI.—U. S.—A 20 per cent. solution of Benzoin in alcohol, or:

TINCTURA BENZOINI COMPOSITA.—U. S.—“Turlington’s Balsam,” commonly called “Friar’s Balsam” (also containing Benzoin, Aloes, Storax and Tolu), also may be given.

Average Dose: 1 c.c. (15 minims) every two hours.

The fact that these expectorants are harmless is a very great advantage—and is a point to be particularly remembered in the treatment of small children, in whom opiates and such depressants as antimony and potassium tartrate are to be avoided.

#### Tar.

SYRUPUS PICIS LIQUIDA.—U. S.—Syrup of Tar.—Containing one-half of 1 per cent. of the soluble principles of tar in syrup, is mildly stimulant and the taste is not unpleasant.

Average Dose: 4 c.c. (1 fluidrachm).

Tar itself has a disagreeable acrid taste and is not often used in substance.

#### Terpin Hydrate.

TERPINI HYDRAS.—U. S.—Terpin Hydrate.—This is a body closely related to turpentine, camphor, etc. It occurs in colorless, lustrous, rhombic prisms, or a white crystalline powder, nearly odorless, of a slightly aromatic and somewhat bitter taste, soluble in about 200 parts of water and in 10 parts of alcohol.

Average Dose: 0.1 gm. (2 grains) in capsules or elixir. Owing to its slight solubility in water, the elixir must be strongly alcoholic and glycerin be substituted for syrup—a serious objection to its general use. It is very commonly associated with codein, which is also not to be recommended for routine practice.<sup>2</sup>

Terpin Hydrate has been known for some time, but was not used in medicine until after Lepine published the results of his physiologic investigations in 1885. It is supposed to possess the antiseptic and stimulating effects of turpentine without possessing its irritating properties. The substance soon became popular and was included in the United States Pharmacopeia for 1890. It is also official in the German Pharmacopeia and in the French Codex.

2. It may be prescribed as the unofficial Elixir of Terpin Hydrate and Codein Sulphate. Dose: Two teaspoonfuls, containing 0.15 gm. (2 grains) Terpin Hydrate and 0.024 gm. (½ grain) Codein.

It has been suggested as a remedy in a variety of ailments, but it appears to be useful mainly as an expectorant, enjoying a reputation particularly among the nostrum vendors. It is, in reality, useful in aiding to get rid of secretion from the bronchial mucous membrane.

#### Terebene.

TEREBENUM.—U. S.—Terebene.—This is a polymerization product derived from turpentine which it closely resembles.

It is a colorless liquid, having a rather agreeable odor and an aromatic, somewhat terebinthinate taste, readily soluble in 3 times its volume of alcohol, but only slightly soluble in water.

First obtained by Soubeiran and Capitaine about 1841, it was introduced into medicine by Dr. William Murrell about 1885; it was made official in 1890 and in the British Pharmacopeia of 1898.

It is used in much the same conditions as Terpin Hydrate; its immiscibility with the mixtures usually employed as expectorants has interfered in no small way with its employment. It may be prescribed in alcoholic solution, in capsules or in the form of an emulsion.

Average Dose: 0.5 c.c. (8 minims).

#### Squill.

SCILLA.—U. S.—Squill. The bulb of *Urginea maritima*, containing several potent principles, it is exceedingly irritant and in large doses toxic.

Average Dose: 0.1 gm. (2 grains).

Of all the official drugs used in the treatment of cough, few are better known than squill, the syrup being the most popular of its preparations.

This drug is both stimulant and nauseant; hence, it is used in both stages of bronchitis.

SYRUPUS SCILLÆ.—U. S.—Syrup of Squill. This represents 5 per cent. of Squill; made from Vinegar of Squill and, therefore, containing dilute Acetic Acid; it is, of course, incompatible with ammonium and other carbonates—a fact not infrequently lost sight of by the prescriber.

ACETUM SCILLÆ.—U. S.—Vinegar of Squill. This represents 10 per cent. of the drug extracted with dilute acetic acid.

Average Dose: 1 c.c. (15 minims).

FLUIDEXTRACTUM SCILLÆ.—U. S.—Average dose, 0.1 c.c. (2 minims).

TINCTURA SCILLÆ.—U. S.—This represents 10 per cent. of the drug.

Average Dose: 1 c.c. (15 minims).

These last three preparations of squill are seldom employed, but the following is widely used:

SYRUPUS SCILLÆ COMPOSITUS.—U. S.—Compound Syrup of Squill, Hive Syrup. This represents 8 per cent. of the Fluid-extracts of Squill and Senega and 0.2 per cent. of Antimony and Potassium Tartrate or about 0.01 gm. (⅛ grain) to the teaspoonful.

Average Dose: 2 c.c. (30 minims).

The use of squill as an emetic is not free from danger and the drug is seldom so employed alone.

CREOSOTE.—U. S.—(or Guaiacol.—U. S., which constitutes up to 90 per cent. of creosote) is used as a stimulant expectorant. There is considerable diversity of opinion as to its mode of action. It seems to possess little germicidal action so far as the lungs are concerned. When it is administered in a bland oil very large doses are tolerated, but this is not necessary for its expectorant effect.

Numerous compounds of creosote and of guaiacol have been suggested as substitutes for the official products, but it is not probable that they possess any decided advantages over the official. Those which are less poisonous are probably absorbed from the alimentary canal to a much less degree than are the official creosote and guaiacol.

Among the guaiacol compounds is the proprietary “Ethacol,” containing ethyl-morphin, a fact to be carefully borne in mind, as the name of the preparation is not nearly so suggestive of morphin as of guaiacol. The manufacturers of this article recommend morphin or ethyl-morphin in bronchitis for increasing secretion! to which attention has already been called.



## ANODYNES.

When the irritability of the throat causes excessive coughing anodynes are indicated. Morphin, however, must only be used with the greatest caution owing to its tendency to check secretion, "free circular therapy" to the contrary notwithstanding.

*Codein.*

CODEINA.—U. S.—Codein. Very soluble in alcohol, much less soluble in water.

CODEINÆ PHOSPHAS.—U. S.

CODEINÆ SULPHAS.—U. S.—Both are quite soluble in water, but not in alcohol.

Average Dose: 0.003 gm. (3 mg. 1/20 grain).

Codein, rather than its salts, is suited for combination with Terpin Hydrate, since both require alcohol as its solvent.

CODEIN has come very largely into use in expectorant mixtures in recent years, partly because its action resembles that of morphin without disturbing digestion or causing constipation in moderate doses, partly, no doubt, because manufacturers have popularized it in order to avoid the stigma attaching to the general use of morphin and opium.

Codein undoubtedly lessens cough, but, as already stated, this is not always desirable. Codein phosphate or sulphate, being soluble in water, may be added to almost any cough mixture which is not alkaline.<sup>3</sup>

Ammonium Chlorid is not well suited for combination with Terpin Hydrate, since the latter requires a strongly alcoholic menstruum which precipitates ammonium chlorid.

Numerous substitutes have been introduced for morphin and codein, but it has not been demonstrated that they possess all the advantages and none of the disadvantages of the officials. It must not be forgotten that habit may be formed with any of the morphin derivatives, including codein.

Attention has previously been called to the extreme similarity between Ayer's Cherry Pectoral and Pruni-Heroin, and the reader is invited to compare the extravagant claims made for Glyco-Heroin (Smith) with the action of heroin as stated by Sollmann and other accepted authorities.

Still another of the host of expectorant nostrums is "Syrup Codeia Compound—Bell," said to contain codein phosphate, terpin hydrate, eucalyptus and ipecac (compare with formula of Ayer's Cherry Pectoral).

The manufacturers of the "Syrup Codeia Co.—Bell" lay particular stress on the purity of their codein. The United States Pharmacopeia gives a very simple test for the purity of codein, which any physician may apply. We again invite a careful comparison of the testimony of accepted authorities concerning the constituents of this nostrum with claims made by the manufacturers.

The bromids of ammonium, potassium and sodium are safer than morphin, and are frequently beneficial when anodynes are indicated. Their doses should, however, be more than proportionately reduced for children.

*Hydrocyanic Acid.*

HYDROCYANIC ACID may be added to expectorant mixtures, but its action is fleeting and it must be frequently repeated.

ACIDUM HYDROCYANICUM DILUTUM.—U. S.—Contains 2 per cent. absolute HCN.

The average dose is 0.1 c.c. (1½ minims).

## DEMULCENT EXPECTORANTS.

Demulcents are frequently employed to allay the irritation of the mucous membrane, and they possess the great advantage of being harmless. They may be administered in the form of lozenges or troches.

3. The following is suggested as a simple prescription containing codein:

R. Codeinæ sulph. ....	grs. viii	15
Ammonii chloridi .....	3i ss	6
Syrupi prunl. virg. q. s. ad.....	3iii	100

M. Sig.: A teaspoonful every two or three hours.

Compound Mixture of Glycyrrhiza, Syrup of Tar, Syrup of Squill or Syrup of Tolu may be substituted, wholly or in part, for the syrup of Wild Cherry.

The following demulcents may be used as vehicles:

SYRUPUS ACACIÆ.—U. S.

MUCILAGO ACACIÆ.—U. S.

*Licorice.*

GLYCYRRHIZA.—U. S.—Licorice root is so well known as to require but little comment. Its preparations afford a variety of forms for administering it.

FLUIDEXTRACTUM GLYCYRRHIZÆ.—U. S.—This is the fluid-extract of licorice root, from which a satisfactory syrup may be prepared by mixing 25 c.c. of the fluidextract with enough syrup to make 100 c.c.

Average Dose: 2 c.c. (30 minims).

EXTRACTUM GLYCYRRHIZÆ PURUM.—U. S.—This is a semi-solid extract prepared from the root and is well adapted as an addition to extemporaneous mixtures.

Average Dose: 1 gm. (15 grains).

TROCHISCI GLYCYRRHIZÆ et OPII.—U. S.—This contains 0.005 gm. (5 mg. or 1/12 grain) of opium.

GLYCYRRHIZINUM AMMONIATUM.—U. S.—Ammoniated Glycyrrhizin is an excellent demulcent; it is readily soluble in water, but is incompatible with acids.

Average Dose: About 0.25 gm. (4 grains).

PULVIS GLYCYRRHIZA COMPOSITA.—U. S.—*Brust Pulver Gr.* Compound Powder of Glycyrrhiza, a laxative, containing Senna, Washed Sulphur, Glycyrrhiza, Sugar and Oil of Fennel, and is popularly believed to be a desirable adjuvant to expectorant medicines.

Average Dose: 4 gm. (60 grains).

MISTURA GLYCYRRHIZÆ COMPOSITA.—U. S.—Compound Mixture of Glycyrrhiza, Brown Mixture, containing Purified Extract of Glycyrrhiza and Acacia, each 3 per cent., syrup 5 per cent., with Camphorated Tincture of Opium 12 per cent., Wine of Antimony 6 per cent. and Spirit of Nitrous Ether 3 per cent.

Average Dose: 8 c.c. (2 fluidrachms).

This is a deservedly popular expectorant. It is very often prescribed alone, but is also much used as a vehicle for other expectorants, particularly ammonium chlorid.

*Ammonia.*

AMMONIUM CARBONATE.—U. S.—Ammonium Carbonate Br., Ammonium carbonicum Ger.

White, hard, translucent, striated masses of a strong odor of ammonia without empyreuma, and a sharp, saline taste, slowly but completely soluble in about 4 parts of water and decomposed by hot water.

A condition deserving especial mention is that in which the mucus is particularly thick and tenacious, requiring liquefaction; for this purpose, ammonium carbonate is frequently added to other expectorants; it has the disadvantage of an unpleasant taste, which can not be disguised with diluted acids because these decompose the carbonates.

The cough of chronic bronchitis requires the use of one of the stimulant expectorants, such as Terebene or Terpin Hydrate, bearing in mind the avoidance of those which will prove objectionable with continued use.

While urging the advantage of using the pharmacopeial agents, we particularly suggest that the physician consider the several ingredients of any nostrum instead of accepting the absurd and often grotesque claims of the manufacturers.<sup>4</sup>

4. Compare the following, purporting to have been written by a physician, with any text-book treating of the ingredients of which Respiton is alleged to be composed—5 grains, each. Asclepias (species ?) berberis and aromatics to the teaspoonful:

"I have used Respiton in cases of La Grippe and on a baby, 9 months old, for severe cough, with excellent results.  
H. E. Williams, M.D."

Constipation in Anemic and Chlorotic Subjects.—Sir Andrew Clarke recommended one-half grain each of aloin, ferri sulphas exsic., ext. belladonnæ, ext. nucis vomicæ, pulv. ipecac, pulv. myrrhæ and soap: One pill one hour before last meal, should bowels not act during the day. Osler uses a sulphur confection in the morning and a pill of iron, rhubarb and aloes throughout day. Shoemaker prescribes: R. Aloes purif. gr. iii; massæ ferri carb. gr. ii; pulv. aromat. gr. i: One or two pills at the bed hour. Exercise in the fresh air is, of course, a valuable adjunct.—*Denver Medical Times.*



## Clinical Notes

### A CASE OF COMPOUND DISLOCATION, WITH FRACTURE OF THE LEFT ULNA.

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After a careful search of the literature I have failed to find a case similar to the one described in this paper, and I am reporting this with the hope that it will be of benefit to other members of the profession.

*Patient.*—On Dec. 29, 1903, C. H., aged 24, was admitted to the Emergency Hospital of this city.

*History.*—While ascending a ladder in the afternoon of the same day he had fallen about fifteen feet to the ground below. With some building material in his hand he had ascended about two-thirds of the ladder and, turning around, he lost his balance and fell to the ground below. He landed on the palm of his right hand, left wrist, knees and face. The injury to the right palm was of the lacerated variety, which required six sutures to close the wound, after which it was dressed with 10 per cent. iodoform gauze and redressed every day for a week. The sutures were then removed, the wound having healed by first intention. The injuries to the knees and face were simple contusions, the former healed completely under iodoform gauze dressing in about five days; the latter healed, except the slight discoloration, in about ten days under bichlorid and later alcohol compresses. More important than the injuries I have just described, and that which has led me to report this case, was the injury to the left forearm. The man, as I have mentioned above, landed on his left wrist, etc., and as soon as his wrist struck the ground dislocation of the ulna occurred, with the free end of the ulna piercing the muscles, fascia, cutaneous and other tissues, the result being a "compound dislocation." From the history which the patient gave and from the appearance of the wound, I concluded that the end of the ulna, which was protruding through the tissues of the wrist, had struck the ground, thus causing the splintering which had occurred of that end of the ulna. I made a diagnosis of "compound dislocation, with a comminuted fracture" of the left ulna.

*Treatment.*—The patient arrived at the hospital at 6:30 p. m., and was evidently under the influence of alcohol, which I later learned was given to him by his friends in the hope of relieving his pain. His injuries had been dressed by one of the physicians at the Naval Academy Hospital, after which the patient was removed to the Emergency Hospital. I found the patient a little stupid and suffering a good deal of pain, for which I directed the nurse in charge to administer morphia, gr.  $\frac{1}{4}$ , with atropia, gr.  $\frac{1}{150}$ , and to repeat the injection, if necessary, to quiet the patient. After an inspection of the injuries I concluded to wait until it was necessary to redress them and not to interfere with what had already been done. I remained with the patient about two hours; then left him in charge of the nurse for the night. The next morning I called to see patient, and was informed by the nurse in charge that the morphia and atropia had had no effect and that the patient had been suffering all night. On inspecting the dressings I found that they were thoroughly blood stained, and deemed it wise to investigate the cause for so much bleeding. Removal of the dressings from the left forearm showed the splintered end of the ulna protruding through a lacerated wound of the soft parts of the left wrist, which had been sutured with catgut and, I am sorry to say, had not proved adequate for the injury. I removed the loosened sutures and could then clearly see that the distal end of the ulna, which was protruding, was splintered to such an extent as to make it triangular, with an apex, instead of being more or less blunt as is the case in the normal bone, the styloid process being broken off.

*Operation and Result.*—Under general anesthesia I proceeded to repair the injury. I found it impossible to return the free end of the ulna through the opening made by its exit, so extended the opening up the forearm by an incision about three inches, and then, after catching up and ligating all bleeding vessels, I was able to reduce the dislocation by extension,

flexion inward and outward of the hand, and manipulation, my assistants retaining the ulna in position while I closed up the wound with ten interrupted sutures. A plaster of Paris bandage was then applied, an oblong window being left over the wound which was dressed with 10 per cent. iodoform gauze after thorough irrigation with 1 to 1000 bichlorid solution. The injuries to the right palm and knee were also dressed with 10 per cent. iodoform gauze after bichlorid irrigation. The lacerated wound of the right palm required six sutures to close it. Both palm and knee had entirely healed by the sixth day, at which time the sutures were removed from the palm. The injury to the left forearm was dressed every second day, then every third day, until the sutures were removed at the end of four weeks, the wound having healed by third intention. The plaster bandage was removed at the end of three weeks. After massage with alcohol I put up the wrist in an anterior and posterior splint, which I kept on for about ten days. After removal of the splints, passive movements and massage were ordered and gradually increased until the patient was allowed to rotate and to flex his hand as much as possible. The wound healed up entirely, and the patient was discharged at the end of the seventh week with fairly good movement.

### SUCCESSFUL AMPUTATION OF THE PENIS FOR EPITHELIOMA.

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NEW ORLEANS.

*History.*—In June, 1898, Y. C. consulted me about an epithelioma of the penis which he and his physician friends had unsuccessfully tried to heal for eight months. Instead of healing, the epithelioma had continually grown larger until it involved not only all the preputial margin of the penis, but the larger portion of the glands as well.

*Examination.*—It was the squamous variety of epithelioma which had started as a warty excrescence on the folds of the prepuce. Hypertrophied papillae studded the ulcer where the mucous membrane and skin had previously come together. Several scabs or layers of epithelium had been removed from time to time when finally the base of the growth gradually began to harden and to extend, its surface being covered with a cauliflower-like excrescence. The portions of the tumor that had ulcerated had everted edges which bled freely on manipulation. The granulations were red like a cock's comb—even the friction of the clothing or the removal of bandages was sufficient to start up a slight hemorrhage. Fortunately, the process of infection had not reached the inguinal lymphatic glands as on careful examination they were found to be neither enlarged nor tender, so it was not necessary to remove them. The fact that I had seen several epitheliomata in old people caused me to look with grave suspicion on any warty growth of the penis, even though the patient was a young man—45 years of age, as in this instance.

*Diagnosis.*—Though the diagnosis was self-evident, the base of the tumor hardened, and the history one of an epitheliomatous growth, the base and every indication pointing to the diagnosis of skin cancer, still I would not amputate such an important organ without first excluding every possibility of doubt of syphilitic gummata or simple papillomata. I therefore excised a small portion of the tumor and had the diagnosis of epithelioma verified by a competent microscopist. Had I not known that the patient had never been infected with syphilis, I should have tried him for a short while on large doses of iodid of potash and mercury. Chaneroid is usually a more acute affection than epithelioma, is amenable to proper treatment and, as a rule, occurs in younger men. Buboec and secondary symptoms develop in the early course of syphilitic chancre, and induration is much larger in comparison to the size of the ulcer than in epithelioma. In chancre in from six to eight weeks there is a roscolous rash. In syphilitic gummata the growth is much more rapid and the ulceration after it develops is not so likely to bleed. Its edges are more undermined, its granulations not so fungous. Epithelioma, as remarked before, is usually a disease of middle or old age. It is



a chronic ulcer with indurated edges and no disposition to heal, and glandular enlargement comes late in the course of the disease. All these diagnostic points should be taken into consideration, as was done in this case, before a final amputation is made. A competent microscopist can settle the question by a careful examination of a section of the tumor.

*Treatment.*—As the prognosis of the disease is always grave, I told the patient after the diagnosis had been made positively that the disease would progress from bad to worse and that there was no hope for recovery from local or constitutional treatment, and that his only chance would be immediate removal of the organ. He had heard the siren tale of all the quacks; in fact, he had tested some of their wares at enormous expense and pain to himself, only to see the disease progress with more rapidity than before; hence he was reconciled to radical and rational treatment, and when I assured him that the element of pain would not enter into the case at all he readily consented to an amputation of the organ, which was done in the following manner:

*Operation:* The pubis and scrotum were shaved and thoroughly cleansed with soap, water and the usual antiseptics. The mechanical cleansing had been done previously. The head of the organ was thoroughly hooded so as to prevent the possibility from infection from the ulcer during the operative proceedings. A strong rubber band was rendered aseptic, doubled on itself, and thrown around the penis, close to the symphysis pubis. The penis was firmly held, though not stretched, and after a cuff of healthy skin had been dissected back the cut was made through the corpora cavernosa about two inches proximal to any evidence of the diseased tissue and a beveled incision made which left the urethral portion one inch longer than the corpora; the diseased portion was thus ablated. At this point the rubber band was loosened and four small vessels were either twisted or ligated with catgut. The urethra was split up for a small distance and its edges stitched to the skin, which had previously been approximated over the amputated stump of the penis. A soft rubber catheter was left in the bladder in order that the wound might not become infected by the urine passing over it. A light sterilized gauze dressing and T bandage were applied to the perineum. The parts were occasionally washed off with boracic acid or carbolic acid solution.

*Result.*—An uninterrupted recovery was the result and no recurrence of the trouble has appeared, though seven years have elapsed since the operation was performed.

*Remarks.*—In neglected cases in which the disease has progressed even to the roots of the penis and in which the inguinal glands are enlarged, it becomes necessary to enucleate the glands from the groin as well as to amputate the penis from the symphysis pubis; as a matter of course this is a much more serious operation and the liability to recurrence is much more probable. Castration of the patient at the time this amputation is done has been advocated by some surgeons, but as the operation is required at an age in which sexual passion rarely enters into the case, it occurs to me that the testicles may be left unless they too are involved in the diseased process.

INTESTINAL PARASITES IN CANAL ZONE.  
ONE HUNDRED AND FIFTY CONSECUTIVE EXAMINATIONS  
OF STOOLS.

NORMAN E. WILLIAMSON, M.D.  
Pathologist, Colon Hospital.  
CANAL ZONE.

*Balantidium coli*, or *Paramœcium coli*, has not hitherto been reported from this section. It occurred in two cases of our short series. It has also twice been seen by Dr. E. P. Beverley, and in one case by Dr. Lloyd Noland, at Ancon Hospital—five cases in all.

It is oval or pear-shaped, at times round; from 70 to 110 microns in length by from 60 microns to 72 microns in width. It is actively motile, being covered with flagellæ most numerous at the mouth, which is at

the small pole. There are a rather large nucleus and two contractile vacuoles.

INTESTINAL PARASITES FOUND IN 150 CONSECUTIVE EXAMINATIONS  
OF STOOLS.

	Ova of Uncinaria Duodenalis.	Ova of Trichocephalus Dispar.	Ova of Ascaris Lumbricoides.	Ameba Dysenteriae.	Rhabdonema Strongyloides.	Cercomonas Intestinalis.	Balantidium Coli.	Myiasis.	Trichina Spiralis.	Negative.
48										+
18	+									
10				+						
1						+				
8		+	+							
1		+				+				
11	+	+				+				
1	+	+								
4					+			+		
4	+		+							
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150	46	48	25	21	10	10	2	2	1	48

A monograph of reported cases has recently been written by R. P. Strong.<sup>1</sup> Access to more recent literature is not available here.

The two cases seen here were complicated by other infections. Both patients, however, had diarrhea, which could be attributed to the balantidium, which was found in great numbers in both cases.

Worthy of note also is the relative frequency of *Rhabdonema strongyloides*. The small, yellow, slowly motile ameba, which I have frequently seen in the Philippines, and which is usually considered non-pathogenic, has not been seen in this series of cases.

A CHRISTMAS STORY.

E. S. McKEE, M.D.  
CINCINNATI.

About eighteen years ago I was called to see a patient, a recent arrival from Russia, whom we will call Mrs. Blankstein. She was very ill, indeed, and I found it necessary to see her every day for a month, commencing December 15. She recovered, and in due time I sent my bill. In somewhat overdue time her husband came to my office to pay it. The following was his plea: "Mr. Doctor: dat bill you zendt mein vife, he's all dright, but vone dem visits you make mein vife you makes him on a Grisdmas day, and I vandt you make me a bresent dat visit you makes mein vife ond Grisdmas day." The request was so original, coming from the source it did, so different from the usual demand of a per cent. off, that I threw off the visit, made him a "bresent" of it, instead of charging him double as I felt like doing for being taken away from my Christmas turkey.

I have had many times the worth of the presented visit telling it to my friends. Almost every Christmas since this occurrence I have been called to some sufferer, poor in this world's goods, and before leaving I have told the story of the Christmas present of a visit and made the patient a present of the Christmas visit I was then making. The happy smile, the brightened eye of the pale patient has been my reward for working when the rest of Christianity was feasting.

1. Bulletin No. 26, Bureau of Government Laboratories, Manila.



# THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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## ACCIDENTS AND THE DUTY OF THE STATE.

We all have a hazy understanding that there are too many industrial and other accidents in this country. We realize indistinctly and shudder sympathetically over those appalling federal statistics as to railroad accidents which have convicted us before all Europe of reckless disregard of human life. Indeed, we seem to accept the accident column as a natural accompaniment of our breakfast. It is a permanent feature of the daily papers, though its proportions tend to shrink as the material monotonously increases, so that the death of an obscure person by street-car accident is now not worth more than an inch of type. Yet, in fact, we are all curiously ignorant as to the actual extent and portent of accidents. We have no knowledge of the numbers of non-fatal accidents nor of the disability which results from them, and our only trustworthy figures as to fatal accidents are those concerning railroad accidents and to some uncertain extent accidents in mines. We do know from German statistics that the greatest burden of accidents is borne by certain classes of manual workers: such occupations as those of diggers, teamsters, sailors, miners—occupations in which the man must depend on his own personal strength—are those showing the heaviest proportion of disabling accidents. Recent statistics<sup>1</sup> only confirm the observation of those familiar with the accident wards of our great hospitals. Their occupants belong on the whole to the humblest ranks of the industrial army, and death or disabling injury means in their case usually the reduction of themselves and their families to pauperism. Physicians who have served in such wards will recall many instances of patients technically cured, yet evidently incapable of returning to their former work. The subsequent history of such cases, the long-delayed convalescence, the resulting dependency and even pauperism have never been reckoned up, yet it is the public which must bear the expense of the patient through his hospital treatment and the public which, in many cases, must support him and his family after he leaves the hospital.

Whether it could ever be considered the function of a public hospital to inquire into the nature and causes of the accident cases in its wards is, of course, open to question; yet there can hardly be a question but that the public which pays for the costly hospital service, and in many cases for the maintenance of the family, may prop-

erly ascertain through some agency where the responsibility for a given accident actually rests. At present, this work of investigation and of fixing responsibility is not only ignored by the public, but because of public neglect the whole matter has fallen into the hands of exploiters on every side. First, there are the great corporations which maintain private hospitals and impregnable secrecy. Second, there are the employers' insurance associations, which secure the individual employers against the third element, "the personal inquiry lawyer" and his indispensable colleague, the "ambulance shark."

The employer does indeed seem forced to use this expedient of insurance, which relieves him of the costly annoyance of defending suits reasonable and unreasonable, but which at the same time cuts him off from the friendly sense of responsibility for men injured in his service—a responsibility he would naturally both feel and express. The workman, on the other hand, by means of this employers' insurance, is prevented from dealing with his employer directly, and as he has no money with which to pay lawyers', physicians' or court fees, he is driven to practitioners who will accept his case on shares. The patient is really the victim at every point of circumstances over which he can never hope to exercise control. He bears the penalty of the law's delays and sets his puny strength against that of highly organized business enterprises. If after years of waiting he obtains adequate damages, he must content himself with but the share of the monkey in the old fable.

The governmental insurance of Germany shows the first successful effort to bring some sort of order out of this chaos. It has been now a matter of twenty years' experimentation there, and the results are worthy of study. We have not space to give more than the merest outline of the system now in operation in Germany, and already extensively imitated in Austria and other countries. There are already three forms of compulsory insurance established, against sickness, accident and old age. The insurance funds against sickness are contributed one-third by the employers and two-thirds by the employees, accident insurance is a charge against employers only, while the old age or disabilities indemnity is made up of about equal contributions from the employers and the employees, supplemented by a small fixed contribution by the government. These various funds are managed under strict governmental supervision at an astonishingly small expense. The administration charge is stated as less than 8.5 per cent. Embezzlement and misappropriation are unknown. The annual receipts are more than \$130,000,000, and 17,000,000 work men and women are contributing to and receiving these funds. It is, however, to the accident insurance and its direct and incidental results that we wish to refer. The following points are especially to be noted: 1, All manner of safeguards of life and limb have been introduced by employers of the various insuring groups;

1. "Statistisches Jahrbuch für das Deutsche Reich," 1903.



2, hygienic conditions in places of employment have greatly improved; 3, all possible methods of treatment tending to shorten the period of convalescence after accident and to restore the working power of the patient have been introduced into the hospitals; 4, country convalescent homes have been greatly developed. It is true that superficially there appears to be in Germany a large increase in the number of accidents; that, however, is acknowledged to be due to the fact that all accidents, however slight, are now reported, and a man with a cut finger is sent to a physician. The serious complications which may follow neglect of trivial hurts is thus avoided by prompt attention.

Thus the public does not cease to enforce the employers' responsibility for the injured man until the latter is restored to active labor. The United States is the only great civilized country which continues a wasteful *laissez-faire* policy toward industrial accidents. Russia's new law enforces the employer's responsibility in a way second only to that of Germany, and in like manner France, Belgium and even England have laws which recognize the inevitable powerlessness of the workman to protect himself from the dangers of his occupation.

Doubtless it will be long before we shall see in this country any system of compulsory insurance. Indeed, the very suggestion is repugnant to the average American. Yet no candid observer, least of all any physician of large hospital experience, can doubt that the whole subject of industrial and trade accidents needs examination and publicity and some intelligent and authoritative supervision.

#### DRUGS AND DIET AND MIND AND STOMACH.

In the deluge of new drugs that has come on the medical profession during the last decade nothing has been more remarkable than the number of remedies suggested for gastric affections. Surely if it were possible to relieve gastric symptoms by drug treatment some one or more of the many remedies offered to the profession would have proved successful. The mineral, the animal and the vegetable kingdoms have been diligently searched and put under contribution to supply therapeutic substances. From the silver and gold which were much more recommended as gastric tonics a decade ago than they are now, down to the almost innumerable forms of ferments of all kinds which have been suggested there has been a veritable flood of remedies for dyspepsia. It has been found in most cases that any one of these remedies if given with proper suggestions as to its efficacy and, if the patients were curiously inquisitive, with added details of information as to its source, would do good for a time at least, though inevitably before long the therapeutic effects ceased to be obtained.

There has come to be a rather general impression, then, that most of these new-fangled gastric remedies, except for a certain amount of tonic stimulation, which

their composition always assured for them, owed most of their beneficial effect to the influence on the patient's mind of a new form of drug treatment. In a word, there has come to be a suspicion at least that in this as in the many tonic remedies of less ethical pretensions the only therapeutic effect directly produced has been that of the stimulant, while the supposed specific efficacy was due to mental influence. It has become more and more clear in recent years that a large number of persons—in the words of a distinguished London physician—have not enough brains to run their business and their digestion. If their brains are occupied most of the day with intellectual affairs of any serious kind this is especially sure to be the case. It is the people of the educated classes who know that they have stomachs, who are constantly pestered by the subjective symptoms which that organ gives and who are looking for remedies and modifications of diet that will save them from further annoyance.

There is no doubt that, while their minds are open to receive them, new suggestions often prove of therapeutic benefit, but these suggestions are also to no little extent responsible for the dyspeptic symptoms of which the patients complain. Too much attention is paid to the stomach and its functions, and as a consequence it does not get on well. The centipede, when asked how he could possibly walk with all his legs without getting them confused, is said to have tried to explain how it was done, but got so mixed up that he lay absolutely unable to move. Something of the same thing seems to be true with regard to these dyspeptic patients who nurse their ailments and know all the dietetic rules, especially with regard to getting up from the table hungry, not taking liquids with meals, avoiding certain foods because they have an idiosyncrasy for them, and all the other details whose safeguarding must require such an intense attention at meal time as sadly to demoralize the trophic influences flowing down from the central nervous system.

Long ago, in the early forties, Prof. Austin Flint, the elder, insisted on this connection of dyspepsia with the mind, and then nearly half a century later, in an article<sup>1</sup> read before the New York State Medical Association, called particular attention to the fact that his experience as a physician had completely confirmed the ideas expressed in his original paper. He insists especially that the most important direction that can be given to dyspeptics is to avoid thinking too much about themselves, about their symptoms, their diet, their personal peculiarities as to food and the like, and to tell them frankly that they should not follow so-called rules of health in this matter, but should consult their tastes and their appetites.

He said in a passage which should be in the notebook of every physician: "Do not adopt the rule of cat-

1. Transactions of the New York State Medical Association, vol. 1, p. 143.



ing only at stated periods; twice or thrice daily. Be governed in this respect by appetite and eat whenever there is a desire for food. Eat in the morning or at bedtime, if food is desired. Insomnia is often attributable to hunger. In the choice of articles of diet be distrustful of past personal experience and consider it to be a trustworthy rule that those articles will be most likely to be digested without inconvenience which are most acceptable to the palate. As far as practicable let the articles of diet be made acceptable by good cooking. As a rule, the better articles of food are cooked, the greater the comfort during digestion. Never leave the table with an unsatisfied appetite. Be in no haste to suppose that you are separated from the rest of mankind by dietetic idiosyncrasies and be distrustful of the dogma that another man's meat is poison to you. Do not undertake to estimate the amount of food which you take. In this respect different persons differ very widely, and there is no fixed standard of quantity which is not to be exceeded. Take animal and vegetable articles of diet in relative proportions as indicated by instinct. In the quantity of drink follow Nature's indication, namely, thirst. Experience shows abundantly that, with a view to comfortable digestion, there need be no restriction in the ingestion of liquids."

There seems to be no doubt that if this common-sense method of dealing with these frequent and bothersome patients who usually want to take so much time in explaining their idiosyncrasies should be more generally followed we should hear much less of the multitudinous stomach remedies and especially of the far-fetched ferments of whose efficacy there is *prima facie* doubt, though they come lauded with all the alluring pseudoscience of the professional advertising agent. Along this line lies peace and progress for both physician and patient. With intestinal function carefully regulated, it is not digestive specifics, but freedom from worry and a return to pristine habit and instinct that will restore dyspeptics to their place among those with *mens sana in corpore sano*.

#### THE TREATMENT OF BACTERIAL DISEASES BY VACCINES.

The discovery of the diphtheria antitoxin at the end of the last century gave rise to hopes regarding the treatment of other bacterial diseases, which were soon dashed to the ground. In the years succeeding the discovery of diphtheria antitoxin, a mass of facts bearing on the general subject of infection was collected, and bacteriologists soon realized that bacteria secreting so-called exotoxins were very much in the minority. Most of the bacterial infections to which the flesh is heir are due to germs which produce endotoxins which cannot be combated by the methods used against diphtheria, botulism and tetanus. In his introduction of tuberculin, Koch was the first to suggest a procedure having in view the destruction within the body of an endotoxin-producing

organism, the tubercle bacillus. The failure of this treatment, under Koch's own method of administration, is known to all, and has led to its almost complete abandonment.

Some three years ago A. E. Wright, in England, suggested what was a modification in the method of administration, rather than a modification in the principles of manufacture of bacterial vaccines. Wright's work, however, was based on some new observations on the protective mechanism of the human body, in that it was preceded by the discovery that besides antitoxins and other reactive substances, the blood serum normally contains protective bodies which Wright called opsonins. These opsonins, which seem to be present in normal individuals in an almost equal quantity, are reduced before or in the early stages of a bacterial infection, and vary greatly during the course of a bacterial disease. The method of treatment which has been applied to diseases produced by bacteria having endotoxins, such as the *Bacillus typhosus*, has usually been that of inoculation with a vaccine composed of the dead bodies of the bacteria and their soluble products. Hitherto such inoculations have not been based on any accurate method, the dose has been gauged empirically, and the administration has been rather a haphazard performance. The work of Wright has shown that under such methods it was just as easy to do harm to the patient as to benefit him, perhaps a little easier. Wright and other workers, such as Bulloch,<sup>1</sup> have shown that there are times during a bacterial infection when the system is not manufacturing opsonins in normal quantities, and, on the other hand, there are times when large amounts of opsonin are being produced. According to Wright, the manufacture of opsonins, or antitropins as he now calls them, follows a definite law. He calls this the law of the ebb, flow and reflow, and subsequent maintained high tide of immunity. If a patient with a given bacterial disease, say for example, tuberculosis, is inoculated with tuberculin during the ebb in antitropin formation, the result is an actual increase in the poisoning of the individual, and naturally an increase in the severity of the symptoms. If, on the other hand, the individual is inoculated at a time when the system is producing large numbers of antitropins, i. e., during the flow, the inoculation stimulates the system still further to the production of antitropins, and the result is the improvement of the patient.

So far Wright has applied his method mainly to two conditions: tuberculosis and staphylococcus infections. The results of his treatment have been exceedingly encouraging. Most of his work has been done on patients who had been given up after the utter failure of ordinary treatment, and the percentage of cures and improvements is quite high. The method is in many ways quite complicated, requires for its carrying out a laboratory, and needs the supervision of one who has had experience in the work. It is a form of treatment which

1. The Practitioner, 1905, vol. lxxv, p. 589.



will almost of necessity fall into the hands of the large hospitals, and which can never be carried out by the general practitioner. So far but little practical work has been done outside of London, where Wright and his associates have worked, but the treatment promises so much, and if successful, will be applicable to so many diseases, that it is to be hoped that it will be given an extensive trial.

#### MAGNESIUM SULPHATE AS AN ANESTHETIC.

Few greater boons have been conferred on humanity than that which has resulted from the discovery and application of ether and chloroform as anesthetics. America may well be proud of the part that has been given to her to play in this matter, and if we read the indications a right further honor is to come to her for new and important discoveries of scarcely less magnitude. The American mind has shown itself to be an eminently practical one, but it is none the less scientific. It is practical because its discernment is clear and its reasoning correct—and science is but applied precision.

The latest exemplification of the foregoing statements is found in the results of a series of experiments carried on by Dr. S. J. Meltzer in association with Dr. John Auer and reported at a recent meeting of the New York Academy of Medicine.<sup>1</sup> These investigators were able to demonstrate the possession by magnesium-salts of hitherto undescribed inhibitory and anesthetic properties susceptible to therapeutic application. Dr. Meltzer had formulated the view that the phenomena of life result from the interaction of excitation and inhibition. Of the four main inorganic constituents of the body it has been shown that sodium, potassium and calcium have a stimulating effect on muscle and nerve. It was, therefore, concluded that the inhibitory activity must reside in the magnesium, and accordingly a study of the salts of this body was undertaken. It was found in animals that intracerebral injections of magnesium sulphate induce a state of general inhibition. It was next discovered that intravenous injections of various magnesium-salts in small amount inhibit respiration and cause paralysis of the entire body; that local applications to nerve-trunks blocked conductivity and abolished excitability; that subcutaneous injections cause deep narcosis, with complete muscular relaxation, while subarachnoid injections cause almost immediate anesthesia and paralysis of the posterior extremities. In addition it was found that intravenous injections of magnesium-salts almost instantly check intestinal peristalsis, while severe tetanus and opisthotonos induced in monkeys by tetanus-toxin can be completely removed for many hours by subcutaneous injection of magnesium sulphate.

The several procedures mentioned having proved innocuous in animals it was decided that they might be applied to man with safety. Accordingly, twelve patients were given intraspinal injections of magnesium

sulphate prior to operation at the hands of several surgeons. It was found that the best amount to employ is one cubic centimeter of a sterile 25 per cent. solution to every twenty-five pounds of body weight and the best time for operation is three or four hours after the injection. The effects observed consisted in paralysis of the legs and of the region of the pelvis, with analgesia sufficient to permit surgical operations. Larger doses give rise to profound general anesthesia, with marked depression of respiration. There is also retention of urine, which may persist for one or two days. Sensibility and motility return as a rule within from eight to fourteen hours.

It is not likely that intraspinal injections of magnesium-salts will replace inhalation of ether or chloroform for purposes of surgical anesthesia, but there are times when the latter cannot be practiced with safety, and although the former is not wholly free from risk, it has advantages over other forms of intraspinal anesthesia, and it may be found that it is susceptible of application under the circumstances mentioned. In any event the method is worthy of careful trial.

#### RECOGNITION OF MEDICAL ORGANIZATION.

In New Orleans there is a popular movement in favor of permitting the Louisiana State Medical Society to nominate the president of the State Board of Health. The Governor, who has the appointing power, has not yet announced his position toward this proposal, but all classes of citizens in New Orleans seem to favor the innovation. This can only be regarded as a genuine recognition of the altruistic services of the medical profession to the community and as an expression of confidence in the purposes and principles of medical organization. We shall hear more of this sort of thing as organization proceeds and fulfills its proper duties.

#### SUICIDE AND SELF MANSLAUGHTER.

A person who is supposedly sane and who sacrifices his life through willful neglect—whether this be due to pride not permitting him to ask for help or to religious delusions forbidding him to take the needed measures for his preservation—is little different from an ordinary suicide. The London coroner at Rotherhithe, however, makes a distinction. A man had deliberately refused to seek medical aid on account of his belief in faith-healing, and the coroner instructed the jury that since there was no evidence that the man had refused medical advice with the sole object of ending or shortening his life, the verdict could not be suicide by omission or self-neglect. It was, therefore, not a case of self-murder but of self-manslaughter—an offense not recognized in the criminal code. There is a distinction here with a difference, if the man really believed he was going to get well by faith alone, spurning all material aid thereto, but it is hard to see how the criminal law can safely consider such proceedings as without its pale. There seem to us to be large possibilities for evil in such a course. So far as the results to society and the

1. Medical Record, Dec. 16, 1905, p. 965. See abstract in THE JOURNAL, December 30.



individual are concerned, there is little difference between such a course and suicide, and the law is for the protection of society and the individual. When it comes, moreover, to the aiders and abettors of such transactions, no matter what are claimed to be their motives, it does seem as if the law should have power to intervene, especially when they attempt to apply their principles to the irresponsible and helpless. We must remember also that suicide does not itself always imply moral obliquity. A very large proportion of suicides are clearly irresponsible, and the degree of responsibility in many others is difficult to decide. The distinction, therefore, between self-murder and self-manslaughter seems to be rather a vague one, and we believe it would be better for the community if a coroner's verdict of suicide or homicide by neglect were brought in every case of avoidable death under Eddyism, faith cure and similar methods.

#### BIRTH RATES.

It is a well recognized fact and needs no verification that the poor are more prolific than the rich; the reasons are also well known. According to the *New York World* of November 30, out of 55,000 babies born in the borough of Manhattan only 13 came to fashionable Fifth avenue below Ninety-fifth street. That is only 13 babies in a thoroughfare bordered by the homes of the well-to-do for four and one-half miles. The contrast between these figures and those of the populous sections inhabited by the proletariat is certainly striking enough, and we must think that there are some elements in the statistics that are perhaps deceptive. New York is in the registration area and the figures ought to be correct, but it seems to us as possible that many of the offspring of the rich New Yorkers may be born away from home and thus affect the figures.

#### THE PRECIPITIN TEST FOR HUMAN BLOOD.

The importance of the precipitin test in determining biologic relationships has been clearly set forth in Nuttall's fine monograph on the subject, and it must be admitted that the facts there instanced certainly tended to diminish the value of the test from a medicolegal standpoint. The relationship between man and the ape, for example, is shown by the fact that the serum of a rabbit inoculated with human blood gives a precipitate not only with human blood, but also, though in less degree, with the blood of the ape. The precipitation of an immune serum by the blood of allied species as well as by the specific blood used for inoculation is a circumstance that naturally prevents the formulation of any such dogmatic statement as seems required by the exigencies of the law. Uhlenhuth's<sup>1</sup> discovery, however, seems to remove this difficulty. The inoculation of rabbits with the blood of the closely-related hare gave rise to a serum which precipitated when mixed with hare's blood, but had no action on the blood of the normal rabbit. Similarly apes inoculated with human blood produced a serum that had high precipitating power for

human blood, but was inactive for apes' blood even in low dilution (1:10). These results are somewhat at variance with those obtained by other observers who have found it difficult to produce potent antisera with the blood of closely-allied species. Uhlenhuth explains this, however, by individual idiosyncrasy in the experiment animals, and considers that while some individuals may not lend themselves readily to the production of antisera with the blood of kindred species, others are favorable for this purpose. If his results are confirmed it is evident that when sera produced by this method are used the value of the precipitin test in legal medicine will be greatly enhanced.

#### THE PATHOLOGIC ANATOMY OF EXOPHTHALMIC GOITER.

So many and such varied anatomic conditions have been found in connection with exophthalmic goiter that it is not easy to decide which are essential and distinctive and which non-essential and accidental. The most common of these consists in certain histologic alterations in the enlarged thyroid gland, to whose overaction the principal symptoms of the disorder appear to be due. Such alterations were found with great frequency by Dr. W. C. Mac Callum<sup>1</sup> in a series of 28 cases studied histologically. They involved the form and size of the alveoli, the character of the epithelial cells, and of the colloid, the vascular supply, the connective-tissue framework and the lymphoid structures of the thyroid gland. The alveoli vary greatly in size and form, the epithelium of many being folded in such a manner as to yield an appearance of sending off long diverticula, which frequently become constricted off and form new alveoli. The epithelium changes from a flat or cubical type to the high cylindrical form. The colloid is markedly diminished in amount and presents a ragged appearance. The vascular supply is extraordinarily rich, the veins being especially large and distended with blood. The latter lie for the most part in the abundant connective-tissue framework of the gland, which is increased in density, considerable bands of fibrous tissue passing through the gland and giving rise to distinct lobulation. The walls of the veins are unduly friable and the connective tissue contains a good deal of lymphoid tissue in the form of circumscribed scattered nodules. In addition circumscribed prominent nodules, composed of a more homogeneous tissue are found in varying number. These are made up of uniform, small, round alveoli, usually separated one from another and embedded in a hyaline connective tissue. They are lined with plump, rather eubical, epithelium, and they may or may not contain colloid material. Cysts of varying size, usually containing a clear greenish, somewhat glutinous, fluid, are also present at times. No bacteria or cell inclusions could be demonstrated and the parathyroid glands were found practically normal in the nine cases in which they were examined. The anatomic picture, it will be seen, corresponds most closely with that of compensatory hypertrophy, which it may be presumed has followed a previous injury to the gland inflicted perhaps by some infectious disease.

1. Deutsche med. Wochft., 1905, 31, p. 1673, abstracted in THE JOURNAL A. M. A., Dec. 23, 1905, p. 1992.

1. Bull. Johns Hopkins Hosp., vol. xvi, No. 173, p. 287.



## Medical News

### CALIFORNIA.

**Sanitarium Opened.**—Loma Linda Sanitarium, near Redlands, was opened to the public October 1 under the management of Dr. George K. Abbott. It is operated under the methods of the parent institution in Battle Creek, and its régime includes all branches of physiologic therapeutics.

**October Vital Statistics.**—The returns from 53 out of 57 counties for October show an annual birth rate of 13.1 and an annual death rate of 14.9 per 1,000. During the month 1,873 living births were reported, and 2,117 deaths, not including stillbirths. Tuberculosis was the leading specific cause of death in the state, but of those who died from the disease 11.4 per cent. had lived in the state less than one year.

**Personal.**—The Point Richmond Board of Health met November 23 and elected Dr. Hawley N. Barney health officer.—Dr. Louis C. Deane, San Francisco, has gone to Germany.—Dr. D. C. Strong, Redlands, has assumed his duties as superintendent of the San Bernardino County Hospital.—Dr. H. Miller Robertson, Arlington, has been elected county physician of Riverside County, vice Dr. Isaac A. McCarty, Corona, resigned.—Dr. Warren T. Barr has been appointed a member of the Fresno health board vice Jacob H. Parseghlan, resigned.—Dr. William H. Brooke has resigned as a member of the Alameda board of health on account of removal from the city.—Dr. Lewis Q. Thompson, Gridley, is seriously ill with septicemia.

### GEORGIA.

**Insanity Among Negroes.**—Dr. T. O. Powell, superintendent of the Georgia State Sanitarium, Milledgeville, is reported as saying that there are 900 negroes now at the State Hospital and that many more are awaiting admission.

**Personal.**—The governor on December 5 reappointed Dr. Charles J. Montgomery, Augusta, and Dr. William F. Brunner, Savannah, as members of the trustees of the Georgia State Sanitarium, Milledgeville.—Dr. Thomas P. Waring, Savannah, was operated on December 2 for appendicitis and is making satisfactory progress.—Dr. Owen T. Kenyon, Dawson, shot and killed R. E. Dickinson in Atlanta, November 25, in self-defense. No charge was preferred against Dr. Kenyon.

### IDAHO.

**Epidemic Diseases.**—Diphtheria is prevalent to such an extent at Burke that the public schools have been ordered closed and public meetings prohibited.—The publication committee of the Boise Medical Society has issued a circular denying the rumors that typhoid fever is epidemic in the city and stating that the disease is sporadic and that in fully one-half of the cases it was contracted outside of the city.

**Society Upholds Dr. Nourse.**—Dr. Robert L. Nourse, Hailey, has been fined \$300 and costs for contempt of court because of language used in his address before the Idaho State Medical Society, criticising the action of the Fourth Judicial District Court in the case of Dr. Raff against the Idaho Board of Medical Examiners. Dr. Nourse is supported by the state medical society and will make application for a writ of review.

### ILLINOIS.

**Reappointments.**—Dr. Vaclav H. Podstata has been reappointed superintendent of the Cook County Institutions, Dunning, and Dr. Haim I. Davis, county physician.

**Smallpox.**—Several cases of smallpox have appeared in Jersey, Greene and Macoupin counties, and on December 17 reports were received of the appearance of the disease at Galesburg and Spring Valley.

**For a Visit Only.**—Dr. Lemuel Tibbetts, Rockford, requests the correction of the statement in THE JOURNAL that he was about to move to California. He expects to visit California for two or three months, leaving about the middle of January.

**Physicians Vindicated.**—In the case of Dr. Joseph R. Hollowbush, Rock Island, charged with perjury by Jerry McCarthy, the state's attorney authorized the dismissal of the case, completely vindicating Dr. Hollowbush.—After a trial occupying ten days the jury in the case of C. E. Demsey against Dr. St. Elmo M. Sala, Rock Island, for damages on the charge of alleged malpractice, returned a verdict for the defendant.

**Coroner's Cases.**—The coroner of Cook County in his annual report shows that 3,482 cases were investigated in his office since Dec. 1, 1904. Of this number 1,185 deaths were from nat-

ural causes and 453 were suicides. Of the latter 159 died from gunshot wounds, 83 from asphyxiation, 11 by jumping from heights, 20 from drowning, 2 from setting fire to clothing, 26 from cutting or stabbing, 6 from jumping under trains, 43 from hanging, and 103 from poisoning.

**Dedication of Ottawa Tent Colony.**—On December 12 the Tent Colony for the Treatment of Tuberculosis, Ottawa, was formally dedicated. Dr. Frank Billings, Chicago, made the principal address, in which he told in plain terms the latest decision of science regarding the treatment of tuberculosis, and eulogized Dr. James W. Pettit for his work in the cause of humanity. Two years ago the state medical society authorized Dr. Pettit to make this experiment at his own expense. In closing, Dr. Billings said the greatest work that Dr. Pettit has done has been to humanity in general by setting a great living example of right living to all the world, "and these things I say not in flattery, but in envy of the great work that Dr. Pettit has been permitted to do at a great sacrifice to himself." Dr. George A. Zeller, superintendent of the Illinois State Hospital for the Incurable Insane, Bartonville, in his address, praised Dr. Pettit for reducing the per capita cost for the care of tuberculous patients and stated that the modern method of treating tuberculosis was being followed as far as possible in the state institutions. A buffet luncheon was served at the club house and public exercises were held in the pavilion.

### Chicago.

**Deaths of the Week.**—During the week ended December 16, 489 deaths occurred, equivalent to an annual death rate of 12.80 per 1,000, which is nearly 12 per cent. less than the rate of the previous week and the rate of the corresponding week last year, 15 per cent. less than the average December rate of the last decade and 1 per cent. less than the lowest previous recorded rate. Of the deaths 81 were due to pneumonia, 60 to consumption, 35 to nephritis, 33 to violence (including suicide), 32 to cancer, and 30 to heart disease. One death was caused by scarlet fever, 11 by diphtheria, and 4 by typhoid fever.

### INDIANA.

**Golden Wedding.**—Dr. and Mrs. T. B. Noble, Greenwood, celebrated their golden wedding anniversary November 30.

**Medical Faculty Entertained.**—The University Club of Purdue University entertained the faculty of the Purdue School of Medicine, Indianapolis, at the Hotel Lahr, Lafayette, December 9. President W. E. Stone of Purdue University officiated as toastmaster. Drs. George Kahlo, Indianapolis; Christian B. Stemen, Fort Wayne, and Myles F. Porter, Fort Wayne, responded to toasts.

**Laboratory Instruction.**—At the health officers' school, held in Indianapolis under the direction of the State Board of Health, December 14 and 15, instruction was given in the work of the pathologic and bacteriologic divisions of the State Laboratory of Hygiene, including demonstration of the Widal test, diphtheria cultures, tubercular bacilli, bacteriologic analysis of water, preparation of specimens for shipment, methods of obtaining analysis from the laboratory, and general laboratory procedure.

**Personal.**—Dr. William B. Fletcher, Indianapolis, was seized with cerebral hemorrhage December 11, and is critically ill.—Dr. John M. Nickels, Sellersburg, has been appointed physician for the poor farm of Clark County, succeeding Dr. Charles M. Bottorff, Charlestown.—Dr. Brose S. Horne, Marion, has located at Jonesboro.—Dr. Albert H. Combs has been appointed a member of the health board of Marion.—Dr. Frank G. Jackson has resigned as a member of the Muncie board of police commissioners.—Dr. Samuel E. Smith, superintendent of the State Hospital for the Insane, East Haven, has been appointed expert advisor to the Southeastern Hospital commission.—Drs. Edmund D. Clark, Thomas B. Noble and Frank A. Morrison have been appointed the board of health of Indianapolis.—Dr. Norman E. Jobes has been appointed superintendent of the City Hospital, Dr. Eugene Buehler city sanitarian, and Dr. Edgar F. Kiser superintendent of the city dispensary.—Drs. John C. Wood and Roscoe W. Payne have been appointed members of the Franklin board of health.—Dr. Frank W. Black, Ligonier, has been appointed coroner of Noble County.—Dr. Irvin J. Becknell, Goshen, has been appointed secretary of the Elkhart County board of health.

### IOWA.

**Fire Loss.**—The residence of Dr. Cassius C. Cottle, Marshalltown, was destroyed by fire November 27, with a loss of \$12,000.



**Typhoid Fever.**—Typhoid fever has assumed an alarming proportion at Estherville. Four deaths occurred in one day last week.

**In Fashion.**—Des Moines is being visited with an epidemic of grippe, with the neuralgic symptoms recently reported to be prevalent in London.—Sioux City is said to be suffering from a similar epidemic.

**Illegal Practitioner Fined.**—Dr. J. C. Wilhite, who was convicted November 25 of the illegal practice of medicine, was sentenced to pay a fine of \$300 and costs. Wilhite says he will appeal to the Supreme Court.

**Personal.**—Dr. Benjamin O. Kittleman, Des Moines, was operated on for tuberculosis, December 3, and is making a good recovery from the operation.—Dr. Nicholas Schilling, New Hampton, sailed for home from Naples, December 8.—Dr. Henry C. Young, Bloomfield, was operated on for appendicitis, December 3, and is doing well.—Dr. George M. Kline, Mount Pleasant, has accepted a position on the medical staff of the new State Hospital for the Insane, Ann Arbor, Mich.

### KANSAS.

**Personal.**—Dr. James A. Trowbridge, La Harpe, expects to leave early in January for Europe.

**Donation to Hospital.**—Dr. Simeon P. Bell has added \$20,000 to his donations to the Kansas University Hospital, Rosedale, making a total of \$90,000, including the site on which the medical buildings are erected.

**Diphtheria.**—Yates Center has had 3 deaths from diphtheria. Five residences are under quarantine and schools and other public meeting places have been closed.—During October there were 364 cases of diphtheria reported in the state, with 41 deaths, an increase of 140 over September and an increase of 30 in deaths. The disease is said to be prevalent in 33 counties.—Quarantine measures are being enforced in Oakland.—The schools in Toronto and in Neal have been closed.

**Physicians and Political Appointments.**—Kansas physicians believe that in the interest of the public welfare the State Medical Society should have something to say as to who should be on the State Board of Health and the State Board of Examination and Registration. The governor of the state, however, seems to think differently. The following excerpt from an editorial in the *Journal of the Kansas Medical Society* gives some idea of the situation:

At the Wichita meeting three men from each county were selected as representatives of the profession and presented to Governor Hoch with the request that he select new men from this list. The governor saw fit to ignore us utterly, and appointed men who, doubtless on account of their relation to politicians or of their business ability, seemed to him the ideal physicians. But not one of the appointees was in touch with the modern movement in medicine, and, therefore, in spite of their personal charms, were hardly fitted to make and execute laws affecting so vitally our profession.

We do not wish to mix up in politics, but it looks as if Governor Hoch were going to force us to do so. He thinks us a negligible quantity simply because we have not flocked before him and pestered his life with importunities. We evidently must change our policy and get after every politician in every county where we are organized. We can have great influence on even Governor Hoch's renomination and election. We can see to it that every new assembly man is pledged to give us the "square deal"—and to take our side against the vacillations of our Nicolaian governor. Every member will please do what he can for himself in this matter, but more especially hold himself in readiness to respond to Secretary Huffman's telegraphic or written directions.

### KENTUCKY.

**Medical College Opens.**—The Louisville Medical College opened its thirty-eighth annual session December 10, with a lecture by Dr. Clinton W. Kelly.

**Sanatorium Opened.**—The new sanatorium at Hopkinsville was opened by Dr. C. B. Petrie, November 19, and on that day the Christian County Medical Society held its regular meeting in the building as the guest of the proprietor.

**Railway Hospital Service Wanted.**—Representative Rihnock, Covington, has introduced a bill into Congress asking for the establishment of a railway hospital service, organized along the same lines as the United States Marine-Hospital Service.

**Diphtheria and Smallpox.**—Diphtheria has developed at Turner's Station and Smithfield, Henry County. At the former place the school has been closed on account of the disease.—Smallpox has appeared at Middlesboro, where 48 cases are reported.—Several new cases of smallpox are reported in the vicinity of Nepton.

**Kentucky Railway Surgeons Organize.**—About 40 railway surgeons of the state met at Lexington, December 1, and organized the Kentucky State Association of Railway Surgeons. Dr. Richard C. Faleoner, Lexington, was elected president; Dr.

Clarence H. Vaught, Richmond, vice-president, and Dr. James B. Kinnaid, Lancaster, secretary and treasurer. The next meeting will be held in Richmond, June 15, 1906.

**Health Officer Wins.**—The suits filed against Dr. Maverell K. Allen, health officer of Louisville, by George Churchman, a dairyman, to recover \$145 alleged damages for loss on milk and to recover \$50 for alleged damages to the plaintiff's business, have been decided in favor of the defendant. Last summer Dr. Allen instigated proceedings against Churchman because he failed to produce a certificate that milk furnished him by a Shelby county farmer was from perfectly healthy cows, as required by the city ordinance.

### LOUISIANA.

**Children's Sanatorium.**—A sanatorium exclusively for children is to be located at 850 Carondelet Street, New Orleans, in charge of Dr. Erastus D. Fenner.

**Wish to Name State Health Officers.**—At a meeting of the governing committee of the New Orleans Health Association, December 5, the following resolution was adopted: "Resolved, That it is the sense of this association that the nomination for state health officer be made from the recommendations of the State Medical Society."

**Personal.**—Dr. Arthur Weber has resigned as a member of the New Orleans Board of Health.—The Shreveport Medical Society on December 6 adopted a resolution indorsing the selection of Dr. Clifford H. Irion, Benton, for president of the State Board of Health.—Dr. J. Ashton Blanchard, Shreveport, has been indorsed for appointment as a member of the State Board of Health by Dr. T. E. Shumpert, a majority of the city council and 25 members of the local medical fraternity.

### MAINE.

**Released.**—Dr. Charles A. Eastman, Old Orchard, convicted of manslaughter a year and a half ago, completed his sentence in the county jail and was released November 29.

**Medical Club Meets.**—The twenty-eighth annual meeting of the Portland Medical Club was held December 7, at which the following officers were elected: President, Dr. Herbert J. Patterson; vice-presidents, Drs. Chauncey R. Burr and Owen Smith; secretary and treasurer, Dr. George H. Turner, and censors, Drs. Stanley P. Warren, Walter D. Williamson and F. P. Webster.

**Fight Smallpox.**—In order to prevent the introduction of smallpox from New Brunswick into Maine the State Board of Health has established a provisional inspection service at Vanceboro under the care of Dr. Melvin L. Young, and has petitioned the surgeon general of the United States Public Health and Marine-Hospital Service to establish a permanent station at Vanceboro.

**General Hospital Report.**—The fourteenth annual meeting of the Central Maine General Hospital Association, Lewiston, was held December 5. The number of patients treated during the year was 1,127, an increase of 65 over the preceding year. At the close of the fiscal year there remained under treatment 49 patients. Of the number under treatment in the hospital 668 were discharged cured, 109 improved, 12 unimproved, 58 were given advice but not treated, and 47 patients died.

### MARYLAND.

**Graduates Gather Medical Articles.**—The graduates of the Johns Hopkins Medical School have sent their "Collected Papers" to Dr. William Osler. They are contained in 12 superbly bound quarto volumes with index and also a table of contents for each. They represent eight years of work and embrace 465 separate contributions relating to a great variety of subjects.

**New Hospital Opens.**—The new Allegany County Hospital, Cumberland, held its formal opening December 8. The following comprise the directors of the medical staff: Dr. E. B. Claybrooke, president; Dr. C. H. Brace, vice-president; Mr. Arch A. Young, secretary and treasurer; Drs. George L. Broadrup and Arthur H. Hawkins, and Messrs Lloyd Lowens and R. A. Claybrooke. The attending staff is composed as follows: Surgical, Drs. W. R. Foard, E. B. Claybrooke, Henry S. Wailes, Arthur R. Hawkins, George L. Carder and Edwin Harris; medical, Drs. C. H. Brace, George L. Broadrup, C. L. Owens, Willy's R. Hodges and E. H. White; eye, ear, nose and throat, Drs. Robert Y. Fechtig and E. L. Jones, and pathologist, Dr. W. R. Foard.

### Baltimore.

**Opie's Portrait.**—A movement is on foot at the College of Physicians and Surgeons to have a portrait of Dr. Thomas



Opie, the late dean, painted, to be hung in the college building. Dr. Opie has given the college library a large number of books.

**Personal.**—Dr. Howard Kelly, accompanied by four of his children, will leave for a hunting and fishing trip in Florida the last of this month.

**Hospital Incorporated.**—St. Luke's Hospital was incorporated December 13 by a number of physicians, to conduct a hospital, dispensary and training school for nurses.

**Internes Resign.**—The four internes at the City Hospital whose resignation was recently noted severed their connection with the hospital, it is reported, because one of their classmates had been placed in authority over them. The vacancies have been filled.

**Pasteur Institute Report.**—In his annual report of the Pasteur department of the City Hospital, Dr. Nathaniel G. Keirle, director, claims that there has been but one death out of the 775 cases. Three other patients died, but before they had received the full treatment.

**Visiting Nurses' Work.**—The Instructive Visiting Nurses' Association held its annual meeting December 5. It was addressed by Dr. Lewellys F. Barker and Miss Damer, president of the Association of Nurses of the United States. The report showed that eight nurses had made 23,811 visits, and that a deficit existed of \$541. Dr. Barker urged that there was eight times as much work to be done, and that the hospitals can not begin to care for all who need medical attention.

**Personal.**—Dr. James D. Iglehart is in New York City.—Dr. Santiago U. Samodeville will spend the winter in Havana.

—Dr. William H. Welch has been elected a member of the board of trustees of the Carnegie Institute, in place of the late John Hay.—Dr. George A. Hartman has been appointed a member of the jail board.—Drs. Alexander D. McConachie, Arthur Wegefarrh and Edward A. Hartman were elected directors of the Northeastern Dispensary.—Dr. B. Merrill Hopkinson has been elected president of the Baltimore Athletic Club for the fourteenth consecutive year.

#### MASSACHUSETTS.

**Rival Candidates Physicians.**—The city of Worcester elected for mayor, December 12, Dr. John T. Duggan, a democrat. His competitor was Dr. Melvin G. Overlook, republican.

**Insane Hospital Report.**—The trustees of the Northampton Hospital report that on October 1 there were 771 patients; 401 were admitted during the year, 303 were discharged and 79 died. Of the admissions, 199 were men and 202 women. Of those discharged, 84 were well, 30 improved and 25 not improved. The weekly cost per capita was \$3.57, 21 cents less than last year. Under the new law of the state, 9 patients were boarded out. The average duration of insanity in those who died was 19 years, and the average length of stay in the hospital 9 years.

**Hospital News.**—At the annual meeting of the North Adams Hospital staff October 31, Dr. Henry J. Millard was elected president, and Dr. Edward E. Russell, secretary; Drs. Frank D. Stafford and Adolphe Mignault were elected members of the advisory board, and Dr. John F. C. Forrester was made a member of the staff.—By the generosity of D. B. Wesson, a maternity hospital will be added to the charitable institutions of Springfield. It will contain 25 rooms and will cost from \$100,000 to \$200,000.—A. C. Houghton, North Adams, has given a new operating room to the North Adams Hospital.—Mr. and Mrs. F. A. Day, Newton, have presented a new building to Newton Hospital, to be used as a home for nurses, which has cost about \$30,000.

#### MINNESOTA.

**Hospital Incorporated.**—The United Church Hospital, Minneapolis, was incorporated December 9.

**Sanitarium Burned.**—Pine Ridge Sanitarium for Consumptives was destroyed by fire December 2, entailing a loss of about \$2,000.

**Dr. Bly Guilty.**—Dr. Theron H. Bly, Minneapolis, was found guilty, on December 8, of performing a criminal operation on Hilda Rosen which resulted in her death. The prisoner was released after filing a \$2,000 appeal bond.

**Dr. Smeallie's Death.**—The widow of Dr. James A. Smeallie, Cass Lake, whose death notice appeared in THE JOURNAL of December 9, writes that he died after an illness of nine days from pleuro-pneumonia, and not from tuberculosis, as stated.

**Rules Against Physicians' Defense Company.**—The attorney-general of Minnesota has ruled against the Physicians' Defense Company in its complaint against the Maryland Casualty

Company and other casualty companies which are writing physicians' defense policies in Minnesota. The ruling asserts that not only may the casualty company continue to write physicians' defense contracts, but that hereafter the Physicians' Defense Company must comply with the Minnesota insurance laws, which has not heretofore been required.

#### MONTANA.

**Personal.**—Dr. M. William Feenan, Anaconda, has been appointed county physician of Butte County, vice Dr. T. J. McKenzie, term expired.

**Medical Examiners Sustained.**—After short deliberation December 7, the first jury in the history of the state, composed solely of physicians, returned a verdict sustaining the action of the State Board of Medical Examiners in refusing a certificate to practice medicine to John H. Foley, Great Falls. This jury was subpoenaed under the law passed by the last legislature, which provides that a jury of doctors may be subpoenaed by a district judge to hear an appeal in such cases.

#### NEBRASKA.

**Faculty Changes.**—The following changes have been made in the faculty of the College of Medicine of the University of Nebraska, Lincoln: Dr. Charles W. M. Poynter, adjunct professor of anatomy; Dr. L. B. Pilsbury, instructor in bacteriology and pathology; Dr. John M. Mayhew, instructor in medicine; Dr. Harry H. Everett, instructor in surgical pathology, and Dr. Harry J. Lehnhoff, instructor in surgery.

**Hospital Dedicated.**—The new Swedish Hospital, Omaha, was dedicated November 19, the dedication address being delivered by the Hon. John L. Kennedy. The hospital will accommodate 28 patients. The medical staff is made up as follows: Dr. Arthur C. Stokes, attending surgeon; Dr. Roy A. Dodge, assistant; Dr. Charles C. Allison, consulting surgeon; Drs. William R. Hobbs, Rudolph Rix, Carl L. F. Swanson and Paul H. Ellis, attending physicians; Dr. Samuel K. Spalding, mental and nervous diseases; Dr. H. L. Akin, diseases of the stomach; Dr. Harry M. McClanahan, diseases of children; Dr. D. C. Bryant, diseases of the eye and ear; Dr. George H. Bicknell, diseases of the nose and throat, and Dr. James S. Foote, pathologist.

#### NEW JERSEY.

**Hospital Incorporated.**—The Hospital of the Immaculate Conception has been incorporated at Orange.

**Found Guilty.**—Dr. Alfred C. Pedrick, Passaic, on December 5 was found guilty of performing a criminal operation on Mrs. Mary Steinberg, Passaic, by reason of which she was placed in imminent danger of death. Sentence was deferred.

**Contagious Diseases.**—There have been reported 18 cases of scarlet fever in Paulsboro and two of the schools have been closed. Two cases of diphtheria have also developed.—Dunellen is under quarantine on account of the prevalence of diphtheria.

**Personal.**—Dr. William H. Shipps, Bordentown, has been elected acting secretary of the State Board of Medical Examiners, vice Dr. E. L. B. Godfrey, Camden, away on leave of absence.—Dr. Henry B. Whitehorn, Verona, has been chosen president and Dr. Edwin M. Ward, Bloomfield, vice-president, of the Mountain Side Hospital staff, Montclair. Dr. Charles H. Bailey, Bloomfield, has resigned as president of the hospital.—Dr. H. H. Tomlin, Hammonton, has been appointed junior resident physician at the Altoona (Pa.) Hospital.

#### NEW YORK.

**Physicians' Club.**—The physicians of Poughkeepsie have formed a club for scientific and social discussion, to meet monthly at the houses of its members.

**Resolution Against Tuberculosis Hospital.**—The Medical Society of Richmond County has adopted a resolution condemning the proposition to build a \$2,000,000 tuberculosis hospital in Richmond, declaring that the climate there was detrimental to the successful treatment of this disease. It is claimed that such an institution would be detrimental to the health and best interests of Staten Island.

#### New York City.

**Medical Officer for the Comptroller.**—The post of medical examiner for the finance department, with a salary of \$2,500, was created on the recommendation of Comptroller Grout. The duty of this officer will be to look after the claims against the city for damages for personal injuries.

**Aid for Hebrew Sanatorium.**—The following additional subscriptions have been received for the Sanatorium for Hebrew



Children at Rockaway Park: Charles L. Hallgarten, \$500; Sigmund Newstadt, \$500; Mrs. A. Scheitel, \$150. The subscriptions for this institution now amount to about \$25,000.

**Bellevue Rebels.**—Bellevue has rebelled against drunkards. Dr. A. Armstrong has issued an order that plain alcoholic patients will not be extended the courtesy of the hospital during the sobering-up process. It is feared that this order may cause a rupture between the hospital authorities and the police, for the latter have repeatedly mistaken cases of fractured skull for alcoholism.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended December 9, 429 cases of tuberculosis, with 177 deaths; 572 cases of measles, with 7 deaths; 334 cases of diphtheria, with 40 deaths; 187 cases of scarlet fever, with 6 deaths; 94 cases of typhoid fever, with 13 deaths; 34 cases of cerebrospinal meningitis, with 15 deaths, and 222 cases of varicella. This is a total of 1,872 cases, with 258 deaths.

**For Psychical Research.**—Prof. James H. Hyslop has issued a prospectus of the American Institute of Scientific Research that has just been incorporated and which intends to study abnormal psychology. It is intended that the institute shall be something like the Salpêtrière under Chareot and Pierre Janet. It is proposed to study loss of the sense of personal identity, persistent hallucination, amnesia, psychic epilepsy, melancolia and paranoia.

**Institute Soon to be Opened.**—The Rockefeller Institute for Medical Research, to which John D. Rockefeller has given \$3,000,000, will be ready for occupancy the first week in January. The site includes 26 city lots. Appointments to the staff of the laboratory will be announced soon by the board of directors. The institute will continue to aid investigators in this country and in Europe. There are now 20 men working under the auspices of the institute outside of New York. Grants of money are made to students in medical research.

**Tuberculosis in New York City.**—The third annual report of the committee on the prevention of tuberculosis of the Charity Organization Society says: "The tuberculosis situation in New York City is unique. At once we have, though not the highest death rate, a larger number of deaths and a far greater number of cases of sickness than any other city in the country; at the same time that we have a system of public and private control of the disease that with more candor than modesty we may claim as the superior of any elsewhere existing in the United States." The charity department maintained 3,959 patients in its own hospitals last year, and paid for the treatment of 783 patients in private institutions each month. The other agencies for fighting tuberculosis were eight special dispensaries, the special arrangements at Bellevue Hospital, the seaside work for improving the condition of the poor, and several others.

## OHIO.

**St. Alexis Alumni Meet.**—The regular meeting of the alumni association of resident physicians of St. Alexis' Hospital, Cleveland, was held December 7 at the Hollenden Hotel.

**Epidemics.**—On account of an epidemic of scarlet fever at Jefferson the primary grades of the public schools have been ordered closed, and all Sunday schools in the town have been ordered to discontinue their sessions.—The public schools of New Philadelphia have been closed by the board of health on account of an epidemic of diphtheria; the rehearsals for an amateur theatrical performance were ordered discontinued; Sunday schools were not open for children, and children were prohibited from gathering in groups in the streets and in their homes.

**State Hospital Report.**—The forty-sixth annual report of the directors of Longview Hospital shows that the average of patients was 1,100, and the total number of deaths for the year, 61. The current expenditures were \$184,194.20. During the year the county expended for permanent improvements \$54,335.89.—The thirteenth annual report of the trustees of the Massillon State Hospital shows that the last of the new buildings authorized in 1904 is practically completed, and that there remains to be erected only one building, which is to be fireproof and designed as a hospital. During the year 404 patients were admitted and 390 were discharged, of whom 136 were considered cured, 57 improved, 13 unimproved, and 184 dead. The percentage of recoveries was 33.66. The superintendent reiterates in his report his frequently expressed opinion that inebriety is surely the forerunner of insanity. The per capita cost per annum was \$108.70, or, including officers' salaries, \$114.84.—The charges made by Dr. James F. Kelly,

assistant superintendent, and by a clergyman of Cleveland, against the superintendent and steward of the Cleveland State Hospital, were investigated by the board of trustees and not sustained. Dr. Kelly resigned.—The commission appointed to select a site for the proposed new State Hospital for the Criminal Insane has selected a site offered by the city of Lima.

## PENNSYLVANIA.

**Portrait Presented.**—At the regular meeting of the Erie County Medical Society, November 15, it was announced that a large portrait and all the books of the late Dr. Charles Brandes had been presented to the society by the heirs.

**Personal.**—Dr. William N. Stein, Shenandoah, a member of the local board of health, was appointed state medical inspector for the Shenandoah district.—Dr. Solon C. B. Fogel, Allentown, while alighting from a trolley car, December 13, fell and fractured his left leg.

**Pure Food Report.**—The report of the state dairy and food commissioner, published November 24, states that the results obtained by the department indicate the need for legislation regulating the manufacture and sale of drugs and chemicals. The department found that from 50 to 75 per cent. of spices are adulterated and that adulterants are used freely in confections, soda-water, jellies, jams and preserves. The investigations disclosed furthermore that certain "pure rye whiskey" is nothing more than a mixture of alcohol, prune juice and caramel. Certain brands of so-called fruit syrups, the report states, do not contain a particle of the fruit for which they are named.

## Philadelphia.

**Personal.**—Dr. John M. Fisher has been appointed visiting chief gynecologist to St. Agnes' Hospital.

**Bequests.**—By the will of the late Margaretha K. Engel, the German Hospital receives \$1,000.—The will of the late Solomon J. May contains a bequest of \$150 for the Jewish Hospital.

**Chickenpox on Steamship.**—Twelve cases of chickenpox were discovered on the arrival of the steamship *Merion* at this port. November 22. The patients were removed to the Municipal Hospital.

**Reading's Relief Report.**—The statement of the Philadelphia & Reading Relief Association for November showed an expenditure of \$23,714.80, of which \$12,350 was paid for deaths and \$11,364.80 for disability. The number of deaths was 22, of which 8 were from accidental and 14 from natural causes. Twelve hundred and thirty-five new cases were reported.

**Bacteriologic Report.**—The report of the bacteriologic laboratory of the Health Bureau for November shows that 1,295 diphtheria cultures were examined, 400 Widal reactions were made, 906 specimens of milk and 113 specimens of sputum were examined, and 3 disinfection tests were performed. The report also shows that 3,134,000 units of antitoxin were distributed.

**Health Report.**—The total number of deaths from all causes reported for the week reached 509, as compared with 479 reported last week, and 519 reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 10; measles, 5; diphtheria, 13; tuberculosis, 51; cancer, 17; apoplexy, 32; heart disease, 58; acute respiratory disease, 94; enteritis, 17; Bright's disease, 47; old age, 8; suicide, 7; accidents, 21, and marasmus, 8. There were 240 cases of contagious disease reported, with 26 deaths, as compared with 291 cases and 29 deaths for the previous week. Typhoid fever shows a falling off, as 111 cases only were reported this week as compared with 152 for last week.

**Indiscriminate Sale of Drugs.**—It has been discovered that narcotics, particularly cocaine and morphine, are being sold by certain druggists in the rougher section of the city. Several young men have been discovered wholly under the influence of narcotics. Arrests have been made and it has been learned by the authorities that the cocaine habitués have obtained the drug by a secret cipher code. The key to the code was given by one of the victims to the captain of detectives. The key was then tried by the captain and the drug secured. The Philadelphia Association of Retail Druggists, at a meeting December 8, adopted resolutions denouncing all pharmacists who abuse the cocaine laws. Each of the druggists thus far arrested has been held in \$1,000 bail.

**Medical Inspection in November.**—The report of the division of medical inspection for November shows that 4,705 inspections were made, excluding schools; 842 fumigations were ordered; 26 patients were examined for special diagnosis; 426 cultures were collected; 495 vaccinations were performed, and 226 injections of antitoxin were given. The report further



shows that 6,030 visits to the schools were made and that 994 children were excluded from attendance on account of disease. In all 30,524 pupils were examined and 5,310 found to be in need of medical attention. The principal diseases for which children were excluded were: Diphtheria, 14; scarlet fever, 15; measles, 15; variola, 34; ringworm, 34; tonsillitis, 58; mumps, 13; unvaccinated, 228; sprain, 1; abscess, 1. Of the 5,310 pupils recommended for treatment there were: Defective vision, 1,995; defective hearing, 166; defective speech, 19; defective teeth, 493; nasal catarrh, 113; tonsillitis, 8; eczema, 204; cataract, 1; infected wounds, 22; abscess, 19; sprains, 5; fractures, 3; carbuncle, 1; bronchitis, 18; jaundice, 1; rheumatism, 2, and revaccination, 32.

#### VERMONT.

**Diphtheria.**—Diphtheria is reported to be prevalent among the children of Burlington, and the health officer, Dr. James W. Courtney, has been instructed by the State Board of Health to make a physical examination of all children of the public schools.—Because of the appearance of diphtheria, the high and graded schools at Winooski have been ordered closed.

**Benefit for Hospitals.**—Nahum P. Kingsley, Rutland, has given the Rutland Hospital Association his personal check for \$1,000, to be held as a trust fund, and the interest used in the maintenance of the institution.—The court has directed the executor of Col. William Austin to pay the bequest left by him for a hospital in Brattleboro to the authorities of the town, to be paid over to the hospital trustees when required.

#### VIRGINIA.

**New Hospital.**—John B. Newton, vice-president of the Virginia Iron, Coal and Coke Company, Bristol, has donated a suitable piece of land for the erection of a hospital to cost \$50,000.

**Hospital Secured.**—The directors of the Norfolk Protestant Hospital secured, by public subscription, \$11,000 of the \$24,000 necessary to obtain the donation of \$18,000 offered by Messrs. George L. Arps, J. W. Perry and Fergus Reed, to place the hospital out of debt, decided to underwrite the \$13,000 remaining, and called on the provisional donors for the payment of the amount pledged.

#### WISCONSIN.

**Do Not Want Names Published.**—At a meeting of the Fond du Lac County Medical Society, November 9, a resolution was adopted in which the society requests that the newspapers of the city refrain from publishing the names of physicians connected with operations or accidents.

**Doctors Must Take Oath.**—Judge Brazee, Milwaukee, has issued an order regarding practice in the Municipal Court, to be known as rule No. 16, which sets forth that "certificates of physicians presented to the court must be subscribed to by the physician and must be sworn to by him before some official authorized to administer an oath."

**Injunction Dissolved.**—Dr. J. A. Schmidt, Brillion, was granted an injunction a few weeks ago against Dr. Edward Meyer, who was forbidden to practice medicine in Brillion. The restraining order was modified to permit Dr. Meyer to treat the patients he had at the time the injunction was granted. Dr. Schmidt claimed that he had a contract in which Dr. Meyer transferred certain personal property to Dr. Schmidt, including his "field of practice in this community." Judge Burnell, at Oshkosh, has decided to dissolve the injunction and Dr. Meyer is allowed to practice, but is required to make an accounting on the business done by him to the court.

#### GENERAL.

**Yellow Fever in Cuba.**—Cases of yellow fever are still reported from in and around Havana. Cases are being reported as occurring outside of what has been known as the infected district. Dr. von Emdorf, of the Public Health and Marine-Hospital Service, reports that rain has prevailed the latter part of the week, which is unusual for this time of year. In looking over the record of yellow-fever cases reported, he states that it is interesting to note the large proportion of individuals who have contracted the disease after a short residence on the island. On December 13, two additional cases of yellow fever were reported at Colon, in the province of Matanzas.

**Hawaiian Medical Association.**—The annual meeting of this association was held November 18. Health affairs were discussed at some length. Dr. Day pointed out that typhoid causes a high death rate in Honolulu and urged that a better water supply should be provided. Dr. Goodhue urged the es-

tablishment of a school of tropical medicine in Honolulu, and a committee was appointed to consider the matter and report. Dr. Hodgins spoke on infant feeding and started an interesting discussion on the respective merits of condensed and sterilized milk. Dr. Peterson, superintendent of the insane asylum, declared that insane patients or those suspected of being insane are not treated as sick persons, but are arrested and thrown into jail and receive treatment that is not at all a credit to the community. The statements were corroborated by other members of the association, and a committee was appointed to consult with the bar association concerning appropriate legislation that might be submitted to the next legislature. A number of members visited the Russian cruiser *Lena*, where, as the guests of Dr. Vladimir Zabolkin, they received most courteous treatment.

**Yellow Fever News.**—Havana, on December 8, reported up to that date 48 cases of yellow fever, with 14 deaths. On December 11 it was reported that 15 cases were under treatment. There are now 445 men employed in the yellow-fever brigade, of whom 325 are engaged in fumigating, 100 are applying petroleum to all stagnant water, and 20 are inspecting tanks, barrels, etc. Two physicians have been fined \$50 each for failing to report cases.—Arkansas finds that its military quarantine cost \$36,000, all spent in maintaining a quarantine of the good old-fashioned shotgun type.—Augusta, Ga., spent \$2,764.45 on its yellow-fever quarantine.—The state of Tennessee spent \$10,300 in quarantine.—The work of the American Mosquito Extermination Society, New York, is commencing to be felt.—Oklahoma school authorities have about decided to include the mosquito doctrine among the public-school subjects of study.—Surgeon J. H. White, United States Public Health and Marine-Hospital Service, has been detailed to the New Orleans station. He will have as his assistants Passed Assistant Surgeons Corput, Wilson, and McKeon, all of whom saw service during the recent epidemic.—The New Orleans Health Association, on December 10, by a vote of 25 to 7, passed a resolution demanding the resignation of Health Officer Kohnke on the ground of loss of public confidence. They also appointed a committee to visit Governor Blanchard and to ask him to permit the State Medical Society to name the president of the State Board of Health.

**First Meeting Under Amalgamation.**—The new house of delegates of the Medical Society of the State of New York met in Albany December 14, including the chairmen of the standing committees and the joint committee of ten. The secretary was ordered to notify all county societies of the fact that they should reorganize so as to agree with the constitution and by-laws, which was part of the agreement of amalgamation. All association members were also to be notified. The counsel who made application for consolidation gave the opinion that the order from the Supreme Court judge made all members of the New York State Medical Association who are in good standing members of the Medical Society of the State of New York on the receipt of a certificate of the president and secretary of the state association. It was decided to continue the journal and the medical directory and to continue the malpractice defense for the members of the Medical Society of the State of New York. The president and secretary were ordered to continue the journal for January and February, and a committee to be appointed by the president is to select an editor and to report at the annual meeting of the House of Delegates next month. A committee of five was appointed, of which the president is one, to carry out the referendum as per Section 7 of the court order relating to the Principles of Ethics of the American Medical Association. The constitution of the American Medical Association provides that when any state medical society is reorganized according to the plan of the American Medical Association, and by resolution expresses its allegiance to that body, it then becomes a constituent branch of it. Such a resolution was unanimously carried. The per capita assessment on members of the societies was placed at \$3.00. A tentative constitution and by-laws for county societies was submitted as being suggestive and which might be adopted with very slight alteration by the several county medical societies of the state.

#### FOREIGN.

**Endowment for Scientific Research at Berlin.**—A Berlin lawyer has given \$12,500 to start a fund to supply financial aid to scientists studying important problems in the natural sciences, including biology and medicine.

**Congress of Balneology.**—The German and Austrian balneologic societies will unite in a congress to be held at Dresden in March. Liebreich will preside. The general secretary of the German association and of the congress is Dr. Ruge, Berlin W., Magdeburgerstrasse 31.



**Plague in Japan and China.**—Assistant Surgeon Ransom reports that plague has been declared epidemic in Osaka and Kobe. In Osaka, from November 2 to 17, there were 23 cases, with 15 deaths. Shanghai and Chefoo have declared quarantine against Nieuchwang on account of plague.

**Organization of Anglo-Mexican Association.**—The first meeting of this body is to be held at Torreon, Mexico, in January. At first it was proposed to limit the membership to physicians in northern Mexico, but later it was decided that all English-speaking physicians in the republic should be eligible for membership.

**Skoda's Centennial.**—The profession of Vienna united in a memorial meeting on December 11, the hundredth anniversary of the birth of Josef Skoda. He was professor at Vienna for only twenty-five years, but during this period won international fame by his study of physical methods of examination. He resigned his chair in 1871 on account of illness, and died ten years afterward.

**Czerny to Devote Himself to Cancer Research.**—It is reported that Prof. V. Czerny is to retire from the surgical clinic at Heidelberg in order to devote his energies exclusively to the Institute for Cancer Research, which was recently founded there mainly by his efforts and donations. Garré, who recently took Mikulicz's vacant chair at Breslau, is suggested as Czerny's successor. Nearly \$200,000 have been subscribed for the new cancer institute.

**Beriberi Arrives at Glasgow.**—The danger of the introduction of tropical diseases to other countries through the media of vessels and their crews seems to be a very real one. On December 2 two Chinamen, both firemen on board the steamer *Peleus*, which arrived in the Clyde from the Far East, via Marseilles, were discovered to be suffering from beriberi, and were removed to Belvidere Fever Hospital, Glasgow. All precautions are being taken by the sanitary authorities.

**Catalogue of Ancient Medical Works.**—The *Deutsche med. Wochft.* announces that the Copenhagen and the Berlin academies of science have united in publishing a catalog of all the Greek and Latin medical writings that have been handed down to us from antiquity. This catalog is to be preliminary to the suggestion that the International Association of Academies of Science undertake the task of publishing a complete scientific edition of the collected works of the physicians of antiquity. The plan is to be proposed at the next general meeting of the delegates of the association, which will be held at Vienna during the spring of 1907.

**International Congress of Gynecology, St. Petersburg, September, 1906.**—The committee of organization of this congress, which was postponed from last to next September, is said to be actively at work preparing for the meeting. The committee includes twenty of the most prominent gynecologists of Russia, with D. von Ott as chairman. Prof. P. Sadowski, Newski Prospekt 90, is secretary general of the congress, while Dr. Redlich has charge of the exhibition annex. His address is Spasskaja 25, both in St. Petersburg. The *St. Petersb. med. Wochft.* states that the committee requests prompt notification in regard to communications to be presented, so that summaries can be published and distributed in time. Our exchange adds, further, that trips to the Caucasus, Crimea and down the Volga will be offered the members of the congress at reduced rates. The same journal states elsewhere that Professor von Ott has been removed from the superintendency of the Gynecologic Institute at St. Petersburg, his place having been taken by Dr. Salaskin. No reasons are assigned for his removal from the famous model institution erected under his supervision.

**The Austrian Society to Combat Quackery.**—The program adopted by the Austrian society, whose foundation was mentioned in these columns last week, includes efforts to enlighten the people and banish superstition by popular lectures on anatomy, physiology and pathology; by replies on the spot by bright and able medical speakers when statements are made abusing science during the meetings of antivivisectionists, nature healers or other faddists; by analyses of secret remedies and publication of the results, as is being done by the Germans at some places, and by rigid enforcement of all measures tending to restrict the practice of irregulars. The president, Professor Kassowitz, emphasized the fact that quackery is constantly sapping the foundations of science and discrediting its results. The necessity for enlightening the people in this respect is well brought out by a Vienna correspondent in the *Muench. med. Wochft.* for December 5. He states that a bill appropriating less than \$8,000 for public vaccination purposes in a certain district was passed by the legislature for lower Austria by a majority of only one vote. The deputies were almost evenly

divided on the question of the necessity of vaccination. One asserted that if physicians were not paid for vaccinating people there would soon be plenty of testimony to the effect that vaccination does no good.

**The Nobel Prizes.**—Only one physician is honored with one of the Nobel prizes this year, Robert Koch. The other recipients are A. von Baeyer, Munich, an authority on organic chemistry, and P. Lesnard, of Kiel, for researches on the cathode rays. The author of "Quo Vadis," M. Sienkiewicz, receives the prize given for idealistic literature, on account of his trilogy of Polish historical novels, while the Baroness von Suttner is given the peace prize for her works and writings to promote the cause of peace. The career of Robert Koch is known to all our readers, as his name is so closely connected with modern bacteriology and serotherapy. He is not content to rest on his laurels, but is constantly seeking new worlds to conquer, having just completed a year of research in Africa. The important results of his labors were mentioned on page 1888 of our last issue. He was born in Clausthal Dec. 11, 1843. His epoch-making bacteriologic discoveries first attracted attention to him in 1876 while he was serving as district physician in Prussian Poland. After his graduation at Göttingen he served as assistant in the Hamburg Hospital and then opened an office at Langenhagen and later at Rackwitz until, in 1872, he was appointed district physician at Wollstein, near by. Here he remained until 1880, when he was summoned to Berlin as a member of the Imperial Council of Health. His discovery of the tubercle bacillus followed two years later and of the cholera bacillus the following year. He was appointed director of the newly founded Institute for Infectious Diseases at Berlin in 1891, and his announcements in regard to tuberculin laid the foundation of serotherapy not long after. His trip to Africa in 1896 added to our knowledge in regard to malaria, the immunity of adults and means of prophylaxis. The Nobel prizes were founded by the inventor of dynamite, Alfred Nobel. They amount this year to about \$40,000 each. The trustees in charge of the awarding of the prizes do not seem to be aware that there is such a continent as America on the globe, but the lengthening list of the recipients of the prizes is gradually becoming a hall of fame for the great men of Europe. Germany, France, England, Spain, Switzerland, Russia, Sweden and Denmark have each been honored with one or more prizes. The physicians who have received the medicine prize to date are von Behring of Germany, Major Ross of England, Finsen of Denmark, Pawlow of Russia and Robert Koch.

#### LONDON LETTER.

##### The London Milk Supply.

Dr. Collingridge, health officer of the city of London, has made a very unfavorable report on the milk supply of the metropolis. Last year bacteriologic examination of samples of milk from 22 counties showed that only 19 out of 39 were clean and pure. Since then the investigation has been continued and samples of milk from 22 counties have been submitted to Dr. Klein for examination. He found that 15 out of 22 samples were clean and pure; 5 were unclean, and 2 contained the *Bacillus tuberculosis*. These results point to the grossest carelessness, amounting, in fact, to criminal negligence. Several guinea-pigs which were injected with the milk died from extensive pneumonia or typical septicaemia, with copious presence of *Bacillus coli communis* in the blood, and in all the viscera, or acute peritonitis. One-third of the samples examined were thus unfit for use.

##### Bovine Typhus in Egypt.

Egypt has been officially declared free of bovine typhus and the provincial cattle markets, which have been closed for two years or more, will be reopened, provided that no fresh outbreak occurs. This disease has swept away \$5,000,000 worth of cattle, and Koch, on his return from his rinderpest campaign in South Africa, was called on to advise the Egyptian government as to the means of exterminating it. He prescribed the complete isolation of diseased animals and serum inoculation. Some time after his visit to Egypt the disease seemed to increase in virulence and skeptics shook their heads with regard to his advice, but the sanitary department was in capable hands and an extensive inspectorate was established throughout Egypt and in the long run Koch's measures have prevailed. The serum institute at Abasieh is being closed, but a large quantity of rinderpest serum is being kept in cold storage for emergencies. Intelligence has just been received at Cairo that cattle plague has broken out anew in the Sudan. Serum is being dispatched from Cairo with several veterinary inspectors who can now be spared from duty in Egypt.



### Distribution and Spread of Sleeping Sickness in the Congo Free State.

At the Epidemiological Society, London, Dr. J. L. Todd read an important paper on this subject, based on observations and inquiries made during a journey of 2,000 miles and a residence of two years in the Congo by himself and the late Dr. Dutton, who had been sent out by the Liverpool School of Tropical Medicine. Dr. Todd exhibited three spot maps showing the prevalence and distribution of the disease—one for 1884, when European influence was only coming into existence and sleeping sickness followed the native and Arab trade routes; a second for 1897, when the Arabs were expelled, and with the extension of long-distance transport by caravans and steamboats the disease spread in every direction, and a third for 1905, when European supremacy being fully established, and transport being easy and rapid, there was an enormous extension of the trypanosomiasis mainly from aggregation at posts along the lines of trade of native soldiers and laborers, often recruited from infected districts. The intermediate host of the *Trypanosoma gambiense* (the parasite of sleeping sickness), the *Glossina palpalis*, though not aquatic in its larval stage, prefers moist places. The areas of greatest prevalence are the river sides and shores of lakes. Frequently riverine populations show an incidence of trypanosomiasis of from 15 or 20 per cent. while the natives on higher ground escape. The chronicity of the disease is such that the parasites may be present for as long as fifteen years without producing symptoms. On the other hand, death may occur a few months after infection. The alarming spread of the sickness demands vigorous measures. In default of curative treatment Dr. Todd thinks that the only practical procedures are: 1, Establishment on the main roads leading to healthy districts of posts of inspection; 2, expulsion from healthy districts of persons having enlarged glands and their removal to infected districts; 3, control over the migration of the natives. In the diagnosis gland palpation is sufficient for practical purposes, though puncture would be required for scientific.

### The Tuberculous Children of London.

At a meeting of the Invalid Children's Aid Association to discuss the action to be taken with regard to children affected or suspected to be affected with pulmonary tuberculosis, Sir William Broadbent, in an address entitled "The Tuberculous Children of the Metropolis," said that it was remarkable that while consumption, the most prevalent form of tubercular disease, has steadily diminished year by year for the last 30 years, there has been no corresponding diminution in the death rate of the tuberculous affections which are specially incident in childhood—meningitis, peritonitis, tabes mesenterica, disease of bones and joints, and serofulous glands. On the contrary, these have increased. During the years 1901-03 in London 6,391 children under 5 died from different forms of tuberculosis; of these 2,894 died before the age of one year, the mortality decreasing rapidly with every successive year of life. The association can do little or nothing for cases of true pulmonary consumption which come under its cognizance beyond sending the children in early stages into the country. Such cases constitute a small minority of the affections of the lungs met among London children. It is astonishing what an amount of damage to the lungs is survived with apparent restoration of health and vigor. Sequels of measles, whooping cough, bronchitis and other affections are often mistaken for consumption and there are no cases in which fresh air and good food make a greater difference. A child otherwise condemned to lifelong delicacy and suffering, by a change to the country or to the seaside, may be made permanently well. The association should be encouraged to take charge of children suffering from disease of the lungs of whatever kind. In France far more attention has been paid to this question. In England an excellent beginning had been made in the Millfield Home, on the south coast near Littlehampton, for children suffering from pulmonary tuberculosis, under the control of the metropolitan asylums board. For children above the pauper class there is very little accommodation. Sir William Broadbent condemned the so-called comforter or teat, constantly seen in the mouths of infants of all classes, as an invention of the devil. It is, he said, a fraud on the unhappy child; it leads to waste of the digestive secretions, and it picks up every kind of filth when it falls on the floor. On reviewing the whole question, he said that what impresses him is the extent of the demand for institutional accommodation and the inadequacy of the provision. A resolution was carried approving of the practice of the association in endeavoring to make possible early and efficient treatment of children suffering from surgical tuberculosis by assisting to pay for them in nursing homes and special hospitals.

## Pharmacology

### The Press Committee of the Proprietary Association.

As a matter for publicity, we give below a list of the members of the Press Committee of the Proprietary Association. This committee is doing some very effective work in supplying to the newspapers of the country, which are willing to be dictated to, material to counteract the exposing of frauds in "patent medicines." It will be noticed that this committee represents some of the worst among the "patent medicines." What will be of special interest to physicians, however, is the fact that there are men on the committee who represent preparations that are being advertised to the medical profession through medical journals. For instance, Scott & Bowne, who, besides their "patent medicines," exploit to the public and to the medical profession "Scott's Emulsion." Wells, Richardson & Co., of "Paine's Celery Compound" fame, appeal to the medical profession to help them sell their "Cereal Milk." W. A. Talbot represents on the committee "Piso's Cure for Consumption," but who, at the same time, is with the Micajah Co., and is appealing to physicians to use "Micajah's Medicated Uterine Wafers." This is another bit of evidence to convince those not already convinced that we can not separate the so-called "patent medicines" from the "ethical proprietaries." The following is the list:

A. H. Beardsley, chairman (Dr. Miles' Nervine, etc.).  
 F. W. Schumacher (Peruna).  
 S. W. Bowne (Scott's Emulsion, Buckthorn Cordial).  
 H. E. Bucklin (King's New Discovery, Electric Bitters, etc.).  
 D. S. Chamberlain (Cough Remedy, Pain Balm, etc.).  
 R. R. Land (Swamp-Root Kidney, Liver and Bladder Cure, etc.).  
 E. C. DeWitt (Little Early Risers, Dyspepsia Cure etc.).  
 J. F. Hindes (Bromo-Seltzer, Rheumatic Cure, etc.).  
 H. B. Foley (Foley's Kidney Cure, etc.).  
 O. E. Foster (Doan's Kidney Pills, Burdock Blood Bitters, etc.).  
 W. T. Hanson (Pink Pills for Pale People, etc.).  
 H. L. Kramer (Cascarets, Kidney Pills, etc.).  
 G. A. Newmann (California Fig Syrup).  
 J. A. Patten (Wine of Cardui, etc.).  
 C. A. Rucker (Swift's Specific).  
 C. I. Shoop (Shoop's Restorative).  
 C. C. Hopkins (Liquozone).  
 F. A. Stuart (Dyspepsia Tablets, Absorbent Lozenges).  
 W. A. Talbot (Piso's Cure for Consumption, etc.; also Micajah's Medicated Uterine Wafers).  
 G. B. Rowell (Ripan's Tabules).  
 J. T. Wetherald (Lydia E. Pinkham's Vegetable Compound, etc.).  
 G. B. Van Cleave (Paine's Celery Compound, etc.).  
 I. M. Clark (Laxative Bromo-Quinin Tablets, etc.).

### Not Members of Proprietary Association.

Among the list of members of the Proprietary Association of America, which we published Nov. 18, was mentioned the firm of Fairchild Brothers & Foster. They write that some years ago they consented to join the association because of their interest in the matter of trademarks, but that they never took any active interest in the association or attended its meetings. They say: "Believing that our judgment was at fault in this matter, we have resigned our membership."

### Opportunities for Missionary Work in China.

We wish to direct the attention of nostrum manufacturers to a recommendation made by Consul George E. Anderson of Amoy, China. Writing concerning business and professional opportunities in China, he says: "The Chinese are favorable to the patent medicine business if it can be brought within their reach. They naturally take to such a method of treating diseases, and remedies advertised as they are in the United States and Europe would have a big sale in China, provided the prices charged for them would be within the reach of the middle class." Some patent medicine men, in connection with their threats to sue certain publications which have exposed the fraudulent nature of their business, stated that these exposures have occasioned much loss of patronage; they, therefore, may need a new field in which to push the sale of their products. To judge from this report of Consul Ander-



COMPARATIVE TABLE SHOWING THE STRENGTH OF THE MORE IMPORTANT PHARMACOPEIAL SUBSTANCES AND PREPARATIONS IN THE PRECEDING AND IN THE PRESENT PHARMACOPEIA.

Title.	Chief constituent.	Pharmacopeia, 1890	Pharmacopeia, 8th revision.
Acidum sulphuricum aromaticum.	H <sub>2</sub> SO <sub>4</sub> , by weight.	About 18.5 per cent.	About 20.0 per cent.
Aconitum.	Aconitin, by weight.	Standard not fixed.	At least 0.5 per cent.
Alcohol dilutum.	Absolute alcohol, by weight.	About 41.0 per cent.	About 41.5 per cent.
Belladonnæ folia.	Mydriatic alkaloids, by weight.	Standard not fixed.	At least 0.35 per cent.
Belladonnæ radix.	Mydriatic alkaloids, by weight.	Standard not fixed.	At least 0.5 per cent.
Caffeina citrata effervescens.	Citrated caffein, by weight.	2.0 gm. in 100 gm.	4.0 gm. in 100 gm.
Cinchona.	Alkaloids, by weight.	At least 2.5 per cent. quinin.	At least 4 per cent ether-soluble alkaloids.
Coca.	Ether-soluble alkaloids, by weight.	Standard not fixed.	At least 0.5 per cent.
Colchici cormus.	Colchicin, by weight.	Standard not fixed.	At least 0.35 per cent.
Colchici semen.	Colchicin, by weight.	Standard not fixed.	At least 0.55 per cent.
Conium.	Coniin, by weight.	Standard not fixed.	At least 0.5 per cent.
Emplastrum belladonnæ.	Mydriatic alkaloids, by weight.	Standard not fixed.	From 0.38 to 0.42 per cent.
Extractum belladonnæ.	Mydriatic alkaloids, by weight.	Standard not fixed.	0.3 per cent.
Extractum colchici cormi.	Colchicin, by weight.	Standard not fixed.	1.4 per cent.
Extractum hyoscyami.	Mydriatic alkaloids, by weight.	Standard not fixed.	1.4 per cent.
Extractum nucis vomicæ.	Strychnin, by weight.	15.0 per cent. total alkaloids.	5.00 per cent.
Extractum opii.	Morphin (cryst.), by weight.	18.0 per cent.	20.00 per cent.
Extractum physostigmatis.	Ether-soluble alkaloids, by weight.	Standard not fixed.	2.0 per cent.
Extractum stramonii.	Mydriatic alkaloids, by weight.	Standard not fixed.	1.4 per cent.
Fluidextractum aconiti.	Aconitin, by weight.	Standard not fixed.	0.4 gm. in 100 c.c.
Fluidextractum belladonnæ radices.	Mydriatic alkaloids, by weight.	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum cinchouæ.	Anhydrous e.-s. alkaloids, by wt.	Standard not fixed.	4.0 gm. in 100 c.c.
Fluidextractum cocæ.	Ether-soluble alkaloids, by weight.	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum colchici seminis.	Colchicin, by weight.	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum conii.	Coniin, by weight.	Standard not fixed.	0.45 gm. in 100 c.c.
Fluidextractum guaranæ.	Alkaloids, by weight.	Standard not fixed.	3.5 gm. in 100 c.c.
Fluidextractum hydrastis.	Hydrastin, by weight.	Standard not fixed.	2.0 gm. in 100 c.c.
Fluidextractum hyoscyami.	Mydriatic alkaloids, by weight.	Standard not fixed.	0.075 gm. in 100 c.c.
Fluidextractum ipecacuanhæ.	Alkaloids, by weight.	Standard not fixed.	1.75 gm. in 100 c.c.
Fluidextractum nucis vomicæ.	Strychnin, by weight.	1.5 gm. total alkaloids in 100 c.c.	1.0 gm. in 100 c.c.
Fluidextractum pilocarpi.	Alkaloids, by weight.	Standard not fixed.	0.4 gm. in 100 c.c.
Fluidextractum stramonii.	Mydriatic alkaloids, by weight.	Standard not fixed.	0.35 gm. in 100 c.c.
Guarana.	Alkaloids, by weight.	Standard not fixed.	At least 3.5 per cent.
Hydrastis.	Hydrastin, by weight.	Standard not fixed.	At least 2.5 per cent.
Hyoscyamus.	Mydriatic alkaloids, by weight.	Standard not fixed.	At least 0.08 per cent.
Ipecacuanha.	Alkaloids, by weight.	Standard not fixed.	At least 2.0 per cent.
Jalap.	Alcohol-soluble resin, by weight.	12 per cent.	At least 8.0 per cent.
Liquor ferri chloridi.	Ether-soluble resin, by weight.	Not more than 1.2 per cent.	Not more than 1.5 per cent.
Liquor ferri et ammonii acetatis.	Anhydrous FeCl <sub>3</sub> , by weight.	37.8 per cent.	29.0 per cent.
Liquor ferri tersulphatis.	Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> , by weight.	2 c.c. in 100 c.c.	4 c.c. in 100 c.c.
Lithii citras effervescens.	Lithium citrate, by weight.	28.7 per cent.	36.0 per cent.
Nux vomica.	Strychnin, by weight.	About 17.0 per cent.	About 5.0 per cent.
Oleatum hydrargyri.	Yellow mercuric oxid., by weight.	Standard not fixed.	At least 1.25 per cent.
Oleum amygdalæ amare.	Benzaldehyd, by weight.	20.0 per cent.	25.0 per cent.
Oleum cajuputi.	Hydrocyanic acid, by weight.	Standard not fixed.	At least 85 per cent.
Oleum caryophylli.	Cineol, by volume.	Standard not fixed.	2 to 4 per cent.
Oleum cinnamomi.	Eugenol, by volume.	Standard not fixed.	At least 55 per cent.
Oleum eucalypti.	Cinnamic aldehyd, by volume.	Standard not fixed.	At least 80 per cent.
Oleum limonis.	Cineol, by volume.	Standard not fixed.	At least 75 per cent.
Oleum menthæ piperitæ.	Citral, by weight.	Standard not fixed.	At least 50 per cent.
Oleum pimentæ.	Menthyl acetate, by weight.	Standard not fixed.	At least 4 per cent.
Oleum rosmarini.	Total menthol, by weight.	Standard not fixed.	At least 8 per cent.
Oleum santali.	Eugenol, by volume.	Standard not fixed.	At least 50 per cent.
Oleum thymi.	Bornyl acetate, by weight.	Standard not fixed.	At least 65 per cent.
Opii pulvis.	Total borneol, by weight.	Standard not fixed.	At least 5 per cent.
Opium deodoratum.	Santalol, by weight.	Standard not fixed.	At least 15 per cent.
Physostigma.	Phenols, by volume.	Standard not fixed.	At least 90 per cent.
Pilocarpus.	Morphin (cryst.), by weight.	Standard not fixed.	At least 20 per cent.
Potassii citras effervescens.	Morphin (cryst.), by weight.	13 to 15 per cent.	12 to 12.5 per cent.
Stramonium.	Ether-soluble alkaloids, by weight.	Standard not fixed.	12 to 12.5 per cent.
Suppositoria glycerini.	Alkaloids, by weight.	Standard not fixed.	At least 0.15 per cent.
Syrupus ferri iodidi.	Potassium citrate, by weight.	About 48.0 per cent.	At least 0.5 per cent.
Tinctura aconiti.	Mydriatic alkaloids, by weight.	Standard not fixed.	About 20.0 per cent.
Tinctura belladonnæ foliorum.	Glycerin (half their former size).	6 gm. each.	At least 0.35 per cent.
Tinctura benzoini composita.	Ferrous iodid, by weight.	About 10 per cent.	3 gm. each.
Tinctura cannabæ Indicæ.	Aconitin, by weight.	Standard not fixed.	About 5 per cent.
Tinctura cantharidis.	Aconite.	1 gm. in 2.85 c.c.	0.045 gm. in 100 c.c.
Tinctura capsici.	Mydriatic alkaloids, by weight.	Standard not fixed.	1 gm. in 10.0 c.c.
Tinctura cardamomi.	Belladonna leaves.	1 gm. in 6.67 c.c.	0.035 gm. in 100 c.c.
Tinctura cinnamomi.	Benzoin.	1 gm. in 8.33 c.c.	1 gm. in 10.0 c.c.
Tinctura coichici seminis.	Indian cannabis.	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura digitalis.	Cantharides.	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
Tinctura ferri chloridi.	Capsicum.	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
Tinctura gambir composita.	Cardamom.	1 gm. in 10.0 c.c.	1 gm. in 10.0 c.c.
Tinctura gelsemii.	Saigon cinnamon.	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura hydrastis.	Colchicum seed.	1 gm. in 6.67 c.c.	1 gm. in 5.0 c.c.
Tinctura hyoscyami.	Colchicin, by weight.	Standard not fixed.	1 gm. in 10.0 c.c.
Tinctura kino.	Digitalis.	1 gm. in 6.67 c.c.	0.05 gm. in 100 c.c.
Tinctura lobeliæ.	Anhydrous FeCl <sub>3</sub> , by weight.	13.6 per cent. by weight.	1 gm. in 10.0 c.c.
Tinctura nucis vomicæ.	Gambir.	1 gm. in 10.0 c.c.	13.28 per cent., by weight.
Tinctura opii.	Gelsemium.	1 gm. in 6.67 c.c.	1 gm. in 20.0 c.c.
Tinctura opii deodorati.	Hydrastin, by weight.	Standard not fixed.	1 gm. in 10.0 c.c.
Tinctura physostigmatis.	Mydriatic alkaloids, by weight.	Standard not fixed.	0.4 gm. in 100 c.c.
Tinctura quassia.	Hyoscyamus.	1 gm. in 6.67 c.c.	0.007 gm. in 100 c.c.
Tinctura rhei.	Kino.	1 gm. in 10.0 c.c.	1 gm. in 10.0 c.c.
Tinctura sanguinaræ.	Lobelia.	1 gm. in 5.0 c.c.	1 gm. in 20.0 c.c.
Tinctura scillæ.	Strychnin, by weight.	0.3 gm. total alkaloids in 100 c.c.	1 gm. in 10.0 c.c.
Tinctura stramonii.	Morphin (cryst.), by weight.	1.3 to 1.5 gm. in 100 c.c.	0.1 gm. strychnin in 100 c.c.
Tinctura strophanthi.	Morphin (cryst.), by weight.	1.3 to 1.5 gm. in 100 c.c.	1.2 to 1.25 gm. in 100 c.c.
Tinctura toluana.	Physostigma.	1 gm. in 6.67 c.c.	1.2 to 1.25 gm. in 100 c.c.
Tinctura veratri.	Ether soluble alkaloids, by weight.	Standard not fixed.	1 gm. in 10.0 c.c.
Trochisci cubebæ.	Quassia.	1 gm. in 10.0 c.c.	0.014 gm. in 100 c.c.
Unguentum chrysarobini.	Rhubarb.	1 gm. in 5.0 c.c.	1 gm. in 5.0 c.c.
Unguentum phenolis.	Sanguinaria.	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Unguentum sulphuris.	Squill.	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
	Stramonium.	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
	Mydriatic alkaloids, by weight.	Standard not fixed.	0.03 gm. in 100 c.c.
	Strophanthus.	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
	Balsam of tolu.	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
	Veratrum.	1 gm. in 2.5 c.c.	1 gm. in 10.0 c.c.
	Oleoresin of cubeb, by weight.	0.25 gm. in each.	0.125 gm. in each.
	Chrysarobin, by weight.	About 5.0 per cent.	About 6.0 per cent.
	Phenol, by weight.	About 5.0 per cent.	About 3.0 per cent.
	Washed sulphur, by weight.	About 30.0 per cent.	About 15.0 per cent.



son, China would be a magnificent opening for them. It would also be a great benefit to China, for are not patent medicines valuable remedies, and is it not cruel to deprive any people of them? By all means, let the patent medicine men work the Chinese for a while, if that long-suffering people will stand for it.

#### An Early Patent Medicine Fraud.

According to a correspondent of the New York *Evening Post*, probably the earliest instance of drastic "treatment" of the patent-medicine fraud in this country is recorded in "The New England Chronology," Part II, 2 (1,754), of the Rev. T. Prince (Arbor's English Garner, ii, 577-578):

"March 4 (1631). First Court of Assistants this year, at Boston. Present, Governor, Deputy Governor, Sir R. Saltonstall, Master Ludlow, Captain Endicot, Masters Pynchon, Novell, Sharp, Coddington, Bradstreet.

"Ordered. . . . A man fined £5, for taking upon him to cure a scurvy, by a 'Water' of no value; which he sold at a very dear rate; to be imprisoned till he pay his fine, or give security for it; or else be whipt. And shall be liable to any man's action, of whom he has received money for the said 'Water.'"—*American Medicine*, Nov. 18, 1905.

#### Will Help Honest Advertising.

Those who are a bit nervous over the exposure of the patent-medicine industry by popular magazines should remember that the campaign is directed chiefly against mendacious patent-medicine advertising. Surely no fault can be found with a crusade against lying advertisements. If it were possible to eliminate falsehood from all advertising it would be the best thing that ever happened to the honest advertiser. To-day the man who sticks to the plain truth in his advertisements suffers from the monumental prevarication of less conscientious advertisers who have deceived the public so much that it liberally discounts the utterances of all advertisers except in those isolated cases where experience has shown that one may be believed. Good honest advertising will sell a good honest medicine, and if it doesn't the fault is not with the advertising.

The above is from the *New Idea*, the house organ of Frederick Stearns & Co. What is said here in regard to "patent medicines" applies exactly to proprietaries advertised to physicians. It is the lying, the absurdly extravagant claims, the false statements regarding both the composition and the therapeutic action of the articles, that has brought all proprietaries into disrepute among many physicians. Of course, if the whole truth were written about many proprietaries, it would spell humbug, but there are plenty of valuable proprietaries which would win favor if the straight honest truth were told about them.

#### Practical Work Outlined by Chicago Medical Society.

At the regular monthly meeting, held December 12, the Council of the Chicago Medical Society unanimously adopted the following resolutions:

1. That every branch of the society be requested to set aside an evening for the discussion of this question and particularly to encourage the members to report data in regard to cases observed which were injured or killed by the use of patent medicines.
2. That the secretaries of the branch societies be requested to send this material to the Public Relations Committee.
3. That the council appoint a committee to prepare articles on this subject for the lay press; this committee also to prepare and supply the lay press with other matter on this same subject for publication.
4. That THE JOURNAL of the American Medical Association be requested to prepare reprints of the articles on proprietary medicines and of the articles in *Collier's Weekly*, and that the society should set aside sufficient funds to furnish each doctor in the county with a copy of these reprints.
5. To have run in the *Bulletin* a request for the data of cases observed by the members of the society, who have been or may be injured by the use of patent medicines.
6. That a committee be appointed to see if the *Daily News* will accept a lecture on the patent medicine question to be inserted in their lecture column.
7. To communicate with the president of the state society in regard to above suggestions, and such others as may be made by the council, and request him to communicate with the various county societies and request them to encourage the same work.

#### Southwestern Branch Indorses Movement.

On account of the numerous and rapidly increasing number of worthless and harmful preparations that are being exploited among the physicians of the land, be it

*Resolved*, That the Southwestern Branch of the Chicago Medical Society expresses its hearty approval of the action of the American Medical Association in establishing a Council on Pharmacy and Chemistry to investigate non-official drugs and medicinal preparations. It also approves the action of THE JOURNAL of the American Medical Association in its campaign of educating the medical profession concerning the evils of nostrums and urges it to continue in the good work. It also heartily commends the action of *Collier's Weekly* and *Ladies' Home Journal* in exposing the evils of patent medicines, and be it also.

*Resolved*, That each member of this society be requested to write to the editors of these publications commending the action they have taken in the matter, and also that a copy of these resolutions be spread on the minutes of the society and that copies be forwarded to the secretary of the Chicago Medical Society, editor of THE JOURNAL of the American Medical Association, *Collier's Weekly* and *Ladies' Home Journal*.  
C. HUBART LOVEWELL, Secretary.

#### Resolutions Indorsing the Fight Against Nostrums.

At a recent meeting, the Lackawanna County (Pa.) Medical Society passed resolutions commending the work of *Collier's Weekly* and of the *Ladies' Home Journal* in their campaign against "patent medicines." At its December meeting, the Shiawassee County (Mich.) Medical Society adopted resolutions indorsing the action of THE JOURNAL A. M. A., *Collier's Weekly*, and the *Ladies' Home Journal* in exposing the methods of the Proprietary Association.

#### As Collier's Sees It.



#### BEWARE OF ACETANILID



The following well-known "remedies," both "ethical" and "patent," depend for their results upon the heart-depressing action of Acetanilid:

Orangeine	Megrimine	Ammonol
Bromo-Seltzer	Anti-Headache	Salacatin
Royal Pain Powders	Dr. Davis's Headache	Phenalgine
Miniature Headache	Powders	Cephalgin
Powders	Antikamnia	

and practically all of the drug-store-vended "headache cures" and "anti-pain" remedies.

Take no nostrum of this class without a doctor's prescription, unless you are sure it contains no acetanilid. Make the druggist tell you. He is responsible. A suit for damages has recently been won against a New York drug store for illness consequent upon the sale of a "guaranteed harmless" headache tablet containing three grains of acetanilid.

[The above is from *Collier's Weekly*. It is certainly unkind to mix such ethical and well-established compounds as antikamnia, salacatin, phenalgine and ammonol with common every-day "patent medicines," as is done in this instance!]

#### New Chemical Remedies in Switzerland.

The Swiss Association of Pharmacists has recently passed, at its general meeting, what seems to us a timely and beneficial resolution. It recommends that each manufacturer be compelled to publish on the label of each pharmaceutical product the following points: First, its chemical name, as well as its commercial denomination; second, its reactions (of identity), its melting or boiling point, and its solubility in ordinary solvents; third, its dosage. There are already so many comparatively new chemical remedies and they are being added to so frequently and constantly that pharmacists can not be posted as to their physical characteristics and their properties, hence they can not, without the information above mentioned, exercise the proper control as to their purity or their safe administration.—Editorial in *New Orleans Medical and Surgical Journal*.



### Not Under the Red Clause.

We have before urged that newspapers, as a rule, even to the extent of self-sacrifice, would come out on the side of right if the facts were placed before the editors in a way to show them what is right. It has been surprising to those who have watched the trend of affairs since the publication of *Collier's* article on the "Patent Medicine Conspiracy Against the Freedom of the Press" to note that the Press Committee of the Proprietary Association has not been able to control all of the newspapers. On the other hand, a large number have come out boldly and have sided with the public in this propaganda against frauds in "patent medicines." Every day fresh evidence of this is coming to our attention. We know it to be a fact, also, that many newspapers that have not come out openly on either side have refused to use matter supplied them by the Press Committee of the Proprietary Association. The following are samples of editorial comments in the newspapers:

The *Lincoln Trade Review*, December 2, says: "There is no graft in operation to-day that reaches so deeply into the pocket-books of individuals and gives absolutely so little in return as the sale of numerous 'patent medicines' which prove, on examination, to be unmitigated frauds of the first water. One of the regrettable things in this connection is the way they are advertised and the part that newspapers play in duping the public by publishing the remarkable statements of cures that these frauds are alleged to make."

The *Seattle* (Wash.) *Star* makes the following manly announcement:

"Eleven different patent medicines, which have been regularly advertised in the columns of the *Seattle Star*, will no longer be accorded space in this newspaper."

All advertising arrangements made by this paper are subject to editorial control. The editor can determine what matter offered by advertisers is fit to print and what is not fit to print.

The *Star's* editor has determined that objectionable matter lies in most patent medicine ads. and that they are therefore subject to refusal.

The *Star* desires to be consistent in its crusade against patent medicines as a class. It does not seem right for the paper to accept profits from advertisements of articles which it denounces editorially, and which it believes should not be sold to the people.

The fact that there is considerable pecuniary loss involved as a result of the elimination of these ads. can not be considered for a moment.

This is certainly clear cut, and the editor has taken a firm stand. He further says that the *Star* does not claim to be able to protect the people against all sorts of fakes, but he considers it his simple duty to take the stand here outlined because the line between right and wrong appears to him so clearly drawn.

## Correspondence

### The Removal of Liquor from the Army Canteen.

PUEBLO, COLO., Dec. 14, 1905.

To the Editor:—In a recent issue of the *Medical Record*, the editor takes up the question of the army canteen. The argument advanced is the same old story. The editor of the *Record*, as a scientific man, should be more exact in some of his statements. Congress did not pass an act closing the canteens; the act prevented only the sale of liquor in military reservations, etc. The store department, the post exchange, the reading room, the recreation room, remain the same.

I have seen something of the army life in the Orient, and I wish to say, as a physician and a citizen, that every boy in the army is infinitely better off without the beer halls than with them. It is true, some men will go to outside saloons for their drinks, but they will not go so often and they will not drink as much when they have to go from one to three miles as if they could get it in the camp. Then, too, it helps to save the enlisted man who has not begun to drink. It gives him a much better chance to let it alone when there is none to be found in the army canteen.

There are other causes for desertion, and many of them, apart from those given by the *Record*.

The following statement is made by Gen. Noel Gaines, an old army officer:

"The truth is, the inability of the soldiers easily to obtain liquor is not the cause of the increased desertions and poor discipline and ill-content of the men; but rather the low standard of morals of men and officers, growing out of drinking intoxicating liquors in any form, whereby their morality, sense of honor and patriotism

are gradually destroyed; coupled with the tyrannical treatment of the enlisted men (all of whom are Americans and will not tolerate tyranny) by almost the whole of the younger officers of the army, and a great many of the older ones, are real causes. I testify to this from personal observation."

Lieut. Gen. Nelson A. Miles, just two years ago, after almost three years' trial of the prohibition of liquor in army reservations, had this to say:

"For a long time the army has been without what is known as the liquor feature of the canteen. The army posts are much better off without it, I find. That element having once been discarded it would be an injury and a step backward to reintroduce it."

"The canteen, so-called, is a recreation room or building established or set apart at nearly all military posts. It is for the comfort of the enlisted men."

"It includes the recreation room which gives the men opportunity for social intercourse, the playing of games and the reading of magazines and books. It also affords them light refreshment of various kinds which they may desire in addition to the good, wholesome food furnished by the government."

"There are certain men in the service, as in every community, who will have liquor if it is possible to obtain it. Of course these are not the best men in the ranks."

"But now that liquor has been removed from the military reservations those not addicted to the use of liquor are free from its demoralizing influences. The temptation to use it is made very remote."

"Besides, the amusements rooms where the men who desire may study or read or have orderly recreation are not disturbed by men wholly or partly under the influence of liquor. In other words, the canteen is made inviting to decent, self-respecting men."

"I have visited many posts during the past year, and I know that the conditions are better now than ever before. This I say positively from my own observation."

"At one large post in the West the present canteen is so well conducted and so well patronized that it has paid dividends of \$1 a month to every man. This shows that the argument that the canteen can not be sustained without the liquor feature is wholly false."

"Do you think, General, that there is less drunkenness among the soldiers than existed when the canteen had the liquor feature?"

"I know there is less," was General Miles' emphatic reply.—*Boston Advertiser*, Dec. 12, 1903.

It is time for sensible men, and especially physicians, to give up the fallacy that soldiers must get drunk. I have seen army officers passing through hostile territory so drunk that a sudden attack could have ended in nothing but defeat. Boys who enlist in the army because they can get liquor are poor defenders of their country, and, if they leave the army because they can not get it, it is small loss.

Lord Kitchener, in the campaign of the Soudan, abolished liquor of all kinds, even from the officers' mess. Their liquid refreshments were confined to tea and oatmeal water. This was on no temperance grounds, but because he knew the powers of endurance could be maintained without liquor better than with it. His forced marches over burning sand and his victory of Omdurman proved his conclusions correct. Japan has recently shown the world the advantage of a sober army. A. S. Barker has this to say of excluding wines and beers from ship canteens:

"The navy is to be congratulated that the department has remained firm in excluding wine and beer from the canteen of ships."

"Railroad companies do not employ men who drink intoxicating liquor because of the increased danger of accidents and consequent claims for damages."

"Manufacturing concerns are yearly becoming more strict in this regard. How much greater the necessity for absolute sobriety on a battleship? Tons of explosives are confined in the vessel, fires burn with intense heat in the furnaces, electricity is generated in currents of sufficient strength to run 1,000 lamps and move turrets weighing hundreds of tons, while within the ship closely housed over this dormant hell are more than 700 human beings."

"The majority of enlisted men come from good homes and are temperate. Is it therefore not better to weed out the few intemperate and raise the standard still higher than to disgust many self-respecting men and lower the tone of the service?"

"A. S. BARKER,

"Rear Admiral, U. S. Navy.

"Commander-in-Chief North Atlantic Fleet."

One of the inconsistencies, in which those who want to place the beer halls back in the army camps indulge, is this: They say: Drunkenness has increased; desertion has decreased. Yet, in the same article, they will go on to tell us that men are leaving the army because they can not get liquor. The fallacy is evident. Beer and cigarettes are not the rations of any great football team, and every physician knows that they are equally poor for fighting men.

Let some army officers try as hard to keep the boys from drinking, both by precept and example, as they do now to restore liquor to the army canteens, and we will hear less about the need of it. The result of no beer saloons in the navy is attracting to our navy a better class of men. On one ship alone, in the paymaster's safe, there is over \$33,000 saved by the men on board. This does not occur on board beer-hall ships. According to the official report of the U. S. Navy, the



health of the men is better and the death rate less. There are no medical reasons for returning to the old régime in either army or navy.

JOHN INGLIS.

### The Burning of the Books.

SOUTH HAVEN, MICH., Dec. 18, 1905.

*To the Editor:*—I have just read the letter of Dr. B. Holmes in THE JOURNAL of Dec. 16 on the "Burning of Books," and I must enter a protest against such wholesale denunciation of all medical books older than the last edition. To my mind, the fathers in medicine, be they old or new, deserve not only our respect, but their teachings and their books are worthy of our serious thought and study. There is something more due them and ourselves than—

"As dutious sons we fondly wished  
Our fathers were more wise."

Truth is not always most abundant in things ultra new. There is no greater danger of falling into error by going slow than by going too fast.

The same desire of the public which demands two editions of a daily paper, with extras between, seems to consume some medical men, and they court and receive the distinction of being on the crest of the wave of "the very latest." The public may applaud and flock to them, but it does not follow that their patients are cured or helped by them more than by the more conservative practitioner. There are fads and fancies in things medical, as well as in other lines of human activity. It is the mad desire for something new that drives men to follow after such strange gods as osteopathy, Eddyism, and their like.

The man in general practice can not and should not attempt to keep abreast with the man in the laboratory devoting himself to experimental and original research work.

Fifty thousand of the "60,000 physicians" spoken of by Dr. Holmes can not buy the last editions of all needed medical text-books, nor is it necessary, in my humble opinion, that they should do so in order to be up with the times in their work. Nor do they need to burn or even to discard all save the last editions.

It is often astonishing how little "revising" is required for an excuse for a "new edition." The changes more often consist of an increased number of "plates" rather than new or revised ideas.

Let not the physician be ashamed to have good standard medical books on his shelves, though part of them, at least, be not the very last revision.

The man who subscribes for and faithfully reads a few good current medical journals need not fear that his patients will suffer for lack of modern treatment, even if some of his text-books are two or even ten years old. L. G. RHODES, M.D.

### Roentgen Rays in Dentistry.

CHICAGO, Dec. 18, 1905.

*To the Editor:*—In reference to the article with the above title by Dr. Kassabian in the issue of December 16, permit me to make a few remarks about the technic employed, which, I think, will be of value to every Roentgenologist. As to the material used, I find heavily coated celluloid paper the ideal material for such work. I cut pieces 2 x 3 cm., inclose them in oiled paper, and cover them with black paper, the smooth side of the cover corresponding with the emulsion side of the film.

I place the patient on a table and, according to the advice of Albers-Sehonberg (*Die Roentgentechnik*, Hamberg, 1903), either let the patient adduct his chin as near as possible to his chest (upper jaw) or bend it as far as possible backward (lower jaw). By this position it is much easier to direct the rays as nearly perpendicular as possible to the film, and a distortion will never occur. The film is then inserted, held in place by an assistant or the patient himself, the point of pressure being, of course, as Dr. Kassabian says, on the particular tooth to be Roentgenographed. The results I have thus obtained are most satisfactory. This same method is used, also, in locating stones in the salivary ducts, the film being inserted over the tongue, the head held backward at right angle to the spinal column and the rays directed perpendicular to the floor of the mouth. I reserve the extra-oral Roentgenography of teeth for the third molar only, and then use a very small lead

diaphragm, which helps me greatly in getting a perfect picture of the tooth.

MAX REICHMANN, M.D.

### The Nomenclature of Proprietary Medicines.

NEW YORK, Dec. 11, 1905.

*To the Editor:*—Your issue of December 9 contains an article by Prof. C. S. N. Hallberg on the above subject, from which we quote the following:

And yet, in the face of this undeniable awakening of medical men, a firm of chemists of the highest standing has recently devised the meaningless, empiric names for three articles of its manufacture: Duotonol tablets, quartonol tablets, sextonol tablets. "Tonol" stands for glycerophosphates, and the prefixes refer to one number of different kinds of glycerophosphates, salts of alkalies, contained in each tablet. Now these names have been devised on the assumption that physicians will appreciate them, owing to their brevity and euphony; on the other hand, it is evident that these names will not appeal to the thinking physicians, as they would under the pharmaceutical titles, with the name of the illustrious founder of the firm as the trademark.

We beg leave to state here the considerations which led us to the adoption of the names challenged by your distinguished contributor:

We were the original introducers of the glycerophosphates in this country and extensively advertised them among the medical profession during the past decade. But soon after these salts had met with a favorable reception they were also marketed by other firms. The latter were able to undersell us because they had had none of the enormous costs and risks connected with the introduction, and, besides, some of the competitive preparations had shortcomings in purity and stability.

After advertising these salts as "glycerophosphates-Sehering" for eight years—as Prof. Hallberg advises—we were in self-protection forced to adopt the trademark "tonol." The physician, by using this short and easily-remembered name, was thereby enabled to assure the dispensing of Sehering's glycerophosphates.

The name "duotonol" was given to the lime-soda combination, "quartonol" to the tablet containing four salts, and "sextonol" to the one of six salts. It would hardly have been possible to devise names less subject to confusion. If the combinations had been designated "No. 1," "No. 2" and "No. 3," many physicians would have been unable to recall, when prescribing, which of the three numbers represented the tablet desired. And "Sehering's tablets of glycerophosphates of lime, sodium, iron, manganese, quinin and strychnin" (instead of sextonol) would have presented equally great mnemonic difficulties. But in addition we always state in our advertisements, our literature, and on the labels of the packages, the name of Sehering in connection with the formulas.

We are confident that the tradenames will recommend themselves by their precision and convenience, and indeed, we already possess proof of this fact.

While we regretfully recognize the fact that there is a multiplicity of brands of proprietary medicines, the same is true of all pharmaceuticals; the druggist often has to keep in stock several brands of morphin, quinin, etc. In the case of proprietary preparations, however, the remedy is obvious, if the physician will specify the original product, whose manufacturer deserves the reward of his labors and who may be relied on to supply the product of highest quality. If the physician leaves the selection of the brand to the pharmacist, cheapness—not quality—will often determine whose product is selected, and the cheapest is most likely the poorest one.

SCHERING & GLATZ.

### Infant Consultations.

PHILADELPHIA, Dec. 1, 1905.

*To the Editor:*—Reading your notice of the Congress of "Gouttes de Lait," I would like to call your attention to the fact that there has been started in Philadelphia within the last two months a little hospital under the name of The Christ's Hospital, whose work is the same as those European stations. The purpose of the clinics is to allow mothers to bring their babies to have their diet, hygiene and general care supervised by competent medical men. The question of milk supply is a vital one, and advice to the mothers on milk mixtures is very important. You note on p. 1747 that some of these stations do not survive; it requires an infinite patience to deal with some



of the more ignorant mothers. Many of them have been brought up in a mill, and have faint ideas about housekeeping. They do not know how to make the best of their limited resources. The proportion of waste and needless expenditure among the poor is apt to be greater than among the *gens doré* of our social structure.

This work in Philadelphia is called by the name of child registration and, although just begun, seems to have a future. At other hours there are clinics for the treatment of diseases of children, but the hour of registration is strictly one for normal study. Valuable statistics of height, weight, nutrition, and general development will be obtained, and in the changes of childhood there is the chance to know better how adult processes become initiated. The address of the hospital is 3354 North Front street, where any correspondence with those interested will be welcome.

The institution has its finances guaranteed by the St. Ambrose P. E. Mission and the Providence M. E. Church, as well as by public-spirited individuals of the neighborhood. It seems a very relevant work for religious bodies to assist, and in the future it may be that more of this charity will find issue in their activities.

T. H. EVANS, M.D.

## Marriages

ARTHUR K. HAMMOND, M.D., to Mrs. Keller, both of Fort Wayne, Ind.

JAROS F. ZIVNUSKA, M.D., to Miss Flora A. Salentine, both of Milwaukee, Wis.

RALPH BUTLER, M.D., to Mrs. John E. Shaw, both of Philadelphia, December 18.

S. BASKIN SHERARD, M.D., Iva, S. C., to Miss Mattie Moson, at Baltimore, December 5.

JOHN H. MCCUTCHAN, M.D., to Miss Maude Earle, both of Evansville, Ind., December 6.

ALEXANDER S. SIM, M.D., to Miss Lorna Lucy Lyons, both of Brooklyn, N. Y., December 7.

MOSES EISENSTAEDT, M.D., to Miss Blanche Janet Benjamin, both of Chicago, December 18.

MERLE FLENNER, M.D., Hamilton, Ohio, to Miss Adrienne Nosler of Chicago, December 12.

DEROSTUS E. SMITH, M.D., to Miss May Milehan, both of Kansas City, Kan., December 6.

JOHN L. SEAY, M.D., Sumterville, Ala., to Miss Lizzie Clark of Pratt City, Ala., December 5.

WALTER S. WING, M.D., to Miss Laura Casper, both of Oconomowoc, Wis., November 29.

LIVINGSTON L. SHROPSHIRE, M.D., to Miss Agnes James, both of San Antonio, Texas, November 27.

EUGENE G. HOLDEN, M.D., Caldwell, Idaho, to Miss Ethel Kuppinger of Erie, Colo., December 6.

GEORGE INGLES MACLEOD, M.D., Ardmore, Pa., to Miss Madge Twiggs of Augusta, Ga., December 17.

GEORGE M. SHAW, M.D., Robinsonville, Miss., to Miss Lulu Rhea of Somerville, Tenn., December 6.

JOHN J. TRAVIS, M.D., Northport, Wash., to Miss Alice J. Bowes of Spokane, Wash., November 23.

CHARLES H. ZORGER, M.D., Ivesdale, Ill., to Miss Anna Cecilia Sunderland of Urbana, Ill., November 28.

JOHN CRAYKE SIMPSON, M.D., to Miss Louise Kauffmann, both of Washington, D. C., December 12.

J. AUSTIN THOMPSON, M.D., to Mrs. Allie McCreedy, both of Letts, at Washington, Iowa, November 29.

SAMUEL H. HEAVRIN, M.D., Louisville, Ky., to Miss Stella Rothschild of Owensboro, Ky., December 6.

SAMUEL T. GLASFORD, M.D., to Miss Marie Clark, both of Danvers, Ill., at Peoria, Ill., November 29.

ARNE A. STEMSRUD, M.D., Dawson, Minn., to Miss Minnie Lindell of Grove City, Minn., November 29.

HARRY G. TEMPLETON, M.D., Plymouth, Pa., to Miss Anna Blanchard of Wilkesbarre, Pa., November 26.

JOSEPH HENRY DELANEY, M.D., Bozeman, Mont., to Miss Nina Howell White of Hobgood, N. C., December 19.

ERNEST RAY LIMBOCKER, M.D., New Virginia, Iowa, to Miss Gertrude Vera Salber of Clarinda, Iowa, November 30.

ALBERT F. ZIMMERMANN, M.D., Santa Ynez, Cal., to Miss Virginia Claire Bradley of Los Angeles, Cal., November 29.

EUGENE BYRON GLENN, M.D., Asheville, N. C., to Miss Elizabeth Elliott Lumpkin of Columbia, S. C., December 21.

ALBERT LIVINGSTON STAVELY, M.D., Washington, D. C., to Miss Willie Browning Haralson of Montgomery, Ala., December 6.

## Deaths

William S. Forbes, M.D. Jefferson Medical College, Philadelphia, 1852, died suddenly at his home in Philadelphia, from angina pectoris, December 17, aged 74. Dr. Forbes served for one year as assistant surgeon in the English service during the Crimean War. He also served as resident physician in the Pennsylvania Hospital, and later taught private classes in surgery and anatomy in the College of Anatomy, Philadelphia. He was a member of the Academy of Natural Sciences, College of Physicians of Philadelphia, Philadelphia County Medical Society, Medical Society of the State of Pennsylvania, and American Surgical Association. He served throughout the Civil War as surgeon in the United States Volunteers, was appointed medical director of the Thirteenth Army Corps and served under General Grant during the siege of Vicksburg. He was surgeon to the Episcopal Hospital for 25 years, and also surgeon



WILLIAM S. FORBES, M.D.

to the Jefferson Medical College Hospital. In 1879 he was made demonstrator of anatomy in Jefferson Medical College, and in 1886, he was appointed professor of anatomy, and held that chair until his death. Perhaps the crowning act of Dr. Forbes' life and the deed of which he was most proud was his authorship of the original Anatomy Act of Pennsylvania in 1863, and its amendment in 1883. This act has placed the procuring of subjects for dissection in the various medical schools in Pennsylvania on a legal basis, and has been of the greatest aid in the advancement of medical science. This act is the prototype and has been copied by all of the states in the union. He was the inventor of a new lithotrite and method of obtaining and measuring the strength of these instruments and the measured crushing resistance of vesical calculi. blood from the arteries to the veins, "Per Perositates," and an article on the diaphragm as a protector of the heart, and its influence in changing the current of blood, at birth, from the ductus arteriosus, to the lungs, by compressing the ductus arteriosus until the lumen of the duct is obliterated. He devised and was the first to perform the operation of liberating the ring finger of musicians by dividing the accessory tendons of the common extensor of the digits. At the 1905 commencement exercises of Jefferson Medical College a life-size portrait of Dr. Forbes was presented to the board of trustees of the college by the students and alumni. At the same time the Alumni Association of the University of Pennsylvania presented him with a silver loving-cup in recognition of his services in securing the establishment of the present state anatomic law. Dr. Forbes was an eloquent and sincere teacher and loved by all students who came in contact with him. He was known by the students in Jefferson as "the grand old man."

George Warner Miltenberger, M.D. University of Maryland School of Medicine, Baltimore, 1840; demonstrator of anatomy in that institution from 1840 to 1847; lecturer on pathology from 1847 to 1852; professor of materia medica and pathologic anatomy from 1852 to 1858; professor of obstetrics from 1858 to 1891; dean of the faculty from 1855 to 1869; emeritus professor of obstetrics and honorary president of the faculty of his alma mater since 1891; president of the Baltimore Obstetrical and Gynecological Society in 1885-1886, and of the Medical and Chirurgical Faculty of Maryland 1886-1887; consulting physician to Johns Hopkins Hospital; one of the oldest and



most highly esteemed practitioners of Baltimore, died at his home in that city from senile debility, December 11, aged 86. In 1896 his portrait was presented to the Medical and Surgical Faculty of Maryland. He led a strenuous professional life, and gave to the University of Maryland the best of his life and service.

**George S. Hyde, M.D.** Harvard University Medical School, Boston, 1856; a member of the American Medical Association, Massachusetts Medical Society, Suffolk District Society and Harvard Medical Alumni Association; interne at the Massachusetts General Hospital; a practitioner of Boston for half a century; for 40 years physician to St. Vincent's Orphan Asylum; prominent in all charitable work, died at his home in Boston, December 11, aged 74.

**John F. Failing, M.D.** University of Buffalo (N. Y.) Medical Department, 1868; a veteran of the Civil War, in which he served as hospital steward of the One Hundred and Twenty-eighth New York Volunteer Infantry, and formerly a practitioner of Grand Rapids, Mich., died at his home in Los Angeles, Cal., December 6, from tuberculosis, after an illness of ten years, aged 64.

**Thomas Benjamin Hunt, M.D.** University of Louisville Medical Department, 1864; for nine years a member of the board of education of Warsaw, Ill.; once a member of the State Board of Health; surgeon of the Fifty-fourth Kentucky Mounted Volunteer Infantry, died at his home in Warsaw, November 17, from heart disease, after a short illness, aged 74.

**Benjamin Blackford, M.D.** Jefferson Medical College, Philadelphia, 1855; surgeon in the Confederate service during the Civil War; in charge of hospitals at Front Royal and Liberty, Va.; an alienist of ability; for 16 years superintendent of the Western State Hospital, Staunton, Va., died at his residence in that institution, December 13, from pneumonia, aged 71.

**Evelyn Lyman Bissell, M.D.** Medical Institution of Yale College, New Haven, Conn., 1860; surgeon in the Army during the Civil War; a member of the staff of Governor Waller; president of the New Haven board of health, died suddenly at his home in New Haven, from cerebral hemorrhage, December 9, aged 69.

**William Henry Harrell, M.D.** Medical College of Virginia, Richmond, 1885; for 16 years physician and superintendent of health of Martin County, N. C., and for several years a member of the State Board of Health, died at his home in Williamson, November 27, from pneumonia, after an illness of six days.

**Edwin Reynolds, M.D.** College of Physicians and Surgeons in the City of New York, 1877; member of the New York State Medical Association, New York State Medical Society, and Medicolegal Society; physician to the Brooklyn Home for Consumptives, died at his home in Brooklyn, December 15, aged 59.

**Cassius M. Colegrove, M.D.** College of Physicians and Surgeons, Baltimore, 1883; twice president of the village of Canastota, N. Y., died December 9 from injuries received the evening before by being caught between a train from which he had alighted and a freight train, at Canastota, aged 43.

**Theodore Deecke, M.D.** University of Berlin, Germany, 1857; for 17 years pathologist at the Utica (N. Y.) State Hospital; well known as a pathologist, chemist and medical expert, died at his home in Utica, December 15, after an illness of three years, aged 69.

**William P. Caffey, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1900, local surgeon of the Denver & Rio Grande Railroad at Castle Gate, Utah, died suddenly from heart disease at his home in that place, December 9.

**Lewis Gelston, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1905, a member of the medical staff of the Calumet and Hecla Mining Company, Calumet, died in that city from scarlet fever, December 13, aged 21.

**Morton Grinnell, M.D.** Bellevue Hospital Medical College, New York City, 1881, formerly of New York City, died at his home, Beaver Brook Farm, Milford, Conn., December 10, from pneumonia, after a short illness, aged 50.

**Peter Henry Reiche, M.D.** University of Maryland School of Medicine, Baltimore, 1869, of Baltimore, was struck by a street car and died, December 9, an hour after the accident, at the City Hospital, Baltimore, aged 68.

**William P. Fenlason, M.D.** State Certificate (Tennessee), 1899, died at his home in Chattanooga, December 1, from peritonitis due to injuries inflicted by William Waller, for causes unknown, November 18, aged 66.

**James Fullerton, M.D.** Years of Practice, Illinois, 1878, one of the oldest practitioners of Mason County, Ill., died at his

home in Bath, where he had practiced for 52 years, December 6, from senile debility, aged 77.

**Thomas Grant, M.D.** Manitoba Medical College, Winnipeg, 1896, a member of the American Medical Association, died at his home in North Bend, Neb., December 4, after an illness of more than a year, aged 37.

**John J. Dearborn, M.D.** University of Vermont Medical Department, Burlington, 1873, died at his home in Salisbury, N. H., December 6, after an invalidism of several years, aged 55.

**Nicodemus Theodore Tanski, M.D.** Cincinnati, 1882, of Cincinnati, died at the Seton Hospital in that city, December 17, from burns sustained during an attack of syncope, aged 57.

**William H. Dowell, M.D.** Cincinnati, 1895, died at his home in Green Camp, Ohio, November 30, from pneumonia complicating typhoid fever, after an illness of three weeks, aged 37.

**Thomas W. Hunt, M.D.** Jefferson Medical College, Philadelphia, 1894, formerly of Lanesboro, Minn., and Bridgeport, Okla., died at his home in Haskell, I. T., September 17, aged 40.

**A. Stanley Dolan, M.D.** Michigan, 1882, formerly assistant superintendent of the Southern California Hospital for the Insane, died suddenly in his room at Riverside, Cal.

**James L. Curl, M.D.** Barnes Medical College, St. Louis, 1897, died at his home in St. Louis, November 24, from pneumonia, after an illness of less than three days, aged 29.

**Perley I. Aiken, M.D.** Jefferson Medical College, Philadelphia, 1867, died recently at his home in Honolulu, H. I., after a long and painful illness, and was buried October 28.

**Ellwood S. Gloninger, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1887, died at his home in Philadelphia, December 14, aged 50.

**L. B. Bond, M.D.** Atlanta, 1895; local surgeon to the Baltimore & Ohio Railroad, died at his home in Mt. Clare, W. Va., from typhoid fever, December 6, aged 34.

**Herman Joseph Huyett, M.D.** Jefferson Medical College, Philadelphia, 1885, died at his home in Rock Island, Ill., from nephritis, December 10, aged 43.

**William H. Kroh, M.D.** University of Maryland School of Medicine, Baltimore, 1886, died at his home in Los Angeles, Cal., December 11, aged 46.

**Charles E. Eskridge, M.D.** Louisville (Ky.) Medical College, 1886, died at his home in Winnsboro, Texas, November 29, from heart disease.

**Walter L. Allen, M.D.** Atlanta, 1900, of Chalk Mountain, Texas, was stabbed during an altercation, July 27, and died four days later.

**William O. Collins, M.D.** Kentucky School of Medicine, Louisville, 1854, died at his home in Pimento, Ind., November 28, from nephritis.

**Isaac D. Newman, M.D.** Cincinnati, Ohio, 1885, died at his home in Oakland, Md., December 12, aged 67.

#### Deaths Abroad.

**Sir John Burdon-Sanderson, Bart., M.D.** Edinburgh, 1851; F.R.C.P., London, 1863; M.R.C.P., 1855; D.C.L.; D.Sc.; LL.D.; F.R.S.; Honorary Fellow Magdalen College; president Pathological Society; honorary member of Clinical Society; fellow of the Medico-Chirurgical Society; corresponding member of the Academy of Science of Berlin, the Institute of France, Academy of Medicine of Belgium and Royal Scientific Society of Denmark; late regius professor of medicine, University of Oxford; Jordell professor of physiology, University College, London; physician to the Consumptives' Hospital, Brompton; assistant physician and lecturer, Middlesex Hospital; president of the British Medical Association in 1893; bearer of one of the most illustrious names in medicine, died at his home in Oxford, November 23, from broncho-pneumonia, after a pro-



JOHN BURDON-SANDERSON, M.D.



longed illness, aged 76. In 1870 Dr. Sanderson resigned his hospital appointments to devote himself to physiology and experimental pathology. His first important contribution was on the best means of resuscitating the apparently drowned. Other investigations were on asphyxia, the pathogenic properties of the stools of cholera patients, the artificial tuberculosis, and the intimate pathology of contagion.

E. Ziegler, M.D., professor of pathology and pathologic anatomy at Freiburg, died November 30, aged 56. He was the publisher and editor of the *Beiträge zur path. Anatomie und zur allgem. Pathologie*, and of the allied *Centralblatt*, and he has contributed a large number of important works to science. The article on "Inflammation" in the "Twentieth Century Practice of Medicine," 1899, was from his pen. He was born at Berne and has served as privat docent or professor at Würzburg, Tübingen and Freiburg, removing to the latter place in 1889.

L. Brühl, M.D., one of the first and most prominent members of the German Imperial Health Office, died at Berlin, November 35, aged 70.

R. von Leuthold, M.D., surgeon general of the German army and body physician to the emperor, died at Berlin, December 4, aged 73.

## Book Notice

THE PRACTITIONERS' VISITING LIST (Heretofore known as the Medical News Visiting List) for 1906. Lea Brothers & Co., Philadelphia, 1905.

MEDICAL RECORD VISITING LIST or Physicians' Diary for 1906. New Revised Edition. New York: William Wood & Co.

These visiting lists are pocket-sized, wallet-shaped books, bound in flexible leather, with flap, pencil, pocket, calendar, valuable tables and data, and classified blanks for recording various details of practice, such as charges, calls, engagements, addresses, cash account, etc. They are made for various numbers of patients, monthly or weekly, dated or undated, etc. They are excellently arranged for the physician's convenience.

## Queries and Minor Notes

### SYPHILIS AND REPAIR FRACTURES.

—Dec. 7, 1905.

To the Editor:—I have a case of compound fracture of the tibia near the juncture of the lower and middle thirds. The fibula is also broken. The bones were much splintered and a small piece had to be removed. The patient, a man, had syphilis seven years ago. He took antisyphilitic treatment for a year and a half. He is married, and his wife became infected and had one abortion. She is now troubled with a syphiloderm. I have treated both since June with potassium iodid and protiodid of mercury,  $\frac{1}{4}$  gr. What is the probable effect of syphilis on the uniting of a fracture. What would be the best treatment in this case? X. Y. Z.

ANSWER.—It is generally conceded that syphilis does not interfere with repair of fractured bones. Syphilis, particularly in the large cities, is an exceedingly common disease, yet in the large hospitals it is very rare indeed to find that syphilis has played any part in the cause of fracture, and it is very doubtful if, in itself, it ever interferes with union. In the treatment of the fracture in the above case, therefore, the indications should be met without regard to the syphilitic history. On the other hand, if syphilitic lesions be present they should receive their proper treatment without regard to the presence of the fracture.

### PHYSICIANS' CARDS.

Another physician's card comes to our table to add to the collection. The front side contains the following (names being changed):

O. C. TONLAY, A.M., M.D.,  
Eclectic Physician.

SPECIALTIES: Skin Diseases.  
Nervous Diseases.  
Urinary Disorders.  
Female Troubles.

TELEPHONE, 187.  
German and English spoken.

WEEKLY BLOCK,  
LASINA, NEW OHIO.  
(SEE OVER.)

The reverse side of the card reads as follows:

Dr. TONLAY has had a practical experience of 33 years as a Physician and Specialist, both in the Allopathic or regular; and in the Eclectic or Botanic Schools of medicine. The Doctor prefers and generally gives the extracts of roots, herbs, barks and flowers

of the earth (that is the Eclectic practice), and such DOES NOT INJURE the most delicate stomach or system. Children do not mind to take my medicines. Dr. Tonlay has taken a special course in study of ALL CHRONIC DISEASES, and particularly upon NERVOUS DISEASES, SKIN DISEASES, AND DISEASES OF KIDNEYS, BLADDER, AND FEMALE TROUBLES. The Doctor also cures Rupture, Piles and Gout by the Hypodermic method without surgery. Having been in the Special practice in New Orleans, La., and St. Louis, Mo., and made Chronic Diseases a Special Study, he claims Superior Skill in the treatment of such troubles.

N. B.—Dr. Tonlay prepares and furnishes his own medicines at his office.

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending December 16:

Koerper, C. E., asst.-surgeon, relieved from further temporary duty at the post of Washington Barracks, D. C.

Hanner, John W., asst.-surgeon, granted three months' leave of absence, to take effect on his being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

Hutton, Paul C., asst.-surgeon, ordered to report in person, December 29, to Lieut.-Col. Geo. H. Tornev, deputy surgeon general, president of examining board, at the Army General Hospital, Presidio of San Francisco, Cal., for examination to determine his fitness for advancement.

Ruffner, E. L., asst.-surgeon, advanced to rank of captain from this date (December 15).

Cass, Wm. E., contract surgeon, ordered from Vancouver Barracks, Washington, to Fort Stevens, Ore., for temporary duty.

Adair, Geo. F., contract surgeon, ordered from Fort Wadsworth, N. Y., to Fort Jay, N. Y., for temporary duty.

Branch, Frederick D., contract surgeon, returned from Fort Jay, N. Y., to his proper station, Fort Wood, N. Y.

Slater, Ernest F., contract surgeon, returned to duty at Fort Hancock, N. J., from sick leave of absence.

Chase, Alpha M., contract surgeon, returned to Fort Reno, Okla., from leave of absence.

Marvin, Marion T., contract surgeon, left Fort Robinson, Neb., on leave of absence.

Dickenson, Clarence F., contract surgeon, returned to Fort Logan, Colo., from leave of absence.

Waddell, Ralph W., dental surgeon, left Fort Crook, Neb., on leave of absence.

### Navy Changes.

There are no changes in the Medical Corps, U. S. Navy, for the week ending December 16.

### Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending December 13:

Kalloch, P. C., surgeon, detailed to represent the service at the meeting of the Maine State Board of Health, Augusta, Me., December 7.

Wasdin, E., surgeon, granted leave of absence for one month from December 15.

Carrington, P. M., surgeon, granted leave of absence for seven days from December 7, under paragraph 189 of the regulations. Granted extension seven days leave of absence from December 14.

Wickes, H. W., P. A. surgeon, granted leave of absence for one month from December 20.

Greene, J. R., P. A. surgeon, granted leave of absence for one month from December 18.

Kerr, J. W., P. A. surgeon, relieved from duty at St. John, N. B., and directed to report at Bureau, Washington, D. C.

Corput, G. M., P. A. surgeon, relieved from special temporary duty at New Orleans, La., and directed to rejoin station at New Orleans, La.

McClintic, T. B., P. A. surgeon, granted leave of absence for twenty days from December 13.

Berry, T. D., P. A. surgeon, relieved from duty at New York, N. Y., and from special temporary duty at New Orleans. Authorized to resume leave status.

Long, J. D., P. A. surgeon, granted seven days leave of absence from November 15, under paragraph 191 of the regulations.

Bahrenburg, L. P. H., asst.-surgeon, granted leave of absence for three days from December 11.

Bogges, J. S., asst.-surgeon, granted leave of absence for two days from December 10.

Ebert, H. G., asst.-surgeon, relieved from duty at Fort Stanton, N. M., and on expiration of present leave of absence directed to proceed to Seattle, Wash., for exclusive duty in connection with the examination of aliens.

Salmon, T. W., asst.-surgeon, proceed from Ellis Island, N. Y., to Buffalo, N. Y., for special temporary duty.

Spratt, R. D., asst.-surgeon, granted seven days' leave of absence from December 6, under paragraph 191 of the regulations.

Frost, W. H., asst.-surgeon, granted two days' leave of absence from November 29, under paragraph 191 of the regulations.

Patterson, A., acting-asst. surgeon, granted leave of absence for one month from October 8.

Quigley, F. Leo, acting-asst. surgeon, granted leave of absence for seven days from December 9, under paragraph 210 of the regulations.

Richardson, S. W., pharmacist, relieved from duty at Wilmington, N. C., and from special temporary duty at New Orleans, La., and directed to report to the medical officer in command at New Orleans, La., for duty and assignment to quarters.

McKay, M., pharmacist, relieved from duty at Cincinnati, Ohio, and directed to report at Bureau, Washington, D. C., for duty, relieving pharmacist E. M. Holt.



Allen, G. C., pharmacist, relieved from duty at New Orleans, La., and directed to proceed to Fort Townsend, Wash., reporting to the medical officer in command for duty and assignment to quarters.

Allen, G. C., pharmacist, granted leave of absence for two days.  
Ryder, L. W., pharmacist, granted leave of absence for fourteen days from December 11.

Troxler, R. F., pharmacist, relieved from duty at Port Townsend, Wash., and directed to proceed to Chicago, Ill., reporting to the medical officer in command for duty and assignment to quarters.

Holt, E. M., pharmacist, relieved from duty in bureau, and directed to proceed to Wilmington, N. C., reporting to the medical officer in command for duty and assignment to quarters.

Neves, George, pharmacist, granted leave of absence for eleven days from December 20.

#### BOARD CONVENED.

Board convened to meet at Portland, Me., Dec. 11, 1905, for physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon P. C. Kalloch, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

#### CASUALTY.

Surgeon C. T. Peckham died Dec. 9, 1905, at Buffalo, N. Y.

#### REMOVAL.

Pharmacist H. E. Davis, removed from the service Dec. 13, 1905, effective Nov. 10, 1905.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon general, Public Health and Marine-Hospital Service during the week ended December 9:

#### SMALLPOX—UNITED STATES.

California: San Francisco, Nov. 11-Nov. 25, 8 cases.  
District of Columbia: Nov. 25-Dec. 2, 1 death.  
Florida: Jacksonville, Nov. 25-Dec. 2, 1 case.  
Kentucky: Covington, Nov. 25-Dec. 2, 9 cases.  
Louisiana: New Orleans, Nov. 25-Dec. 2, 1 case.  
Maryland: Baltimore, Nov. 25-Dec. 2, 3 cases.

#### SMALLPOX—INSULAR.

Philippine Islands: Manila: Oct. 7-14, 2 cases.

#### SMALLPOX—FOREIGN.

Canada: Toronto, Nov. 18-25, 3 cases.  
Chile: Iquique, Oct. 28-Nov. 4, 16 deaths.  
China: Hongkong, Oct. 7-14, 1 case.  
France: Paris, Nov. 4-11, 14 cases, 2 deaths.  
Gibraltar: Nov. 12-19, 5 cases.  
Great Britain: Leeds, Nov. 11-18, 2 cases.  
Madras: Oct. 21-27, 2 cases.  
Mexico: City of Mexico, Nov. 4-18, 6 cases, 3 deaths.  
Russia: Moscow, Oct. 28-Nov. 4, 6 deaths; St. Petersburg, Oct. 21, Nov. 4, 8 cases, 3 deaths.  
Turkey: Constantinople, Oct. 29-Nov. 19, 8 deaths.

#### YELLOW FEVER—UNITED STATES.

Louisiana: New Orleans, July 21-Nov. 25, 3,395 cases, 460 deaths.

#### YELLOW FEVER—FOREIGN.

District of Honduras: Belize, Nov. 23-30, 1 case, 1 death.  
Cuba: Habana, Oct. 16-Dec. 5, 31 cases, 11 deaths.  
Ecuador: Guayaquil, Nov. 7-14, 2 deaths.  
Honduras: Puerto Cortez, Nov. 19-25, 3 cases, 1 death.  
Mexico: Vera Cruz, Nov. 19-25, 1 case, 1 death.  
Panama: Nov. 20, 1 case.

#### CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 30-Oct. 21, 21 cases, 22 deaths; Province, to Oct. 7, 210 cases, 183 deaths.

#### CHOLERA—FOREIGN.

India: Madras, Oct. 21-27, 38 deaths.  
Strait Settlements: Singapore, Oct. 21-28, 1 death.

#### PLAGUE—INSULAR.

Philippine Islands: Manila, Sept. 30-Oct. 21, 2 cases, 2 deaths.

#### PLAGUE—FOREIGN.

Africa: (Portuguese) Chinde, Sept. 29-Oct. 8, 6 deaths.  
China: Hongkong, Oct. 7-21, 3 cases, 3 deaths; Yingkow, Oct. 21, 6 cases, 5 deaths.  
India: Bombay, Oct. 24-31, 7 deaths; Karachi, Oct. 21-Nov. 5, 20 cases, 17 deaths.  
Japan: Kobe, Oct. 14-21, 3 deaths.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the week ended December 15:

#### SMALLPOX—UNITED STATES.

California: Los Angeles, Nov. 18-Dec. 2, 4 cases.  
District of Columbia: Washington, Dec. 2-9, 3 cases.  
Florida: Jacksonville, Dec. 2-9, 3 cases.  
Illinois: Galesburg, Dec. 4-11, 1 case.  
Kentucky: Covington, Dec. 2-9, 1 case.  
Louisiana: New Orleans, Dec. 2-9, 4 cases.  
Maryland: Baltimore, Dec. 2-9, 1 case.  
New York: New York, Nov. 25-Dec. 2, 1 case.

#### SMALLPOX—FOREIGN.

Africa: Cape Town, Oct. 14-21, 4 cases.  
Brazil: Pernambuco, Oct. 14-31, 93 deaths.  
Chile: Iquique, Nov. 4-11, 7 cases, 5 deaths.  
China: Hongkong, Oct. 25-Nov. 1, 1 case; Shanghai, Nov. 1, present.  
France: Paris, Nov. 18-25, 21 cases, 2 deaths.  
Great Britain: Liverpool, Nov. 11-18, 1 case.  
India: Bombay, Oct. 31-Nov. 7, 1 death; Madras, Oct. 28-Nov. 10, 27 deaths.  
Italy: Catania, Nov. 16-30, 3 deaths.  
Russia: Moscow, Oct. 7-28, 18 cases, 3 deaths; Odessa, Oct. 21-Nov. 11, 41 cases, 10 deaths; St. Petersburg, Oct. 28-Nov. 4, 6 cases, 1 death.  
Spain: Barcelona, Nov. 10-30, 11 deaths.

#### YELLOW FEVER.

Cuba: Habana, Oct. 16-Dec. 13, 43 cases, 13 deaths; Matanzas Province, Dec. 8-13, 4 cases, 1 death.  
Honduras: Puerto Cortez, Nov. 14-21, 1 death.  
Mexico: Tehuantepec, Nov. 25-Dec. 2, 1 case.  
Panama: Colon, Nov. 21-28, 2 cases, 1 death.

#### CHOLERA—INSULAR.

Philippine Islands: Manila, Oct. 21-28, 4 cases, 3 deaths.

#### CHOLERA—FOREIGN.

India: Madras, Oct. 28-Nov. 10, 26 deaths.

#### PLAGUE—FOREIGN.

India: Bombay, Oct. 31-Nov. 7, 14 deaths.  
China: Hongkong, Oct. 14-Nov. 1, 5 cases, 5 deaths; Niuchwang, to October, 4 deaths.  
Japan: Formosa, Oct. 1-31; 1 case, 1 death; Kobe, Nov. 8-19, 13 cases, 11 deaths; Osaka, Nov. 2-17, 23 cases, 15 deaths.  
Strait Settlements, Singapore, Oct. 14-21, 1 death.

## Medical Organization

### Georgia.

MIDDLE GEORGIA MEDICAL ASSOCIATION.—The physicians of this section met at Griffin December 8 for the purpose of effecting a reorganization of the association.

WILKES COUNTY MEDICAL SOCIETY.—The physicians of Wilkes County met recently at Washington and perfected permanent organization on the standard plan. The new society has on its roll every practicing physician in the county. Dr. Thomas J. Willis was elected president; Dr. John J. Hill, vice-president, and Dr. A. W. Simpson, secretary and treasurer, all of Washington.

ELBERT COUNTY MEDICAL SOCIETY.—The physicians of Elbert County met in Elberton, December 5, and formed a county medical society on the standard plan. The following officers were elected: President, Dr. A. S. J. Stovall, Elberton; vice-president, Dr. Amos C. Smith, Coldwater; secretary and treasurer, Dr. William A. Matthews, Elberton, and censors, Drs. Joseph E. Johnson, L. Pope Eberhardt, and A. B. Matthews, all of Elberton.

NEWTON AND ROCKDALE COUNTY MEDICAL SOCIETY.—Under the direction of Dr. Edward C. Davis, Atlanta, councilor for the fifth district, a local medical society has been organized on the standard plan, which includes in its membership the physicians of Newton and Rockdale counties. Dr. E. W. Ragsdale, Starrsville, was elected president, and Dr. W. Darracott Travis, Covington, secretary. The society will meet monthly, alternating between Conyers and Covington.

### Kansas.

GREENWOOD COUNTY MEDICAL SOCIETY.—The physicians of the county met at Eureka, November 16, and with the assistance of Dr. Oliver J. Furst, Peabody, councilor for the fourth district, perfected the organization of a county medical society on standard lines. Dr. Leslie S. Trusler, Fall River, was elected president; Dr. Jephtha Dillon, Eureka, vice-president, and Dr. William T. Grove, Eureka, secretary and treasurer.

HARPER COUNTY MEDICAL SOCIETY.—On the call of Dr. Oliver J. Furst, Peabody, councilor of the fourth district, a meeting of the physicians in Harper County was held at Harper, November 8, at which a county association was formed on the standard plan. The following officers were elected: Dr. Clarence W. Winbigler, Harper, president; Dr. Charles J. Callender, Anthony, vice-president; Dr. Alpha D. Updegraff, Anthony, secretary and treasurer; Drs. Marcus P. Crisler, Attica; J. Andy Bowles, Bluff City, and B. S. Jordan, Waldron, censors, and Dr. Arthur E. Walker, Anthony, delegate to the state society.

### Michigan.

MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY.—At a meeting held in Muskegon, December 8, the name of the Muskegon Medical Society was changed to the Muskegon-Oceana Medical Society. Dr. John F. Denslow, Muskegon, was elected president; Dr. J. D. Buskirk, Shelby, Oceana County, vice-president; Dr. Vernon A. Chapman, Muskegon, secretary; Dr. Jacob Oosting, Muskegon, treasurer, and Dr. George S. Williams, Muskegon, censor.

### Ohio.

NOBLE COUNTY MEDICAL SOCIETY.—Dr. Charles H. Higgins, Zanesville, acting for Dr. Edmund C. Brush, Zanesville, councilor for the eighth district, went to Caldwell, November 15, to organize a medical society for Noble County.

COLUMBUS (EAST SIDE) MEDICAL SOCIETY.—At a meeting held in Columbus, December 6, at which 25 physicians of the East Side were present, it was decided to form an organization.



Dr. George M. Clouse was elected temporary chairman, and Dr. Grace Welch, temporary secretary.

#### Oregon.

JOSEPHINE COUNTY MEDICAL ASSOCIATION.—The physicians of Josephine County met recently in Grant's Pass and organized a medical society on the standard plan. At the last meeting the association put itself on record as opposed to the lodge or contract system of the practice of medicine.

#### South Carolina.

LAURENS COUNTY MEDICAL SOCIETY.—At the annual meeting of this society a reorganization was effected on the standard plan, under the direction of Dr. Orland B. Mayer, Newberry, councilor for the third district. The officers elected were as follows: Dr. John H. Miller, Cross Hill, president; Drs. William H. Gial, Laurens, and S. F. Blakely, Ora, vice-presidents; Dr. A. J. Christopher, Laurens, treasurer; Dr. Rolfe E. Hughes, Laurens, secretary, and Drs. W. D. Ferguson, Laurens; Jesse H. Teague, Laurens, and T. L. W. Bailey, Clinton, censors.

SIXTH DISTRICT MEDICAL ASSOCIATION.—At the annual meeting of the Pee-Dee Medical Society and the society of the Sixth Councilor District, held in Florence, November 15, under the presidency of Dr. Frank H. McLeod, councilor of the district, it was decided to merge the two organizations. The following officers were elected: Dr. James L. Napier, Blenheim, president; Drs. James Evans, Florence; Joseph F. Dusenberry, Conway; Joseph C. Lawson, Darlington, and C. Henslee, Dillon, vice-presidents, and Dr. Bery G. Gregg, Florence, secretary and treasurer. A committee was appointed to revise the constitution and to report at the next meeting.

#### Tennessee.

WILSON COUNTY MEDICAL SOCIETY.—The physicians of Wilson County met recently at Lebanon and organized a medical society with the following officers: Dr. G. R. Gwynn, Lebanon, president; Dr. Jerry W. McFarland, Corums, vice-president, and Dr. A. O. Eskew, Partlow, secretary and treasurer.

SULLIVAN COUNTY MEDICAL SOCIETY.—The Bristol Medical Society, at its regular meeting, December 4, was formally disbanded and in its stead was formed the Sullivan County Medical Society on the standard plan. Dr. McMinn Pearson was elected president; Dr. M. B. St. John, vice-president, and Dr. Nathan H. Reeve, secretary and treasurer, all of Bristol. The Virginia members of the society will be entitled to retain their membership as privileged members and will enjoy the same privileges as the Tennessee members, with the exception of membership in the State Medical Society of Tennessee.

#### Texas.

BOWIE COUNTY MEDICAL SOCIETY.—At a meeting of the members of the Bowie County Medical Society and visiting physicians, November 17, to hear Dr. J. N. McCormack, a motion was made and unanimously carried that the secretary of the Bowie County Medical Society express its thanks for the very interesting and instructive addresses of Dr. McCormack, chairman of the Committee on Organization of the American Medical Association, and that a copy of these resolutions be sent to the Secretary of the American Medical Association.

We feel that Dr. McCormack has done us a great deal of good, that new interest has been aroused and that many new members will be the result of his work.

T. F. KITTRELL, Secretary.

## Society Proceedings

### COMING MEETINGS.

American Dermatological Association, New York, Dec. 28-30.  
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 28-29.

### SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

*Eighteenth Annual Meeting, held in Louisville, Ky., Dec. 12-14, 1905.*

Under the Presidency of Dr. LEWIS C. BOSHER, Richmond, Va.

#### Surgical Repair of Injured Nerves.

DR. J. SHELTON HORSLEY, Richmond, Va., classified the surgical methods of repair as follows: 1. Simple nerve suture, including all cases where the ends of the nerve are brought into direct contact and sutured, even when nerve stretching or re-

section of the long bone may be necessary. 2. Flap operations, which are usually unsatisfactory. 3. Nerve bridging. By this term is meant those cases in which a foreign substance is used to bridge over the defects between the ends of the divided nerve. This includes not only transplantation of nerve tissue from lower animals, but also *suture à distance*. 4. Nerve implantation or anastomosis. Under this head are included those cases in which the ends of an injured nerve are implanted into a healthy nerve.

He reported a case falling under the last classification. The patient suffered an injury as a result of which the upper part of the median nerve was destroyed for two and a half inches and the musculo-spiral injured in the lower part of the arm, with paralysis of all muscles in the hand and forearm except those supplied by the ulnar. Three months after this the median was implanted laterally into the ulnar. Fourteen months later both flexion and extension returned to a marked degree. At that time the musculo-spiral was cut across and implanted laterally into the median. Ten months after the second operation sensation and motion of the hand and forearm had almost completely returned. In discussing several points connected with the case Dr. Horsley concluded that the extensors must have been supplied through the anterior interosseous of the median, because flexion and extension improved simultaneously, and because extension was not interfered with at the second operation, when the musculo-spiral was completely divided.

#### DISCUSSION.

DR. CHARLES H. MAYO, Rochester, Minn., said one question that interests him more especially is the difference in the ability of repair of a sensory nerve and a motor nerve; also combined sensory and motor nerves. For instance, about the head, where we have the purely motor and sensory nerves, it is almost impossible to keep a sensory nerve from uniting itself. It will get out and grow for inches and repair itself; but a sensory nerve having peripheral impulses toward the center seems to lack regeneration like a motor nerve in which the impulse comes from the center out. He has taken out the infraorbital, plugged the opening with silver, and has had a case as many as seven years without return of sensation in that area, yet within a few months, after operating again, and removing the silver plug, the sensory nerve which had been lying dormant for this length of time, would get out, hunt up a partner, so to speak, and go to work. Take the motor nerve of the arm, where there are acute sensory and motor nerves, we will get more rapid regeneration because of the peripheral impulses. and as the sensory nerve of the arm is so much in excess over that of the nerve of the leg, we will get earlier repair in the surgery of nerves of the arm than we will in the nerves of the leg.

#### Foreign Bodies in the Esophagus.

DR. STUART MCGUIRE, Richmond, Va., said that the diagnosis of foreign body in the esophagus is based on the history of the case, the external palpation of the neck, the passage of an esophageal bougie, and finally by the use of the x-ray. The character and location of the foreign body being determined, the practical question is how to remove it. If it is round or smooth, efforts should be made to extract it with forceps and probangs, or to make the patient eject it by swallowing masses of partially masticated food and then vomiting. If it be small, it may seem wise to endeavor to push it into the stomach. None of these expedients should be tried when the foreign body is pointed, sharp or angular. Under modern surgical technic an open operation is the safest procedure. There are two means of approach, one by an external esophagotomy, the other by a gastrotomy, and the selection of the method depends on the location of the impaction. If it is opposite the cricoid cartilage, an esophagotomy should be done; if it is below the level of the supraclavicular notch, then gastrotomy should be performed.

As an illustration of the operations of esophagotomy and gastrotomy he reported 2 cases. In one the patient, aged 10, while playing with a glass stopper, put it in her mouth and swallowed it. It lodged in the esophagus opposite the cricoid cartilage and produced complete obstruction. The foreign body was removed by an external esophagotomy.



In the second case, a baby aged seven months, while being dressed, seized an open safety-pin and put it in its mouth. The mother, in her efforts to remove it, pushed it first into the fauces and then into the esophagus. The pin was removed in this case by a gastrotomy.

## DISCUSSION.

DR. J. WESLEY LONG, Greensboro, N. C., reported the case of a forty-six-day-old infant who had swallowed an open safety-pin; the pin lodged in the esophagus opposite the two cricoid cartilages. A radiograph, however, showed that the point of the pin was below the arch of the aorta. It produced constriction of the esophagus where the left bronchus crosses it, and the pin was removed by an external esophagotomy without shock. He thinks there are some cases in which this operation is preferable to gastrotomy.

DR. W. S. GOLDSMITH, Atlanta, Ga., mentioned the case of a patient who swallowed the concave part of a dental plate, which lodged in the esophagus, and was retained for a period of four months. At the end of this time patient was very much emaciated and weak. After locating the foreign body, efforts were made to extract it with forceps, but this could not be done. It then occurred to him to try Bull's method of attaching a series of sponges to a long silk ligature and using an esophageal bougie, passing it out through the mouth and leaving in position the series of sponges. After attaching the bougie, he said it is a simple matter by a few sweeping movements backward and forward to push the foreign body into the stomach and extract it through a gastrotomy opening. The foreign body in this case was of such consistency that the *x*-ray was of no value.

DR. H. A. ROYSTER, Raleigh, N. C., narrated the case of a child 2 years of age who, two weeks previously to his seeing the case, had swallowed the wheel of a tin toy wagon. The child was able to swallow liquids, but not solids. During this time it subsisted on milk and liquid food. He used a medium-sized shotted semi-elastic bougie for the purpose of an examination; this passed into the esophagus, met with some resistance on its way, after which he was enabled to pass it farther without destruction. After applying a mouth-gag he was enabled to extract the foreign body with an esophageal forceps. The foreign body lay transversely across the esophagus.

DR. J. SHELTON HORSLEY said that if a foreign body can not be removed by ordinary means, no time should be lost in resorting to early operation. He reported the case of a child who had swallowed a camel from a grab-bag. The child put it into its mouth; it was situated a little lower than the level of the larynx. He tried to extract it by several different methods, but was unsuccessful. He saw the child on the fourth day after it had swallowed the foreign body, did an esophagotomy, and removed it with comparative ease. The esophagus was injured and gangrenous. Septic symptoms developed, and the child died on the fourth day following the removal of the foreign body. He thinks the child's life might have been saved by an earlier operation.

DR. CHARLES M. ROSSER, Dallas, Texas, reported 2 cases of foreign bodies in the esophagus. In one the foreign body, an ordinary pin, was located by the *x*-ray, but could not be removed by ordinary means. Two-thirds of the pin was buried, but with the aid of the fluoroscope the pin was caught by its head and with forceps extracted. In the other case a child had swallowed a nickel, which was located within two or three inches of the cardiac end of the esophagus. Gastrotomy was performed and the foreign body extracted. The child lived about six or eight hours, then died, apparently without shock.

DR. RUFUS B. HALL, Cincinnati, reported the case of a child of a physician, five months old, who swallowed a safety-pin an inch and a half long. It remained in the esophagus for a time, but at the end of twenty-four or thirty-six hours the symptoms caused by its presence disappeared. The child was able to take the breast and thrived well. An *x*-ray picture was taken, which disclosed an open safety-pin in the pyloric end of the stomach. Parents declined to have an operation done for its removal until unfavorable symptoms developed. Several *x*-ray pictures were subsequently taken, but the child did not develop any symptoms referable to the presence of the

safety-pin. When the child was twenty-six months old it passed the pin by the natural route. The child is now 7 years of age.

DR. W. D. HAGGARD, Nashville, Tenn., related the case of a child eighteen months old who swallowed a pin, the head of which was as large as a cherry seed. As the child developed cough, the presumption was that the pin had lodged in a bronchus. An *x*-ray picture threw very little light in regard to the presence of the foreign body. The pin appeared to be located in a bronchus with its head down and to the left. The child had little or no pulmonary symptoms to justify an operation. At the end of ten days another *x*-ray picture was taken, but the symptoms were so slight that operation was postponed. Four days later another radiograph was taken, which failed to locate the pin, and shortly after this the child passed the pin by the natural route.

## Officers.

The following officers were elected for the ensuing year: President, Dr. George H. Noble, Atlanta, Ga.; vice-presidents, Dr. Stuart McGuire, Richmond, Va., and Dr. E. Denegre Martin, New Orleans; secretary, Dr. W. D. Haggard, Nashville, Tenn. (re-elected); treasurer, Dr. Charles M. Rosser, Dallas, Texas (re-elected).

Baltimore was selected as the place for holding the next annual meeting.

(To be continued.)

## CALIFORNIA ACADEMY OF MEDICINE.

*Regular Meeting, held Oct. 24, 1905.*

DR. H. M. SHERMAN in the Chair.

## Cholecystectomy as an Initial Procedure.

DR. T. W. HUNTINGTON reported the history of a patient who had had repeated attacks of biliary colic, accompanied at times by jaundice, fever and clay-colored stools. At operation after a particularly violent attack, the gall bladder was found to contain 16 large stones and about four ounces of thick, grayish, opaque fluid. No stone could be found in the common duct. The gall bladder was drained, and the drainage tube was removed on the fifth day. The discharge of bile through the fistula continued, however. A few days after the operation the stools became clay-colored and remained so. Seven weeks after the operation the abdomen was again opened. No cause for the common duct obstruction could be found except an enlarged, hard head of the pancreas, probably due to a chronic pancreatitis. A cholecystenterostomy was then performed, using a linen thread to unite the lateral surfaces of the gall bladder to the duodenum, after the method of McGraw, and fortifying with a row of Lembert sutures. At subsequent operations it was necessary to reopen this anastomosis with a knife, after dilating the sinus, and finally to close the sinus itself. Since then the patient's recovery has been rapid and complete. Huntington said that cholecystectomy as a deliberately planned initial procedure is proper (1) in extensive trauma of the viscus where suture is impossible, (2) when there is a long standing and impermeable stricture of the duct, (3) in gangrene of the gall bladder, and (4) in malignant disease of the gall bladder. It is probably better not to leave in a contracted gall bladder following chronic cystitis in most cases (1) because there may be, as in the present case, an undiagnosed obstruction in the common duct, which could later be relieved by performing a cholecystenterostomy, and (2) because the drainage afforded through the cholecystostomy wound may be of value in relieving an infected biliary system.

## DISCUSSION.

DR. B. MACMONAGLE stated that there are other possible indications for a primary cholecystectomy. Dr. Clinton Cushing frequently performed this operation, in most cases with satisfactory results. In cholecystitis the gall bladder is infected, and if we can be certain that the common duct is open it might be justifiable to do a cholecystectomy and so remove the main seat of infection. Yet it is hard to exclude stones in the hepatic ducts which may later cause a common duct obstruction



and so, as a general rule, it is better to leave the gall bladder in at the operation.

DR. J. H. BARBAT believes that the gall bladder should be removed only when the cystic duct was absolutely occluded and a cholecystostomy could not, therefore, drain the bile ducts.

DR. T. W. HUNTINGTON said that it is difficult to determine whether the closure of the cystic duct is a temporary or a permanent one, and that a stone in the common or hepatic ducts can never be absolutely excluded.

#### Pseudo-tuberculosis of the Peritoneum.

DR. C. M. COOPER stated that of the many causes that may give rise to structures resembling true tubercles, the most important so far as the peritoneal cavity is concerned are animal parasites and foreign bodies. Tenia eggs and the hooklets of the echinococcus have both produced in the abdominal cavity a condition that resembles tuberculosis and can be distinguished from it only by finding the causative agents within the small nodules. Cholesterol crystals from a ruptured ovarian cyst and pieces of sponge that had been left in the peritoneal cavity at operation have produced similar conditions. Finally the foreign bodies may be food particles that have reached the peritoneal cavity through a perforated gastric ulcer, as in Hanau's case and the one here reported, that of a middle-aged woman whose illness had begun suddenly six weeks before with pain in the lower abdomen; no fever, vomiting or intestinal obstruction; pulse rapid and feeble; marked aversion to food. The abdomen was somewhat distended, with slight tenderness over its lower portion. Free fluid could be demonstrated within the abdomen. Dullness posteriorly over the ascending colon. Leucocytes, 12,000. At operation a large quantity of brownish fluid was evacuated from the peritoneal cavity and the intestines were seen to be studded with innumerable miliary tubercles. At autopsy a postcolonic collection of pus was found originating from a perforated gastric ulcer. Microscopic examination showed that the peritoneal nodules contained no tubercle bacilli, but did contain small food particles that had evidently escaped from the stomach through the perforated ulcer.

*Regular Meeting, held Sept. 26, 1905.*

DR. D. W. MONTGOMERY in the Chair.

#### Palpable Ulnar Nerves.

DR. C. M. COOPER showed a patient with a chronic inflammation of the joints, multiple glandular enlargements, and enlargement of the spleen. The ulnar nerves were thickened. Dr. Cooper believes that such thickening is far from uncommon and that it is most apt to occur in patients who have chronic joint affections of the hands. This fact should be borne in mind when enlargement of the peripheral nerves is found in suspected cases of leprosy.

#### Protection from the X-Ray.

DR. C. M. COOPER protects himself from the deleterious effects of the x-ray by standing in a leaden compartment and making all observations by means of mirrors. One mirror reflects a fluoroscopic image of a known test object and in this manner the penetrating quality of the rays can be estimated. Another mirror, by reflecting the tube itself, indicates the general character of the light. In this manner the operator is not exposed at all to the direct action of the light.

DR. B. F. CARPENTER stated that he knew of an x-ray operator who had no active spermatozoa in his semen as long as he was using this light regularly. Active spermatozoa, however, reappeared after he discontinued its use.

#### Underlying Conditions in Erythema Multiforme Exudativa..

DR. P. K. BROWN reported two cases of erythema multiforme exudativa which showed lesions in organs other than the skin. The first patient was a child 6½ years old that had had attacks of tonsillitis with endocarditis extending over a period of four years. In December, 1904, the patient had ten days of epigastric pain, and following this some fever and a punctate eruption over the trunk, shoulders and thighs. There was general glandular enlargement, the heart was more irregular than usual, and the murmur was louder. The urine contained

albumin, red blood cells, and a few casts. On the third day the patient suffered from pains in the ankle joints. Desquamation began on the fourth day and lasted six weeks. The affected areas desquamated entirely, even the nails taking part in the process. The second patient was the same age. During the first attack in January, 1904, the fever reached 104.2 and lasted three or four days. The first eruption appeared early, covered the whole body and was scarlatiniform in character, except on the shins, where it was more blotchy and irregular. There was general glandular enlargement. Eleven days after the onset, multiple miliary hemorrhages appeared over the body, and these were accompanied by hemorrhages from the mucous membranes and by signs of pericarditis. On certain parts of the body areas of circumscribed edema were visible. Desquamation lasted about two weeks. Blood cultures were negative. There was a marked anemia; hemoglobin, 28 per cent., and red cells, 1,700,000, with a relative increase in the mononuclear leucocytes. The child made a slow but uninterrupted recovery. In the year and a half that have elapsed since that time the patient has had eight or ten similar attacks, some of which have been very light, and only one was accompanied by extensive eruption and desquamation. In the beginning of the attacks undigested food is frequently found in feces, and the breath often has a heavy odor.

#### DISCUSSION.

DR. HOWARD MORROW stated that typical erythema multiforme desquamativa runs a course that is different from that described by the speaker. He was inclined to diagnose the cases reported as desquamative scarlatiniform erythema.

DR. D. W. MONTGOMERY has seen very few cases of erythema multiforme with severe internal lesions, other than joint pains, that do not yield to the salicylates.

#### SOUTHERN MEDICAL COLLEGE ASSOCIATION.

*Annual Meeting, held at Louisville, Ky., Dec. 11, 1905.*

Under the presidency of DR. CHRISTOPHER TOMPKINS, Richmond, Va.

Ten of the fourteen colleges of the association were represented. More stringent rules applying to the admission of students were adopted.

PRESIDENT TOMPKINS read an address on "The Advancement in Preliminary Educational Requirements." The suggestions set forth in the address, after considerable discussion, were resolved in a motion which was unanimously passed. The motion provided that from the present time until January, 1908, an applicant for admission to any college of the association must have had two years in a recognized high school or a certificate from an acknowledged preparatory school, besides a grammar school education. After Jan. 1, 1908, there will be required for admission a high school diploma, or a certificate of graduation from a recognized preparatory school, and the courses at the college shall be for four years of seven months each instead of six months, as is the case with some schools at the present time.

Since the last meeting five colleges not in the association have either filed applications for membership or will do so within a short time. Two of the colleges which have filed applications are the Medical Department of Epworth University, Oklahoma City, Okla., and the Medical Department of the Southwestern University, Dallas, Texas. The other three colleges are in Georgia and Maryland.

#### Officers.

The following officers were elected for the ensuing year: President, Dr. Christopher Tompkins, Richmond, Va. (re-elected); vice-president, Dr. T. H. Fraser, Mobile, Ala.; secretary and treasurer, Dr. G. C. Savage, Nashville, Tenn. (re-elected); executive committee, Dr. J. S. Kane, Nashville, Tenn.; Dr. W. B. Rogers, Memphis, Tenn., and Dr. Stuart McGuire, Richmond, Va.

The next meeting of the association will be held at the same time and place (Baltimore) as the Southern Surgical and Gynecological Association.



# American Medical Directory

The publication of the **AMERICAN MEDICAL DIRECTORY** was authorized in July. Since that date much work has been done.

The active assistance and co-operation of the licensing body in every state and territory has been secured. A complete list of all legally qualified physicians has been obtained from thirty-five states. Similar lists from all other states are in process of preparation. Official lists of graduates have been obtained from three-fourths of the medical colleges in the United States and Canada. This information is being rapidly completed.

A staff of over 6000 local correspondents, residing in every county and large town, has been organized.

Personal information has been secured directly from over 30,000 physicians. The best way to secure absolutely correct information is to obtain it from the individual himself.

## **HAVE YOU SUPPLIED THE ASSOCIATION WITH INFORMATION REGARDING YOURSELF?**

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(OVER)



# American Medical Directory

The American Medical Association is preparing material for a general directory of the Medical Profession of the United States and Canada. The book will be issued early in 1906. It will contain only the names of legally qualified physicians and graduates of recognized medical schools. It will furnish exactly the same information in regard to each physician whether he is or is not a subscriber to the book. It will contain a list of the important hospitals, medical colleges and societies, medical practice laws of each state, and other information of interest to physicians. It is desired that this directory shall be absolutely correct, and to this end personal information is requested from each physician practicing in the United States or Canada. It will be necessary to furnish this information once only, as it will be preserved in permanent form in a Biographical Card Index of the American Medical Profession. The following data will be given in the Directory, regarding each physician:—Name, year of birth literary degree received in course, Medical College and year of graduation, address, with office address and office hours

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5. My school of practice is \_\_\_\_\_

6. I am a member of the following medical societies \_\_\_\_\_

7. I have practiced at my present location \_\_\_\_\_ years, and at the following places for the years named: \_\_\_\_\_

Name each location and give dates.

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(OVER)



## OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held Oct. 5, 1905.

Dr. R. C. MORRIS in the Chair.

## Hemiterata.

DR. CHARLES S. BARNES exhibited a specimen belonging to the class of malformations known as hemiterata. The mother, aged 24, had previously given birth to two healthy children, the oldest 2 years of age. In the second pregnancy there was an excess of amniotic fluid. During the recent pregnancy only apparent abnormalities were increased thirst and undue abdominal enlargement. Labor, delayed because of the excessive distension of the abdomen, was terminated spontaneously after manual rupture of the membranes. The latter was followed by the discharge of about four quarts of amniotic fluid. The child, a male, was apparently well formed, and, for the first twenty-four hours seemed healthy. At the end of this time it began to regurgitate all liquid given by mouth, and later frequently vomited much dark green liquid similar to that seen in intestinal obstruction of the adult. Enemata were ineffective in freeing the bowels. Death by exhaustion occurred at the end of seventy-two hours.

The probable diagnosis of intestinal obstruction was confirmed by the specimen. Two inches of the duodenum, beginning one and one-half inches below the pylorus, consist of a small impervious fibrous cord. Below the latter, for a short distance, the gut is abnormally small but patulous, thence gradually shading into a normally formed gut. The presence of hydramnios raises the interesting question as to whether the abnormality and the hydramnios are related as cause and effect. Though not definitely determined in this case, it seems more than probable that the lesion of the gut in this region may have caused stenosis of the umbilical vein.

A few practical thoughts suggested by this case are: 1. The probable futility of any surgical intervention in this and similar cases, although it would be advisable to try it, if positive diagnosis can be made. 2. The complications of parturition incident to hydramnios. 3. The frequency of the association of hydramnios and fetal abnormalities. 4. The obscurity of the etiology of hydramnios and the desirability of careful search for pathologic lesions as causes. 5. As valuable knowledge is often to be acquired by postmortem study of the fetus, whatever may have been the apparent cause of death, such study should always be made when possible.

## Backache in Women and Its Treatment.

DR. WILLIAM E. PARKE said that backache is a frequent symptom in women coming to gynecologic dispensary service. In a record of 1,000 cases 25 per cent. or more were found to present this symptom. The seat of pain is the lumbar, the sacral or the coccygeal region. The lumbar pains are usually due to some general disorder, while the sacral and coccygeal pains are more frequently due to some disorder of the pelvic viscera, such as lacerations, displacements, inflammations or tumors. The most frequent cause of backache is neurasthenia and this in turn may be due to the pathologic condition of the pelvis. Backward displacements are particularly prone to cause backache, due, perhaps, to impeded circulation. It was present in this condition 194 times and absent only 40 times. Backache was noted in 46 patients without gross pelvic lesions. Many of these doubtless had under-developed or cirrhotic ovaries. Backache is sometimes due to toxemia from intestinal absorption of imperfect metabolism, also to congestion of the menstrual period. Pain in the coccyx is due to inflammation, dislocation or fracture. It is often a pure neurosis. Many diseases of the bowels, muscles, kidneys and nerves which give rise to backache are not referred to in this paper.

The treatment of backache is complex and often unsatisfactory. Medical and surgical measures are employed. Toxic and lumbar backaches are treated with laxatives, diuretics and colon irrigation. Some are given salol, salicylates or iodids. To the congestive type are administered ergot, digitalis, strychnin and bromids. The anemic are given iron and tonics. Temporary relief is afforded by the use of local counter irritation. For neurasthenics the rest cure is advised. Surgical measures have for their object the sewing up of lacerations, the correcting of malpositions and the removal of diseased organs and tumors.

## DISCUSSION.

DR. CHARLES P. NOBLE believes that renal trouble seldom causes backache. In cases of movable kidney, as a rule, there is no backache. When present, the pain is due to congestion or to torsion of the ureter. If a loose kidney becomes partly twisted so as to interfere with return circulation, the kidney becomes congested and there is a certain amount of local soreness that may be felt in the back.

DR. WILLIAM KRUSEN emphasized the value of the drinking of large quantities of water in these cases. Frequently a rheumatic diathesis is associated with pelvic disease. He has never seen a case of nephritis with backache, although people think they have kidney trouble when they have backache. Pains may be due to the lithemic diathesis, and a certain proportion of backache is due to traumatism. The fact that women are habitually constipated and that they drink small quantities of water are two factors to be borne in mind in treatment. Hydrotherapy plays an important part in the relief of symptoms.

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Miscellany

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**An Efficient Army Medical Department.**—In discussing this Dr. G. Frank Lydston says that the concentration of abundant, up-to-date medical supplies—in the purchase of which boodle should have no part—in centers which present suitable transportation facilities is a *sine qua non*. Surgeons should be given more authority and a freer hand, and should be appointed for their capacity and not for their political pull. Several thousand miles, more or less, of red tape should be eliminated from the medical department and thrown into the ash-heap, where it properly belongs.

**The Profession of Medicine.**—In two respects the medical profession deserves the grateful recognition and regard of all other callings in modern life. It has always insisted that the practice of medicine is a profession and not a trade. Trade is occupation for livelihood; profession is occupation for the service of the world. Trade is occupation for joy of the result; profession is occupation for joy in the process. Trade is occupation where anybody may enter; profession is occupation where only those who are prepared may enter. Trade is occupation taken up temporarily, until something better offers; profession is occupation with which one is identified for life. Trade makes one the rival of every other trader; profession makes one the co-operator with all his colleagues. Trade knows only the ethics of success; profession is bound by lasting ties of sacred honor.—President Faunce of Brown University, Addressing the Rhode Island Medical Society.

**Means to Correct the Dispensary Abuse.**—Imhofer of Prague discusses, in the *Prag. med. Wochft.* for October 5, the best means to combat the dispensary abuse, which has assumed large proportions there. He suggests as the measures best adapted for local conditions that all applicants to the dispensary should have to pass first through a room where an inspector demands a certificate testifying to the bearer's lack of means or a line from a physician indorsing his application. A card is then given the applicant and he can then proceed to the dispensary proper, or to the clinic or ward. No one is admitted to the dispensary or clinic without presentation of a numbered card of this kind. The inspector is always at liberty to pass an applicant directly into the dispensary or clinic when circumstances demand the avoidance of red tape delay, and an applicant accompanied by his physician should also have free right of way. By some such sifting process the dispensaries and hospitals could be kept free for the poor, while those able to pay for medical attendance would be excluded from them.

**An African Poison Test.**—Dr. F. C. Wellman describes in the *Journal of Tropical Medicine* the poison test used in Africa to determine the guilt or innocence of a suspected person. He recently saw the test made with fatal consequences. He says:

The agents which are generally used in this region are obtained from two *Leguminosæ*, i. e., bark of the Ombambu tree (*Erythrophloeum guinense*) and leaves of a bush called Okalembe (*Jepthrosi vogeli*), together with the rootlets of another bush belonging to the *Polygalaceæ* called by the natives Utata (*Securidaca longipedunculata*). All three are powerful poisons. These substances are



dried, powdered with various others, placed in the bottom of a small gourd and carefully covered with the resinous exudation from the Ulemba tree (*Ficus psilopoga*). On top of this is poured an evil-smelling mixture of different harmless solutions. Over the surface of the liquid is sprinkled a light-colored powder. The witch doctor, with many mystic incantations and flourishes, stirs the mess a couple of times with his finger, taking care not to touch the bottom. Then the fortunate party whom it is proposed to acquit drinks. The mixture is again stirred, scratching the resin at the bottom, and liberating the poisonous substances. After a few minutes of ceremonies and rites to gain time for the poison to thoroughly permeate the whole, the draught is once more stirred and the victim (who is always made to drink last) quaffs to his doom. Another method, similar in principle, is to have a skin bag with two compartments, one containing the poisonous powdered substances and the other an innocuous powder of the same color, sprinkling these in turn over the top of an inert decoction.

### A SIMPLE CLASSIFICATION OF INSANITY.

THEODORE DILLER, M.D.

PITTSBURG, PA.

"In the interest of a simple classification of scientific terms," Dr. John B. Chapin, in his last annual report as superintendent of the department for the insane of the Pennsylvania Hospital, announces that the statistical tables of this institution have been modified. Turning to these tables one finds only these forms of insanity: Melancholia, mania, dementia and delirium from toxic conditions, paresis, epilepsy and imbecility—the same which were known to Pinel and Esquirol.

Dr. Chapin states that 60 forms of mania and 57 forms of melancholia, and 21 forms of dementia have been formulated; and apparently wearied and disheartened by the various attempted elaborate classifications of the insanities and of the failure of any general agreement between them, he goes back to the simplest of all classifications, that best known in the history of psychiatry, to the general medical profession and to the courts.

While one may readily sympathize with Dr. Chapin's feelings and desires it is not so easy to feel sure that this simple classification really simplifies the subject. Indeed, the question may be fairly raised as to whether it does not make it more hazy. The Gordian knot of the classification of the insanities is not so readily cut.

It would be interesting to know how Dr. Chapin would classify the cases commonly called paranoia or monomania, many of which exhibit neither mania, melancholia or dementia to any conspicuous degree; and how he would similarly dispose of cases known to other alienists as dementia præcox, maniac-depressive insanity, etc.

Certainly such a simple classification can convey but little information to the reader of Dr. Chapin's report. Much could be argued for a partial etiologic classification as compared with it. That a psychosis is of toxic or infectious, of evolutionary or involutional origin may generally be ascertained with a considerable degree of accuracy; and a classification which sets forth these facts is helpful to him who peruses it; and hospital reports are intended to be of use to those who read them.

No classification of the enormous group of morbid mental phenomena commonly called insanity has ever been made which has met with general approval. None can be made to-day. Alienists generally are agreed, however, that a classification on a pathologic basis would, if it were possible, be the ideal classification; and while such a classification is not possible to-day, it is growing less and less impossible. It would seem that alienists should classify "insanities" as fully as is now possible on this basis, leaving to the future its full consummation. To this end it is always helpful to regard every case of insanity as an expression, or more properly, as a partial expression of a physical disease or maldevelopment, applying to it, besides the ordinary tests of psychology, those of the best current methods of clinical medicine.

In the meantime it would appear that a moderately extended classification of the insanities as given by Kraepelin, for instance, is of more practical value than the simple classification to which Dr. Chapin returns in that it allows for a better recognition and a better prognosis and treatment of the various physical diseases which express themselves chiefly or conspicuously by morbid mental phenomena commonly called insanity.

### THE NEWSPAPER AND MEDICINE.

H. SHERIDAN BAKETEL, M.D.

JERSEY CITY.

The various news stories on medical topics, which appear in the daily press from time to time, are mines of mirth to those who know. Few articles on medical subjects which appear in the columns of the average newspaper are either truthful, accurate or scientific.

While the perusal of these stories often excites the risibilities unduly, there is a serious side to the matter. Newspapers, which to a very great extent are the popular teachers of the masses, are educating the people in the wrong direction by the dissemination of misstatements. When a part of the press condemns antitoxin because a few persons have died subsequent to its administration, thousands of people are prejudiced against this remedy. Many of these misinformed people would doubtless refuse to allow antitoxin to be used in their families if occasion required and, as a result, innocent lives would be offered up as a sacrifice on the altar of newspaper inaccuracy.

The medical profession is to blame for this state of affairs, because, as a whole, the papers do all in their power to present actual facts to their readers.

I know from previous years of experience as an editor in the metropolitan field that many editors take as much care to verify the statements given them as a bank cashier does to verify signatures to checks.

The field of the newspaper man is wide. Although often a college graduate, he can not reasonably be expected to be equally versed in medicine, law, theology, engineering and the other professions, into which subjects his work leads him almost daily. It is not to be wondered at, then, that a great New York paper should solemnly declare that a great surgeon (giving his name, of course), performed a marvelous operation which consisted in tying off the common "catotid" artery, an operation hitherto unknown, etc.

The average newspaper does not desire to make itself the laughing stock of the medical public by the publication of foolish and unscientific statements. The editor is usually actuated by high motives and realizing that the bulk of the people believe what they read, endeavors as far as in him lies, to lead his readers along the paths of truth and right.

He publishes an article on some medical topic, furnished by a young reporter and obtained in good faith, possibly from a drug clerk or hospital orderly. He is ignorant of the fact that its subject matter is rankest nonsense, for none of his medical readers has taken the trouble to so inform him. Thus he goes on publishing misstatements from the same irresponsible source, each time doing more and more to injure the cause of medicine in the eyes of the public.

Had some medical man called up the editor on the telephone and informed him of the blunders in the article the wielder of the pen would have been put on his guard. The young reporter would have heard from "the old man" in no uncertain terms, the drug clerk or hospital orderly as a source of medical misinformation would have been relegated to innocuous desuetude, and when medical subjects were treated in the future a reputable physician would have been consulted. It is in this way that the profession is to blame for the idiotic and inane medical tales which often appear in newspapers.

This growing evil can be remedied by a definite plan of campaign on the part of the trustees of the American Medical Association, the national clearing-house of things medical, which would have as an end the publication of medical truths in all the important papers of the country.

There is hardly an editor in the United States who would not gladly print from time to time accurate articles on medical topics, written in careful newspaper English, free from long and unusual medical terms.

A series of well written articles on the situation in Panama, for example, showing the great progress made in sanitary matters, and the institution of the very latest methods known to hygienic science by Colonel Gorgas and his able assistants and demonstrating how, by careful living along stated lines, the residents of the Canal Zone could obviate disease, would go



far toward assuaging the fear of those who have relatives in Panama. If the present campaign against the health conditions along the line of the canal is continued, it will be quite impossible to obtain competent men to go there. The proper kind of publicity would change public opinion.

Again, take the casualties attendant on the barbarous manner in which we celebrate Independence Day. This year, according to newspaper reports, over fifty persons lost their lives by the explosion of powder in some form, while hundreds were maimed, many permanently. A series of articles published throughout the country in May and June, showing the awful results of the past celebrations of the Fourth, and the wide wake left by tetanus and its kindred diseases, would assist in arousing the people against this national slaughter and would conclusively demonstrate that patriotism could be shown in ways other than by killing and maiming the youth of the land.

There is a widespread prejudice among the masses against hospitals and operations. Surgeons are looked on as butchers, seeking whom they may knife. Carefully prepared articles could combat these foolish notions and could bring out the benefit derived from hospitals and operative procedures.

The patent medicine evil is the curse of the nation. Millions of people lay countless millions of dollars in the greedy maw of this ogre. Men and women contract habits from the constant use of patent medicines that forever after hold them in tenacious embrace and prove their ultimate ruin.

In no way could the American Medical Association do a greater service to mankind than by demonstrating to the public, through the daily press, the fallacy of the use of patent, secret nostrums. Of course, some papers, which carry the advertising of these concerns, would not publish articles attacking the business, but a majority of the reputable journals would gladly join in a righteous fight to put the vendors of alcohol and opiates, under high-sounding names, out of business.

Space forbids going further into details concerning the great undeveloped field for medical publicity, other than to say that seasonable articles should be furnished, instructing the people how to prevent the diseases peculiar to the various times of year and how to care for their bodies and their minds.

If such a scheme were put into effect the people would be better off, and would have far more respect for the physician, and the work he is striving to accomplish in preventive medicine and in the alleviation of disease.

The practice of medicine would be raised to a higher plane. Medical men, oftentimes classed by the public as high-grade artisans, would assume the high position to which they are entitled and which their fellow-practitioners in Great Britain already occupy.

To carry out this scheme will take much thought. The most feasible plan, to my mind, is to have the trustees establish a publicity bureau, the chief of which should map out the plan of campaign, oversee the preparation of articles, and communicate with the editors of the large papers concerning their acceptance of special articles. In short, the chief should act in a capacity similar to the managing editor of a metropolitan paper.

If the special stories were put up in the style usually adopted by Sunday papers, carefully edited and suitably illustrated, they would be accepted by practically every decent paper in the country. No two papers in the same city will take the same article, hence it would be necessary to have various separate lists, to which stories would be sent and which would not conflict with the other.

Besides this, it is extremely probable that arrangements could be made with the plate associations which supply specials in stereotyped form to all the weeklies and small dailies in the country, to furnish them with weekly contributions, so that the propagation of medical truth would extend to the very ends of the country, with the result that every reader of a paper from Maine to California and from Dawson City to Key West would profit by reading medical facts, not fancies.

The medical publicity bureau could also inaugurate a method for local, county and state societies to make such medical news public as is deemed necessary, for the correction of evils

in their midst and for the squelching of the physician, who calls up the newspaper office every time he attends an accident case, performs an operation or goes out of town.

If the trustees of the Association will take up this matter either along the lines indicated or in a manner which seems best to them, I know that five years from now all the members of the medical profession in the United States will rise up and call the American Medical Association blessed.

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## Therapeutics

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[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

### Lobar Pneumonia in Children.

Dr. G. A. Sutherland, in the *Clinical Journal* (London), states in the treatment of lobar pneumonia in children that the greater number of cases, if put to bed, with fresh air and suitable diet, will generally recover. These cases, however, although the natural course of the disease can not be shortened, must be carefully observed, in order to relieve any troublesome symptoms which are liable to arise in the course of the disease, and to meet complications which are not unlikely to occur. Among these symptoms is pleuritic pain, which causes the child a great deal of suffering, and in the treatment of this symptom he recommends the application of a turpentine fomentation or a linseed poultice over the painful area for half an hour or until the skin is thoroughly reddened. This may be repeated some hours later, but it should not be kept on the chest continuously, irrespective of the presence of this symptom. He especially emphasizes, therefore, the value of these hot moist applications if used interruptedly.

In the diaphragmatic form of pleurisy two or three leeches may be applied over the affected area in combination with strapping of the affected side. When such treatment fails he recommends as a last resort the use of opium and morphin.

In this connection he dwells on the contraindication of opium in pneumonia, because of its toxic effect on the respiratory center, and states that it should not be given except in extreme circumstances. Coughing is another symptom which is very disturbing to the patient, due in part, perhaps, to the irritation of the exudate which is present, or to the presence of a bronchitis. In either case the interrupted use of hot local applications, as described above, is of value.

He speaks also of the position of the patient in bed as being a cause in producing these paroxysms of coughing, and recommends that the position of the child be changed from time to time. If necessary, the use of steam inhalations may be resorted to in irritable conditions of the bronchi. It may be used for from ten to fifteen minutes at a time, and repeated at intervals of every four or five hours. When there is persistent coughing, with or without much secretion, he recommends the tincture of belladonna in doses of from 5 to 10 minims (.30-.65), repeated as the individual case requires. It is especially recommended when the secretion is in excess, as it dulls the sensory branches of the vagus throughout the lungs, and stimulates the respiratory centers. In some cases from 5 to 10 minims (.30-.65) of tinctura opii camphorata will relieve the hacking cough present.

Pyrexia is another condition in the course of pneumonia which sometimes must be combated, but it must be remembered that the height of the temperature is not necessarily an indication of the gravity of the disease, but prolonged high temperature after the seventh day tends rapidly to weaken the patient and must be carefully watched. The author deprecates the use of antipyretic drugs in the reduction of the temperature of pneumonia. In infants the employment of a hot bath, which may be rapidly cooled to 85 F., will frequently cause a drop in the temperature of from one to two degrees, and at the same time will relieve the restlessness of the patient. In older children he recommends sponging in bed with



hot or tepid water, and in extreme nervous disturbances the temporary application of cold cloths or the icebag to the head. He also recommends the internal use of liquor ammoniæ acetatis in dram doses (4.00) as an antipyretic. This rise in temperature, however, may not be due to the toxic effect of the pneumococcus alone, but may be caused by gastrointestinal disturbances, and consequently calomel in small doses may relieve the hyperpyrexia, and the restlessness.

In the treatment of insomnia in these cases he recommends cold applications to the head or hot applications to the chest. The use of ammonium bromid in from 5 to 10-grain doses (.30-.65) is recommended as effective and as the least harmful of all the hypnotics. In some cases a dose of brandy, drams 2 to 4 (8.00-15.00) in hot water is recommended as a very efficient hypnotic.

Any signs of cardiac weakness must be carefully watched for, such as dilatation of the left ventricle or failure of the right heart, and at the onset of these signs he recommends the use of alcohol in the form of brandy or wine, strychnia and ether. For an infant one year old in the precritical stage of pneumonia he recommends strychnia in doses of from 1/100 grain to 1/200 grain (.0006-.0003) every four hours. If dilatation of the right ventricle is present, with cyanosis and dyspnea, showing an overaction of the right side of the heart, some depletion of blood is recommended. He therefore recommends the application of three or four leeches over the hepatic region, followed by a hot fomentation to encourage further bleeding. In connection with this treatment he advises further assistance by a two or three-grain dose of calomel, followed by a saline, in addition to the heart stimulants already recommended. Dry cupping is sometimes advised, employed over the base of the lungs posteriorly, as a substitute for the leeches.

He has not seen much benefit from the use of oxygen inhalations.

In some cases dyspnea and rapid breathing arise, which apparently do not depend on the pulmonary or cardiac condition. In such cases the cause is probably the failure of the respiratory center, due to the effects of the toxemia, and in these instances he recommends atropin as a direct respiratory stimulant, combined with strychnia, given in doses of from 1/100 to 1/200 grain (.0006-.0003) hypodermically every four hours for a child 5 years of age.

Laryngismus Stridulus.

Comby, in the *Medical Bulletin*, recommends that in these sudden paroxysms hot compresses be applied to the anterior portion of the neck, and that an emetic be given internally. The child, of course, should be confined to the house, and given hot drinks with antispasmodic remedies. The following combination is recommended in such conditions:

R. Tinct. belladonnæ.....m. xx 1|30  
Potassi bromidi.....gr. xxx 2|  
Syrupi aurantii corticis q. s. ad.....3i 30|  
M. Sig.: One teaspoonful every three hours in a little water.

In severe cases the dose of the bromid may be increased. The following combination is sometimes recommended as a substitute for the foregoing:

R. Spiritus chloroformi.....m. x 65  
Glycerini .....3i 4|  
Syrupi tolutani .....3v 20|  
Aquæ dest. q. s. ad.....3ii 60|  
M. Sig.: One teaspoonful at a dose, and repeat every half-hour if necessary.

In some cases in which asphyxia may be probable, rhythmic traction of the tongue is recommended previous to intubation or tracheotomy. He recommends as prophylactic treatment of this trouble that any vegetative growths in the nasopharynx should be removed as well as large faucial tonsils, if present.

Mercury in Parasypilitic Conditions.

In the treatment of certain stages of syphilis and in those diseases due to the toxins of this disease, as tabes dorsalis, Dr. Frank Billings recommends mercury given in the usual form, as inunctions, by the application of the ointment to different portions of the body each day, preferably the inner portions

of the thighs, the calves of the legs, the sides of the thorax, and the inner portion of the arms. He also recommends as a substitute for this method of introducing mercury into the system, the injections of the bichlorid of mercury deeply into the muscular tissue, about two or three times a week. The dose of the bichlorid recommended is about 1/25 of a grain (.0025). He especially recommends as probably the most suitable preparation of mercury in the treatment of these parasypilitic conditions the salicylate administered in the following combination:

R. Hydrargyri salicylatis.....gr. xxiv 1|65  
Liquid paraffin .....3ss 15|  
M. Sig.: Five minims injected subcutaneously two or three times a week.

The advantage of this latter form of medication is that it is taken up very gradually by the system, and consequently the effects of mercury are present for a number of weeks or months after these injections have been made, owing to this slow absorption. The size of the dose may be gradually increased, if necessary, to meet the requirements of the case. The iodids are recommended in conjunction with this treatment, and are to be given in gradually increasing doses by the mouth.

The Treatment of Laryngeal Manifestations of Influenza.

E. J. Moure, in an abstract in *Merck's Archives*, states that the laryngeal manifestations of influenza may be described under four different forms—the catarrhal form, the infiltrated edematous form, the ulcerative form, and the myopathic form. As local treatment in these different conditions he recommends an inhalation of the following combination:

R. Menthol.....gr. x 65  
Balsam peruviani .....3ss 2|  
Thymol .....gr. i 06  
Tinct. eucalypti q. s. ad.....3ii 60|  
M. Sig.: One teaspoonful floated on a pint of hot water as an inhalation.

In conjunction with this treatment he recommends hot fomentations externally applied to the neck and throat, as especially useful in the painful congestive forms. Scarification, according to the author, may be necessary in the edematous form, when the following combination fails to give the proper relief:

R. Cocainæ hydrochlor.....gr. ii-iiiiss 12-.20  
Sol. adrenalin (1-1,000).....m. xl 2|65  
Glycerini  
Aq. menth. pip., āā.....3vi 24|  
Aquæ q. s. ad.....3vi 180|  
M. Sig.: To be used as a spray three or four time a day.

Later in the course of the disease, after the infiltration has subsided, he recommends applications of a silver nitrate or zinc chlorid solution, 1 to 100, locally to the affected parts.

Medicolegal

Competency of Witnesses.

The Supreme Court of Georgia says of a witness, in *Macon Railway & Light Co. vs. Mason*, that, had he been licensed under the laws of that state to practice medicine, he would have been competent to testify as an expert witness on the fact being made to appear that he was a licensed physician. But, generally, nothing more is required to entitle one to give testimony as an expert than that he has been educated in the particular trade or profession. Knowledge gained by consistent and close study of medical works renders one competent to testify as an expert concerning the matters of which he has thus learned. It is not essential that he should be actively engaged in the practice of medicine. Nor is it essential that one who really has a scientific education on the subject should be a graduate of any medical college, or have a license to practice from any medical board. What he knows is what really qualifies him to express an opinion as an expert, and a diploma or license is only important as furnishing satisfactory evidence of his competency as a witness. Accordingly, a person who is neither a physician nor surgeon can express an opinion on a medical question, when the matter inquired about lies within the domain of the profession or call-



ing which the witness pursues. But not being a licensed practitioner, it is necessary to lay the proper foundation showing him to be an expert as to the subjects on which he proposes to express his opinion.

The court also holds that the wife of an injured party is not, because of the marital relation existing between them, and the policy of the law to preserve inviolate the confidential communications between husband and wife, incompetent to testify as to the nature of the injury received by him, and its effect on his physical condition, when there is nothing to indicate that her knowledge on the subject was gained because of any confidence which he reposed in her as his wife. The wife may testify to symptoms which she has observed indicating that her husband suffered from headache, but she should not be permitted to generalize or state any bare conclusion on her observation of others who had headache, she not professing to be an expert.

#### New Compulsory Vaccination Law.

Chapter 58 of the Acts of West Virginia of 1905 amends section 21 of chapter 150 of the Code of that state by providing that the county court of any county in the state, on petition of 100 voters of the county, shall direct and have enforced on any party or parties compulsory vaccination or quarantine, in case of smallpox epidemic, in any city, town or village of the county or in their said county. Any person refusing to be vaccinated when so directed by the county court, and who can not give satisfactory proof of having been vaccinated previous to that time, or a certificate from a reputable physician showing that a successful vaccination on his or her body is impossible or improper, or sufficient reason be given why it has not been done, shall be placed under quarantine as directed by section 7 of this chapter; provided, further, that when it shall be directed by the county court of any county in this state as herein provided, no child or person residing in a locality in which an epidemic is prevailing shall be admitted to or received into any of the public schools in any city, town, village or the county who can not produce a certificate or satisfactory proof showing a successful vaccination, or a certificate from a reputable physician showing that a successful vaccination on his or her body is impossible or improper, or sufficient reason be given why it has not been done, and the trustees or other officers having charge, management or control of such school shall cause the provisions of this act to be enforced when so directed by the county court. For the purpose of the enforcement of this act the county court may appoint competent physicians in any city, town, village or the county, and fix their compensation, which shall in no case exceed 25 cents for each successful vaccination; and such physicians shall provide themselves with good and reliable vaccine virus with which to vaccinate such persons when directed by the county court. If any physician shall give any person a false certificate of vaccination, as herein provided for, he shall be guilty of a misdemeanor, and on conviction thereof he shall be fined not less than \$20 nor more than \$100. Any person who shall have smallpox going into another county, within three months of said time, shall be required to produce a certificate showing that he has been properly cleansed and disinfected, which certificate shall state what has been done to accomplish this end, and if said certificate be acceptable to the county health officer of the county to which such person shall go, it shall be deemed sufficient and entitle such person to remain therein, but if not deemed sufficient, such person shall not be permitted to remain therein.

#### To Prevent the Spread of Communicable Diseases.

Chapter 519 of the Laws of Tennessee of 1905 provides that whenever any case of smallpox, yellow fever, cholera, bubonic plague, typhus fever, diphtheria, membranous croup, scarlet fever, or other communicable diseases exist (except it shall not embrace any venereal disease, such as gonorrhea or syphilis), or is even suspected to exist in any household, it shall be the duty of the head of said household, or any other person in such household possessing knowledge of said facts, to immediately notify the municipal or county health authorities. Furthermore, whenever any physician, surgeon or practitioner of medicine shall know or suspect that any person or persons,

whom they have been called to visit, or who has been brought to them for examination (or any other suspicious information received relative thereto), is, or are infected, or even suspected, with any of the aforementioned diseases, he shall, and it shall be his duty to, immediately notify the health authorities of the town or county in which said diseased person or persons are found.

After receiving such notice, it shall be the duty of all municipal or county health authorities to immediately proceed to carry out such rules and regulations as the state board of health may prescribe, having for their object the prevention and restriction of the disease or diseases above mentioned. The house or locality shall be inspected, and the diseased person or persons, as well as any other person or persons exposed to said disease, may be quarantined. And when a case of either of the diseases above named is reported the local board of health or its health officer shall at once cause to be placed in a conspicuous position on the house where it exists a quarantine card having printed on it in large letters the name of the disease within, or to prohibit entrance to or exit from such house without written permission from the health officer, and no person quarantined by a local board of health or its health officer on account of having a contagious disease, or for having been exposed thereto, shall leave such quarantined house or place without the permission of the health officer, and every physician attending a person affected with any of the aforesaid diseases shall use such precautionary measures to prevent the spread of the disease, as may be required by said local board of health. No person shall remove or deface such card, which shall remain in place until after the patient has been removed from the house, or has recovered and is no longer capable of communicating the disease, and the said house and the contents thereof have been properly disinfected by the local board of health and all other sources of danger of communicating the disease are removed. It shall be the duty of every physician in attendance on any person afflicted with any contagious or infectious disease designated in this act to notify the proper health officer when said premises are ready for disinfection, so that the same may be properly disinfected under the directions of said health officer or some other person under his authority.

Municipal and county health officers or municipal and county boards of health may adopt such measures for the general or local vaccination of the inhabitants of their respective jurisdictions as they shall deem proper and necessary, and whenever necessary vaccinate such inhabitants to prevent the introduction or to arrest the progress of smallpox without being authorized or ordered by the state board, and the expenses in whole or in part of such general or local vaccination shall, on their order, be paid out of the city or county funds, as the case may be. Every person who shall refuse to be vaccinated or prevent a person under his or her care and control from being vaccinated on application being made by the said health officer or said board of health or by a physician employed for that purpose, unless in the written opinion of another physician it would not be prudent on account of sickness, shall be fined not more than \$5 for each offense, and any physician fraudulently giving a certificate of sickness or of vaccination to prevent vaccination shall be fined not less than \$25 nor more than \$50.

Other provisions of the act are that whenever a place is quarantined it shall be the duty of the board of health to provide for all persons confined therein food, fuel, and all other necessities of life, including medicine and nurses whenever necessary. On receipt of notice of existing or suspected disease as above the board of education, superintendent, or school district board shall be notified, and said public school authorities shall not allow any pupil to attend any public school from the house while any inmate of same is sick with smallpox or other communicable disease, or during the period of two weeks after the death, recovery or removal of the sick person. For one believing himself afflicted with a contagious disease to voluntarily go on the highway or enter a public conveyance, or to knowingly aid him to do it, is made a misdemeanor. The state board of health may carry out these provisions whenever a local board neglects or refuses to do it.



## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

December 9.

- 1 \*Comparative Study of Various Forms of Tuberculosis. M. P. Ravenel, Philadelphia.
- 2 Intracorporeal Conjugation in the Malarial Plasmodia and Its Significance. C. F. Craig, Manila, P. I.
- 3 What is a Poison? (To be concluded.) R. G. Eccles, Brooklyn, N. Y.
- 4 \*Cerebral Hereditary Syphilis. W. J. Butler, Chicago.
- 5 Restriction of Contagious Diseases in Cities. C. V. Chapin, Providence, R. I.
- 6 \*Ureteral Catheter and Its Importance in Diagnosis and Treatment of Kidney Lesions. L. W. Bremerman, New York.

1. Comparative Study of Various Forms of Tuberculosis.—Ravenel summarizes his paper as follows:

1. The division of mammalian tubercle bacilli into two types, human and bovine, first proposed by Theobald Smith in 1898, has been amply confirmed. These types have cultural, morphologic, and tinctorial characteristics by which they may usually be recognized. The chief point of difference, however, is found in the very much greater pathogenic power of the bovine type. Bovine bacilli, however, are met which have low pathogenic power. 2. No other species of mammal has been shown to harbor a variety of tubercle bacillus so constant in its characteristics as to justify its classification as a third type. 3. Other species suffering from tuberculosis derive their infection from man or from cattle. 4. The human tubercle bacillus, as a rule, has a low pathogenic power for cattle, but cultures are not infrequently found which are virulent for the bovine race. 5. The bovine tubercle bacillus has the power of invading the human body and producing the lesions of tuberculosis. 6. We are at present unable to state the exact proportion of cases in which bovine tuberculosis is transmitted to man, but in view of the evidence at hand we must regard the disease in cattle as the source of a certain part of human tuberculosis, and any relaxation in our laws and precautions against bovine tuberculosis would be most unwise.

4. Cerebral Hereditary Syphilis.—Butler says that the nervous system is attacked by hereditary syphilis in a considerable proportion of cases, sometimes without cutaneous lesions, the disease remaining latent until puberty or later. The pathologic conditions include cranial osteosclerosis, periosteitis, meningitis, endarteritis, thrombosis, as well as atrophy, sclerosis and softening of the cerebral cortex. The symptoms are recurring convulsions, severe headache, worse at night, and impaired intelligence. Later the epilepsy may disappear. Hemiplegia frequently develops and the patients may become paralytic idiots. Partial motor paralyses, aphasia and disturbances of the special senses may occur. Mental deficiency, occasionally congenital, usually develops at a later period of childhood. Prognosis is unfavorable unless the condition is recognized and treated in its early stages. Congenital syphilis should be vigorously treated with mercury during the prevalence of cutaneous manifestations and, when nervous symptoms develop, potassium iodid, or if this disagrees, iron iodid, should be added.

6. Ureteral Catheterization.—From an experience covering several thousand catheterizations, Bremerman feels justified in saying that the procedure is not nearly so difficult as is claimed. When rigid attention is paid to technic and asepsis and the choice of a proper instrument, there need be no fear of dangerous after-complications. He says that he can not entirely agree with some of the authorities when they state that a catheter should never be inserted in the pelvis of the kidney when that organ is involved by any inflammatory process. He has yet to see any untoward conditions arise from catheterizing a pyelonephritic kidney or one affected with a chronic inflammation.

#### Medical Record, New York.

December 9.

- 7 \*Certain Forms of Ocular Tuberculosis. C. S. Bull, New York.
- 8 Displacement of the Abdominal Organs. O. Lerch, New Orleans, La.
- 9 \*Fresh Air and Rest in the Treatment of Pulmonary Tuberculosis. G. R. Pogue, Greeley, Colo.
- 10 \*Reduction Treatment. J. W. Wainwright, New York.
- 11 Principles of Ethics of the American Medical Association. A. L. Benedict, Buffalo, N. Y.
- 12 Uncertainties and Fallacies in Scientific Medicine. H. B. Hemenway, Evanston, Ill.

7. Forms of Ocular Tuberculosis.—Bull says that tuberculosis of the conjunctiva is much more often a primary disease, the result of an ectogenic infection, even in cases in which

tuberculosis has already developed elsewhere in the body, than of infection occurring through the blood. Although tuberculous disease of the conjunctiva is not often secondary to tuberculous disease in other parts of the system, it is itself liable to be the starting point of general tuberculosis. An intact normal conjunctiva, however, can never be infected. There must always be a loss of substance, usually a traumatic abrasion. Tuberculosis of the conjunctiva is more often secondary to nasal tuberculosis than primary. The symptomatology and treatment of tuberculosis in the various other anatomic regions of the eye are discussed in detail, and the author draws the following general conclusions: It is doubtful if any case of intraocular tuberculosis is ever a primary disease. In cases of doubt, or of very difficult diagnosis, the injection of tuberculin is an efficient aid to diagnosis. There is a general reaction in at least 85 per cent. of the cases, and some local reaction in about 50 per cent. As a method of treatment, both the old and new tuberculin have proved practically useless in Bull's experience. It is a remedy which needs careful watching. Surgical intervention in intraocular tuberculous conditions of the eye should seldom be done, unless there is considerable pain which tells on the patient's health, because the disease is not primary, and hence excision would remove only one focus.

9. Fresh Air and Rest in Pulmonary Tuberculosis.—Pogue says that much harm has been done to consumptives by the indiscriminate prescribing of fresh air, outdoor life, and exercise, without proper instructions and education of the patient, together with a consideration of the extent of the lesions present. The patient in the early stages of the disease who is told to adopt tent life, without being given definite instructions, is very apt to shut himself up tight at night in his tent, and so spends seven or eight hours a day in a closed canvas box. Patients must be kept outdoors all day long in the open air, and practically the same conditions must prevail at night, but they must be made comfortable, and be protected from cold winds, rains, and storms, and, during the summer months, from the direct rays of the sun. The beginning of the outdoor life must be gradual, without abrupt transition from the patient's usual mode of life. Similar fallacies exist in the minds of the laity, and even of the profession also, regarding the value of exercise. The patient who is told to live out of doors and "rough it" usually does not live long to carry out the injunction. Of 62 patients in various stages of the disease, whose histories are known to Pogue, who during the last five years have taken the "roughing it" cure, 43 are dead and only 2 show signs of having their disease arrested. Rest is the element it is important to secure, for usually the patient is only too apt of his own accord to take too much active exercise.

10. Reduction Treatment.—Wainwright says that it must always be remembered that obesity can not be successfully treated by the same or similar methods in every case. Corpulent persons, who are otherwise healthy, by careful dieting, plenty of exercise, baths, and other rational means, may reduce their superabundant adipose deposit, or at any rate may prevent an increase. On the other hand, obesity in disease is but a symptom, and the treatment of the obesity alone may, and probably will, have an injurious effect on the patient's general condition. The cause must be treated and the attempts to reduce the flesh must be governed by the disease from which the patient is suffering. Wainwright describes in detail the various measures of diet, exercise, bathing, etc., that are useful, and points out how they may be adapted to the needs of different individuals.

#### New York Medical Journal.

December 9.

- 13 \*Avulsion of the Terminal Branches of the Trigeminal Nerve for the Cure of Trifacial Neuralgia. E. LaPlace, Philadelphia.
- 14 \*Treatment of Puerperal Infections. R. W. Holmes, Chicago.
- 15 Note on the Spirochæta Pallida. C. Herrman, New York.
- 16 Federal Control of Epidemic Diseases. E. E. Field, Norfolk, Va.
- 17 Some Extracts from the Diaries of Bishop Nicholson. H. Barnes, Carlisle, England.
- 18 \*Value of Meat Inspection to the Public Health. D. A. Hughes, St. Louis, Ill.
- 19 Pyelonephritis and Ulcer of the Esophagus Complicating Pregnancy. L. T. LeWald, Manila, P. I.



13. **Avulsion of Trigemini for Neuralgia.**—La Place has devised a gradual method of avulsion whereby he has succeeded in removing a nerve from the seat of the incision to its ultimate ramifications in the skin itself. A special curved hemostatic forceps is used. The nerve is exposed and lifted from its seat. It is then clamped, but not cut; the forceps, held in the right hand, are turned very gently from left to right, winding both the proximal and remote parts of the nerve on itself. This is done very slowly and deliberately, taking as much as two minutes for one turn of the forceps; otherwise the nerve would break. The nerve gradually yields and winds itself on the forceps, slowly but steadily, and the winding is kept up until the nerve finally breaks. It takes from twelve to twenty minutes to obtain this result, and La Place considers time very essential; otherwise some of the removable filaments might be left behind, and the operation rendered in a measure incomplete. The nerve appears as a tightly wound string about the jaws of the forceps. By placing this in water and shaking carefully the nerve soon becomes limber and disentangled, showing itself in its full anatomic condition much more complete and perfect anatomically than would ever be possible by the most skillful dissection. Four patients have been treated by this method during the last two years, and pain has not returned in any case.

14. **Treatment of Puerperal Infections.**—Holmes summarizes his paper as follows:

1. The battle against puerperal infection is practically won by an adequate system of asepsis and antiseptics. True autoinfections very rarely arise, and usually are not of serious portent. 2. It is no more possible to operate aseptically without skilled assistants in obstetrics than in general surgery; properly to conduct an operative case requires a full quota of assistants. 3. Puerperal infection is not a specific disease. Diverse types of micro-organisms may be the etiologic factors, and any part of the parturient canal may be the seat of the infection. 4. To treat locally a thermal condition of the puerperium without a clear, positive knowledge of the seat of infection should be characterized as an obstetric crime. 5. At the present time there is absolutely no method of adequately reaching the offending germs in the uterine submucosa or muscularis. The curette can not discern the locality of the retained remnants of secundines; the finger alone can ascertain this; a placental forceps more easily, more certainly, and with infinitely greater safety, can remove them, under guidance of the finger. 6. It is a grave error to neglect digital revision of the uterus after any instrumentation for the purpose of cleaning the uterine cavity. 7. Nature, by supplying the reaction zone of Bumm, offers the surest safeguard to the woman; puerperal infections demand the same rest for the uterus as do inflamed parts elsewhere. 8. The danger of shreds in the uterus is greatly overestimated as regards their rôle in infections. 9. Active operative measures endanger the life of the woman doubly or trebly to the extent the expectant plan does. 10. The use of saline purges, administration of ergot, hydrastis, etc., removes much of the danger or necessity for active therapy; in a day or two the danger is often past, for, like a baby, the lying-in woman is subject to evanescent febrile elevations.

18. **Value of Meat Inspection.**—Hughes discusses the relation of animal disease to human disease; the methods of meeting these dangers, and what meat inspection as carried on by the government means to the public. Hughes says that at present the only way for people to protect themselves against diseases communicable from animals and to guard themselves against diseased animals sold in the local markets, killed, prepared for the trade without expert government inspection, and foisted on them as wholesome, is to take advantage of the wisdom of the federal law. If they refuse to purchase meats which have not passed the government inspection, their protection is assured. The government has recognized the danger arising from diseased meats; it has devised methods to meet the danger; it assures the people of safety, provided they consume meats guaranteed to be free from disease.

#### Medical News, New York.

December 9.

20 \*Etiology of Syphilis. S. Flexner, New York.

21 Plea for the More Careful Examination of Diseases of Women by the General Practitioner. W. E. Darnall, Atlantic City, N. J.

22 \*Thyrotomy vs. Laryngectomy: Notes on the Frequently Malignant Nature of Chronic Hoarseness. C. Jackson, Pittsburg, Pa.

23 Tuberculous Kidney. J. B. Clark, New York.

24 \*Simple Device for Ophthalmoscopic Work. Devised Especially to Meet Conditions Existing on Board Ships, but Capable of General Application. R. E. Riggs, U. S. A.

25 \*Relation of Incontinence of Urine to Neurasthenic Symptoms, and Its Treatment by the Isolated Induction Shock. A. D. Rockwell, New York.

26 \*Treatment of Conditions Resulting from Chronic Anterior Urethritis. W. D. Trenwith, New York.

27 \*Improved Head-Holder for the Removal of the Human Brain. B. B. Stroud, Ithaca, N. Y.

28 \*Syphilitic Fever. J. A. McKenna, Philadelphia.

29 Relapsing Fever. Koch, Hongkong, China.

20. **Etiology of Syphilis.**—Flexner reviews the subject generally, considering more particularly the causal relation of the pallida to syphilis.

22. **Thyrotomy versus Laryngectomy.**—Jackson calls attention to the frequently malignant nature of chronic hoarseness, and urges the necessity for early diagnosis while the case is still operable by thyrotomy, whereby not only the life, but the voice, the comfort, the happiness and the usefulness of the patient may be saved. If the diagnosis be made late, as it usually is, total laryngectomy offers the only hope of prolonging life. Speaking of the endo-laryngeal operation, he says that he considers his years of training to acquire endo-laryngeal skill an utter waste of time so far as the surgery of malignant disease is concerned. It is ten times worse than letting the growth alone, for while failing to extirpate radically it induces local spread and metastatic deposit. He concludes as follows: 1. The patient with cancer of the larynx must have his disease discovered early, else a cure is well nigh hopeless. 2. If discovered early the comparatively slight operation of thyrotomy will cure. 3. If discovered late, total or partial laryngectomy will probably prolong life for a variable period, but recurrence is fairly certain and the short extension of existence lacks many pleasures and comforts. 4. The early curable stages of laryngeal cancer are characterized by nothing but hoarseness, which may disappear and recur. Cough, odor, pain, odynphagia, glandular involvement, external swelling, emaciation, cachexia, etc., are present only after the curable stage is passed. 5. The curable case may come in "to get something for a cold that he can not shake off," without any idea of a serious condition, and throws the physician off his guard.

24. **Simple Device for Ophthalmoscopic Work.**—In order to get a satisfactory light under the varying conditions which confront any one trying to do eyework outside of a well-equipped office, Riggs envelopes an ordinary 16-candle power frosted electric bulb in a thin sheet of lead. With a jack-knife and a pair of pincers the sheet is cut and molded to the general shape of the bulb. In this way practically all light is shut out except that which passes through a spherical window about one inch in diameter, cut into the shield after it is applied. Thus with a little ingenuity, and in a few moments, any one who cares to try it, and has electrical attachments at hand, can construct for himself a portable and satisfactory light, which may be suspended from any convenient point and allowed to take a position just behind and to the outside of the ear on the side under examination. The light obtained is soft and equally distributed, and one is scarcely bothered at all by the corneal reflex. The background of the eye is distinctly though softly illuminated, and besides giving the observer an almost normal image, it inflicts on the patient a minimum amount of discomfort. Riggs says that with this arrangement one can easily observe the fundus without the use of a mydriatic, nor is it necessary to have a perfectly dark room. It also gives an equally good view in work about the ear, nose or throat.

25. **Electricity in Urinary Incontinence.**—Rockwell cites the case of a girl aged 13 who was treated successfully by the isolated induction shock. The positive electrode was applied to the sacral region, and the negative, consisting of an olive-shaped electrode, was introduced through the urethra to the sphincter muscle. The isolated induction shock was then administered at the rate of one in five seconds, or about twelve shocks a minute. The applications were repeated every other day for a time, and then less frequently. The character of the treatment so far as concerned rapidity of interruption was approximately adhered to throughout the whole course. The patient finally recovered, but the progress toward complete recovery was neither rapid nor constant, some thirty-five applications having been administered through a period of five months. During this period she had alternations of comparative freedom from attacks and their recurrence with ordinary frequency, but the progress was steadily upward.



26. **Treatment of Chronic Urethritis.**—Trendwith emphasizes the necessity of making an exact diagnosis and of determining the exact status of the case. As a routine measure he advocates the examination of the prostate and seminal vesicles. The treatment should be general as well as local. The local treatment should be governed entirely by the reaction produced by the remedies employed. The urine should be examined at each visit, and no physician should be satisfied to call a patient cured simply because the discharge has ceased. A cure may be said to have been effected when there is no longer any discharge and when the urine is free from pus, shreds or threads, and remains so. Local treatment should be discontinued, but not so the general treatment. The author's method of treatment is described in full.

27. **Improved Head Holder for Removal of Brain.**—The apparatus devised by Stroud consists of a base made of steel tubing, to which is joined a movable upright that can be fixed rigidly at right angles to the base. The upright bears movable jaws to grasp the head on each side and spurs to enter the auditory meatuses; also an adjustable support for the chin. The head is held firmly and both of the operator's hands are free. The apparatus is finished in white enamel and nickel; when not in use it folds flat, so that it occupies little room. The subject lies on the belly, the head being supported and firmly held by the adjustable clamps at the sides and chin. The base of the cranium is horizontal, and serves as a shallow tray in which the brain is supported while the cranial nerves, arteries, spinal cord and membranes are being severed. Thus it is possible to secure a perfect anatomic specimen. The cranium is opened by making a circular cut with the saw about one-half inch above the orbital prominence and the external occipital protuberance. The calvarium is removed either entire or in two pieces by making a second sagittal cut, about one-half inch from the median line over the top of the head to meet the horizontal line. Adhesions between the calvarium and dura are separated by means of a long flexible spatula. The following liquid has been employed by Stroud for a number of years to preserve brains, and has given excellent results:

R. Sodium acetate .....	℥xiv	400
Sodium chlorid .....	℥xiiss	350
Formaldehyd 40 per cent.....	fl. ℥iii	60
Alcohol 95 per cent.....	fl. ℥xlvi	1,400
Water .....	fl. ℥liv	1,600

The sodium acetate and sodium chlorid are dissolved in fifty-four ounces of water by aid of heat. The solution is filtered and cooled and forty-seven ounces of 95 per cent. alcohol and two ounces of formaldehyd are added. This quantity is sufficient for one human brain. If the specimen is much stained by hemorrhage, the blood may be removed by soaking for a few hours in a solution of salt and water. Ordinarily this treatment will not be required. Brains should remain in the solution for from ten to fifteen days, but a longer period is not harmful. Then they may be put into 75 per cent. alcohol, which should be changed once or twice. They may remain indefinitely in 75 per cent. alcohol, or preferably be put into 82 per cent. alcohol. The advantages claimed for this solution are: 1. The mixture is simple and may be prepared at a moderate cost, about 14 cents per liter, alcohol free of tax. 2. It has about the same specific gravity as that of the brain, which should float without support midway between the top of the liquid and the bottom of the jar. Rarely a brain may sink to the bottom; in this case more salt is added. If it floats on the top, 50 per cent. alcohol is added until it sinks below the surface. 3. The specimens have a more natural appearance than when some other preservatives are employed. 4. There is no distortion. 5. It appears to give good results for brains which are very soft from decomposition. In these cases the pia can not be easily removed. 6. Plexuses and membranous parietes are preserved. 7. The alba and cinerea are visibly differentiated. 8. Brains are moderately flexible, so that fissures may be explored. 9. Tissue hardened in it may be used for histologic study.

28. **Syphilitic Fever.**—According to McKenna, the varied symptoms which cloud the diagnosis of syphilitic fever and make its recognition difficult, may be ascribed to so many of

the febrile diseases that the failure of the physician at once to classify properly a case in which syphilis is the cause, is both natural and pardonable. McKenna says that if evidences of syphilis were more often looked for in continued fevers of a doubtful character, or, as a chance, specific treatment given the patient, doubtful diagnosis would frequently be speedily made definite and the health of the patient and the reputation of the physician advanced in a gratifying manner.

#### Boston Medical and Surgical Journal.

December 7.

- 30 \*Operative Treatment of Old Fractures at Lower End of Radius. H. A. Lothrop, Boston.
- 31 Gastric and Duodenal Ulcer. E. M. Buckingham.
- 32 \*Case Illustrating the Value of Persistent Conservatism in the Treatment of Ununited Fractures of the Lower Leg. G. H. Monks, Boston.
- 33 Tuberculosis and Related Diseases of the Lungs in the Medical Out-Patient Department. W. H. Robey, Jr., and R. C. Larrabee, Boston.
- 34 Study of the Gastric Contents in Twenty-one Cases of Tabes, in Three Cases During Gastric Crises. M. P. Smithwick.

30. **Fractures of Lower End of Radius.**—Lothrop summarizes his views as follows:

1. Fractures at the lower end of the radius are very common lesions. As a result of neglect on the part of the patient, or oversight or otherwise on the part of the physicians, the final result is frequently unsatisfactory, either from the standpoint of function, or appearance, or both. 2. Appropriate treatment applied early should give as good a result as could be obtained in any given case; therefore, subsequent operation is not indicated. 3. In cases in which the final result is not satisfactory, surgical interference of some sort is usually indicated. 4. During the first three weeks whatever union has taken place can usually be broken up by manipulation under an anesthetic and suitable apparatus should then be applied as for a recent fracture. 5. After the third or fourth week the best results are obtained by means of an osteotomy in the line of fracture, followed by treatment appropriate for a recent fracture. 6. In fractures which have existed for from two to six months osteotomy should always improve the position and frequently improves the function, although special consideration should be given each case. 7. After the expiration of six months it is more difficult to correct the deformity. The backward and upward displacement of the lower fragment can always be overcome, but the correction of the lateral displacement is more difficult and usually requires an osteotomy of the ulna. The function is rarely improved at this time. Hence, interference should be limited to selected cases.

32. **Conservatism in Treatment of Ununited Fractures.**—Monks cites a case for the purpose of showing that union is possible in ununited fractures of the shafts of the bones of the lower leg after very long periods of time. In this case union took place about two years after resection of the ends of the fragments, and about three years after the original injury. Even in cases in which the bones are considerably shortened (it was estimated that the shortening in this case was about two inches), the muscles will contract sufficiently to enable the patient to balance himself on the injured leg.

#### St. Louis Medical Review.

December 2.

- 35 Immunize the Stegomyia, Anopheles and Culex. C. H. Hughes, St. Louis.

#### Lancet-Clinic, Cincinnati, Ohio.

December 2.

- 36 Diagnosis and Treatment of Infection of the Accessory Mucous Cavities of the Respiratory, Digestive and Genitourinary Tracts. B. Holmes, Chicago.
- 37 \*What Is the Present Conception of Bright's Disease. G. W. McCaskey, Ft. Wayne, Ind.
- 38 \*Sprained Ankle. R. Carothers, Cincinnati.
- 39 Contagious Diseases from the Viewpoint of the Sanitarian. B. F. Lyle, Cincinnati.

December 9.

- 40 Visceral Ptosis—Its Surgery. E. Harlan, Cincinnati.
- 41 Simple Eye Conditions that Should be Familiar to Every Physician. M. D. Stevenson, Akron, Ohio.
- 42 Minor Matters. W. Scott, Loveland, Ohio.
- 43 Syphilis Insontium. E. H. Shields, Cincinnati.

37.—See abstract in THE JOURNAL, Nov. 4, 1905, page 1435.

38.—Id.

#### Surgery, Gynecology and Obstetrics, Chicago.

November.

- 44 \*New Method of Arthrotomy for Old Dislocations of the Shoulder, Based on Experience in the Radical Breast Removal. E. W. Andrews, Chicago.
- 45 \*Indications for and Methods of Artificial Dilatation of the Cervix Uteri. L. Knapp, Prague.
- 46 Technic of Instrumental Dilatation of the Cervix According to Bossi. L. Knapp, Prague.
- 47 Surgical Pathology of One Hundred Mammary Tumors. W. J. Stone, Toledo, Ohio.
- 48 Case of Cesarean Section Performed Under Relative Indications. J. C. Hoag, Chicago.
- 49 Case of Chorionepithelioma Following Hydatidiform Mole. W. L. Burrage and T. Leary, Boston.
- 50 Conclusions Relative to Prognosis and Treatment of Sarcomata of Extremities. F. A. Besley, Chicago.



- 51 \*Operative Treatment of Retrodisplacements, with a New Operation; Intramural Transplantation of the Round Ligaments. C. W. Barrett, Chicago.
- 52 \*Phimosis; Its Treatment by a New Technic. V. D. Lespinasse, Chicago.
- 53 \*When Prostatotomy Instead of Prostatectomy is Indicated. C. E. Barnett, Ft. Wayne, Ind.

44. **New Method of Arthrotomy.**—The steps of Andrews' operation are as follows: 1. An incision is made from the clavicle downward across the front of the shoulder into the axilla. The cut is large, 50 per cent. longer than by the older methods. 2. The pectoralis major is cut near its insertion, leaving about 1 cm. attached to the bone. This muscle, being cut transversely, is laid over with the skin flap, thus exposing the axillary vein and the brachial plexus. The pectoralis minor is not cut, unless the head of the humerus and the vessels have been forced under it. 3. Careful examination of the vessels, if they cross the tuberosity or head of the humerus, is now made. The artery can not be seen readily, except by drawing aside the vein. On account of this deep position, it is more often involved in the adhesions, and has been the vessel usually torn. Great care and plenty of time are needed to separate these vessels when they or their large branches—e. g., subscapular or circumflex—are found adherent. No efforts at reduction should be made until the vessels and large nerve trunks are isolated and pulled aside. It must be borne in mind that some of the reported injuries of the vessels are due to projecting fragments or spicula on the humerus. 4. The forearm should now be flexed on the arm as a lever, and an assistant should rotate, and make traction, when the fibers of the adhesions will be seen and heard to tear gradually, so that the range of motion increases. Andrews says that this part of the work should be intrusted to some one of experience and judgment in joint work, as everything depends on using a sufficient, but not a dangerous amount of force. The operator, while this is going on, should clear the socket of any granulations and cut and nick such bands as refuse to yield after hard stretching. He should search for the lumen of the shrunken capsule. The head and glenoid cavity soon approach each other, the operator tilting the scapula toward the head of the humerus, and giving directions simultaneously as to reflexing, extending, abducting and rotating the limb, as he sees fit. The operator should not attempt this part himself, ordinarily. At the last moment the head is apt to take a subglenoid position and refuse to ride over the lower rim of the socket. Before cutting the ligaments or sclerosed muscles more widely, as one is tempted to do, if a blunt hook or retractor be made to pull the upper end of the humerus straight away from the body, the head can sometimes be dragged over the lip of the socket by a smart pull at the critical turn of the manipulation. Once in place, the bone can usually be held, although the capsular ligament is far from being intact; sometimes, in fact, has lost its identity in a mass of fibrous tissue. The arm should now be kept against the body until bandages are on. 5. The pectoralis major, and, if cut, the minor, should now be reunited by the Harris tendon suture method, and the skin closed with separate suture. Drainage should rarely be dispensed with. Andrews' operation is invariably a bloody one, if the dislocation is of long standing and the adhesions are firm. Good drainage for a few days prevents infection, which can easily take place with large joint surfaces bathed in wound secretion. Andrews concludes as follows: 1. It must be considered established that great force is never justifiable in old shoulder dislocations. 2. Few cases can be left unreduced on account of pain and pressure symptoms on the brachial plexus. 3. Resection is more satisfactory, but not ideal or wholly safe. 4. Arthrotomy by the old incisions is tedious, and never has been widely practiced, but has shown good results. 5. Arthrotomy by Andrews' method is simplified and made quicker, as well as safer. It would possibly be as safe as resection, and much more ideal in results.

45. **Artificial Dilatation of Cervix Uteri.**—Knapp reviews the indications and the methods employed for artificial dilatation of the cervix uteri without offering anything new.

51. **New Operation for Correcting Retrodisplacements of Uterus.**—To secure all the advantages of the Alexander operation, and yet to have an operation which could be combined

with the median incision and still avoid the creation of pathologic conditions, Barrett advocates the following procedure: The abdomen is opened in the median line, through an incision from one and one-half to two inches in length. Intra-abdominal complications are dealt with. The round ligaments are picked up with the author's rubber-jaw forceps, and a control ligature is thrown around each ligament, from two and one-fourth to two and one-half inches from the angle of the uterus. If they are exceedingly well developed, a longitudinal slit is made over the ligament and the peritoneum not included. The edge of the aponeurosis over the rectus muscle is now grasped close to the lower angle of the wound, and curved ligature forceps are carried between the aponeurosis and the rectus muscle, outward to the natural exit of the round ligament, the internal ring, where the forceps is guided into the abdomen by sight or by means of one or two fingers through the abdominal incision as a guide. It is not difficult to have the forceps follow the round ligament subperitoneally to the control ligature. The forceps now grasp the control ligature, and it is withdrawn, and along with it is a loop of round ligament. Each loop of round ligament, while being held by the control ligature, is sewed to the under side of the aponeurosis with catgut, about one inch from the median line, and should the loops prove long enough, as they frequently do, they are sutured together in the median line over the recti muscles. The round ligament runs from the uterus to its normal exit, the internal ring, then under the aponeurosis to the lower angle of the abdominal incision, close to the symphysis pubis, to the under side of which aponeurosis it is attached one inch from the incision. The ligament now retraces its steps to the internal ring, from whence it follows its normal course to the labium majus. This leaves no opening for strangulation of the bowel. The ligament leaves the abdomen at its normal place and utilizes the normal structures as a pulley for the round ligament. The uterus is now held by the very best part of the round ligament, a ligament which has capacity for evolution during pregnancy and involution thereafter. The nature of the operation has led the author to term it "intramural transplantation of the round ligaments." This operation has seemed to present the following advantages: 1. It may be employed where there are intra-abdominal complications of any extent, and through the best possible opening for dealing with those complications. It is easy of execution through even a very small opening. 3. It creates the least possible pathology, forming no new ligament. 4. It utilizes the very best part of the round ligament, acting through the internal ring. 5. It has shown the highest efficiency in holding the uterus forward and yet allowing the normal range of movement.

52. **New Operation for Phimosis.**—Lespinasse has devised what he calls the bloodless cuff operation. Although the operation is not applicable in inflammatory cases, nor is it applicable to infants, it is still said to possess points of advantage and distinction. There is practically no hemorrhage; the postoperative edema is absent or very slight; it does not entail detention from business, and it removes the wound a goodly distance from the urinary meatus, hence it is easy to keep it uncontaminated. The cosmetic result is excellent. The frenulum is first cut from the glans down until the perifrenular pockets are obliterated and the frenular region is smooth. If the frenulum is thick, it is best to leave a little flap from one of its sides to cover in the defect. If short and thick the area is left to granulate, which it does very quickly. The next incision is circularly around the shaft of the penis through the skin only and paralleling the sulcus about  $\frac{1}{2}$  cm. behind it, being careful to avoid the veins. Next a similar incision is made at an equal distance behind the sulcus and paralleling it through the mucous membrane only, being careful to avoid the veins here also. When the prepuce can not be retracted the skin incision is made and the dissection is started from it as usual. As the mucocutaneous junction is approached the stenosis is relieved and the prepuce can be retracted. The mucous membrane incision is made and continued as ordinarily. The distal edge of the skin incision is caught and dissected off from the fascia, keeping very close to the skin. It is a matter of no consequence if the skin is nicked, while it is



a serious slip if some of the large veins are nipped. The incision is continued to the mucous-cutaneous junction, then the prepuce is retracted and the dissection started anew on the proximal side of the mucous membrane incision, continuing it till it meets the skin incision. The cuff is slipped off the penis and the cutting part of the operation is completed. If the incisions have been properly placed the two cut edges lie accurately fitted to each other and only need to be sutured. To obviate the tendency of the skin to in-roll, Lespinasse advises placing, first, a continuous suture of absorbable material very close to the edge of the incision; second, an interrupted suture of a stiff, non-yielding material, as silkworm gut, placed far back and ends cut long, thus preventing in-rolling by its stiffness and bridging action; or the elevation of the cut edges like the sides of a tent with a suture clamp to hold them in place. A gauze strip about 9 inches long and 1 cm. wide is wrapped very tightly around the penis, covering the wound. What is desired is pressure to the limit oozing and edema. Over the gauze a narrow and snugly fitting bandage is applied. A large bandage is passed around the waist, and from this a T is dropped down to the penis, having this T 4 inches wide at least, and long enough to reach the scrotum. The penis is placed upright against the abdomen and the T is so regulated that it will retain it there. The glans is covered with a piece of gauze heavily smeared with zinc salve or sterile vaselin, the patient being instructed to replace it after each urination. If the glans swells and pains because of the constriction of the dressing, gentle, firm pressure with the thumb and index finger will reduce it and quiet the discomfort. The dressing must be changed in twenty-four, or at the most thirty, hours. The gauze strip must be removed or markedly loosened by that time, its function of limiting edema and serious extravasation having been fulfilled and further action would be harmful, possibly causing gangrene.

**53. Prostatotomy versus Prostatectomy.**—Unless the bladder, ureters, kidneys are water-logged, as it were, with toxic material, Barnett considers prostatectomy practically devoid of danger; but when there is marked disability, albuminuria, casts, etc., he considers prostatotomy indicated. After drainage has relieved the body of its poison, a prostatectomy can be done at a second sitting, if necessary, with less danger.

#### Columbus Medical Journal, Columbus, Ohio.

November.

- 54 \*Observations on Asepsis in General Surgery. W. J. Means, Columbus.
- 55 Predisposing and Acquired Characteristics of the Alcohol and Drug Habit. C. D. Mills, Marysville, Ohio.
- 56 Puerperal Eclampsia. T. L. Cooksey, Wilmington, Ohio.
- 57 Acne. E. J. Emerick, Columbus.
- 58 \*New Hemorrhoidal Clamp. E. A. Hamilton, Columbus.
- 59 Proctoscope and Colonoscope in the Diagnosis and Treatment of Diseases of the Large Intestines. W. Teachnor, Columbus.

**54. Asepsis in General Surgery.**—After a careful study of the different methods of sterilization of hands and the wound area, Means has come to the conclusion that a strict aseptic method is the only one on which the surgeon can depend primarily, followed by the use of chemical agents for their inhibitory action. This method consists in thoroughly washing the hands in pure soap and sterile water, treating the nails and rinsing the surface with clean water to remove the soap; then the hands and arms may be submerged in a 1 to 3,000 bichlorid solution or a 1 per cent. carbolic acid solution. The management of the wound area is along the same lines.

**58. New Hemorrhoidal Clamp.**—The clamp devised by Hamilton does away with the tissue which has been clamped and in which sloughing would follow if it was allowed to remain. This clamp consists of slotted blades, 2 inches in length, the blades being at right angle to the handle. The under surfaces of the blades are grooved to a depth even with the upper surface of the slots. This groove is wide enough to exert no pressure of consequence on the base of the tumor. The under surfaces of the blades are rounded to facilitate suturing, and the heel of the instrument is properly smoothed off. The upper portion of the clamp blades above the slots and the groove come together with serrated edges, which give as firm a grasp of the tissues as is needed. The use of the instrument is simple. The usual preliminaries of stretching the sphincters

and cleansing the field are attended to; the tumors are brought down to suit the operator's convenience; the clamp is applied parallel to the long axis of the gut and with the heel of the instrument toward the center of the anal orifice; proper pressure is made by the clamp blades; sutures are then passed under the instrument, its rounded under surface facilitating this procedure; a blunt-pointed bistoury or thin scalpel is inserted in the slots and the hemorrhoidal area separated thereby. The clamp with the hemorrhoid is removed and the sutures tied. Either continuous or interrupted sutures are used, usually of catgut of a size suited to the exigencies of a given case. The idea in this instrument is that the lips of the cut surface have not been injured by the crushing of the clamp blades, consequently if proper sterilization of the field has been carried out primary union may be expected here as in any part of the body; and if primary union fails to result, there is no sloughing mass which has to be cared for and healing is advanced by just so much.

#### Kansas City Medical Index-Lancet.

November.

- 60. Ulcer of the Stomach. S. C. James, Kansas City.
- 61 Peculiar Quinlin Idiosyncrasy. F. T. Van Eman, Kansas City.
- 62 Lectures on Nervous and Mental Diseases. J. Punton, Kansas City.
- 63 Maternal Feeding. J. W. Kyger, Kansas City.
- 64 Papillomata of the Larynx. W. M. Reed, Kansas City.

#### Medical Fortnightly, St. Louis.

November 10.

- 65 Typhoid Fever and Its Treatment. J. A. Simpson, Harriman, Tenn.
- 66 Diagnosis and Treatment of Incipient Skin Cancer. F. B. Wynn, Indianapolis.
- 67 Internal Antiseptics. A. L. Benedict, Buffalo.

#### Journal of the Kansas Medical Society, Lawrence.

November.

- 68 Treatment of Deformities. J. Naismith, Lawrence, Kansas.
- 69 My First Fractures. J. D. Clark, Wichita.
- 70 Therapeutic First Principles. G. H. Hoxie, Kansas City.
- 71 How to Produce Acid-Fast Bacilli. H. G. Graham, Chicago.
- 72 Scientific Basis of Medicine. J. T. Axtell, Newton.

#### Medical Standard, Chicago.

November.

- 73 Professor Senn and His Clinic. B. Robinson, Chicago.
- 74 Nicholas Senn, The Man. F. Henrotin, Chicago.
- 75 Surgical Clinic. N. Senn, Chicago.
- 76 Dr. Senn's Clinic from a Visitor's Standpoint. O. W. MacKellar, Chicago.
- 77 Surgical Clinic Held by Prof. Nicholas Senn. G. E. Papot, Chicago.

#### Journal of the Minnesota Medical Association and the Northwestern Lancet, Minneapolis.

November.

- 78 Mammary Carcinoma. W. L. Rodman, Philadelphia.
- 79 End-Results of the Operative Removal of Malignant Growths. A. MacLaren, St. Paul.
- 80 Shock and Its Treatment. G. R. Curran, Mankato, Minn.

#### FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

#### British Medical Journal.

November 25.

- 1 Dyspepsia. R. Hutchinson.
- 2 Education of Physicians in London in the Seventeenth Century.—The Fitz-Patrick Lectures for 1905. N. Moore.
- 3 \*Simple Stricture of the Common Bile Duct Treated by a Plastic Operation. B. G. A. Moynihan.
- 4 Case of Suppurative Cholangitis Following Cholelithiasis and Cholecystitis. G. M. Harston and W. Hunter.
- 5 \*Portal Pyemia and Pylephlebitis. W. L. Brown.
- 6 Observations on the Opsonic Index of Patients Undergoing Sanatorium Treatment for Phthisis. H. Meakin and C. E. Wheeler.
- 7 \*A Hitherto Undescribed Change in the Urine of Patients Suffering from Nephritis. M. A. Ruffer and G. Calvo Coressi.

**3. Plastic Operation for Stricture of Common Bile Duct.**—Moynihan reports a case of gallstones in which the common duct was obstructed by a cicatricial stricture which was evidently the result of an old ulcer. After the stones had been removed from the duct the second portion of the duodenum was mobilized after the manner of Kocher. The stricture, which had been freely divided by a vertical incision, was then abolished by the approximation of the edges of this incision in a transverse direction. A through-and-through suture of catgut was used, threaded on an intestinal needle. The transverse wound was not completely closed, sufficient room being left for the introduction of two rubber tubes, one of which



passed upward into the dilated common duct and the other downward toward the ampulla. Each tube was fixed with a single catgut stitch. The tubes were removed on the eleventh day. For four weeks all the bile passed through the wound. Some pancreatic juice also escaped in this way, as was shown by the digestion of the skin around the wound. In the fifth week bile began to pass into the intestine, and in the ninth week the wound was entirely closed. The patient was sitting up in bed from the first, and was allowed to get up in the third week.

**5. Portal Pyemia and Pylephlebitis.**—Brown has collected 48 cases, in 7 of which (14.6 per cent.) the occlusion was the result of sepsis. He found that in some cases of portal pyemia obstruction symptoms occur, but in the majority of cases they do not. Their absence, however, can not be regarded as excluding pylephlebitis. Their presence is usually the result of a firmly adherent clot in the portal vein or its annexes, rather than of the soft, disintegrating, purulent thrombus. The commonest place for the adherent clot to form is at the junction of the superior mesenteric and splenic veins. He concludes as follows:

1. A collection of pus within the portal zone is the principal cause of portal pyemia. Ulceration of the alimentary tract is only important as being a frequent precursor of such a collection.

2. Signs of portal obstruction are the exception in suppurative pylephlebitis.

3. There are no signs by which we can distinguish with certainty cases of portal pyemia with suppurative pylephlebitis from those in which the vein is not involved.

4. In "adhesive pylephlebitis" the essential feature is the occlusion of the vein, and this may be produced by a variety of causes, among which sepsis is not an infrequent one.

5. Therefore, if our terminology is to accord with pathological conditions so far as they can be determined during life, we ought to speak of two conditions, portal pyemia and portal occlusion, remembering that we may meet with cases of portal pyemia with occlusion.

**7. The Urine of Nephritics.**—The result obtained by Ruffer and Calvocoressi, in experiments made to ascertain whether pathologic urines contain more or less lysogen than normal urines, shows that the physiologic action of the urine of cases of chronic and diphtherial nephritis, in the large majority of cases, is very different from the action of the same quantity of urine of healthy human beings.

#### The Lancet, London.

November 25.

8 \*Treatment of the Attack in Spasmodic Asthma. A. Morison.

9 \*Traumatism as an Exciting Cause of Acute Appendicitis. F. A. Southam.

10 Multiplicity of Complements in Bacteriolytic Sera. W. H. C. Forster.

11 Pathology, Affinities and Treatment of So-called Bleeding Polypus (Discrete Angioma) of the Septum. L. H. Pegler.

12 \*Ethyl Chlorid as an Anesthetic for Infants. F. Murray.

13 Two Cases of Spasm with Hypertrophy of the Pylorus in Infants Cured with Opium. N. Neild.

**8. Treatment of Attack in Spasmodic Asthma.**—Morison describes his treatment of the attack in spasmodic asthma as carried out frequently and always with success. The principle of the treatment is to aid the patient to empty the chest of air. With one hand on the back and the other on the front of the chest, Morison empties it at the end of each inspiration. After several maneuvers of this kind relief is given. Even in old people with stiffened chests he has found compression by one hand over the thorax and the other over the epigastrium, the lower ribs, or preferably over the right hypochondrio-epigastric region, give relief from the thoracic anxiety attending the fixation of the chest, which is chiefly inspiratory. It is unnecessary to give any drugs.

**9. Traumatism as Cause of Appendicitis.**—Southam cites 4 cases illustrating the fact that a direct injury may excite an attack of acute appendicitis when a concretion is present.

**12. Ethyl Chlorid Anesthesia for Infants.**—Murray regards ethyl chlorid as one of the best means of producing anesthesia of from five to fifteen minutes' duration in infants and older children. She has administered ethyl chlorid to 150 infants under a year old. The youngest patients were five and fourteen days old respectively, and a large proportion of them were from five to seven weeks old. Many of them had not undergone any preparation at all, and the only precaution taken with regard to the others had been to withhold food for some hours that morning. The use of ethyl chlorid in prolonged operations is not recommended, partly owing to the waste of

the drug by evaporation, and partly because it has no special advantage over chloroform and the A. C. E. mixture when a narcosis of from twenty to forty minutes is required. Murray has found ethyl chlorid very suitable for tenotomy, circumcision, empyema, and the removal of adenoids, cysts, polypi, dermoids and nevi. Murray says that the simplest form of inhaler is the best to use; a useful one consists of an ordinary shaft on to which the face-piece and bag fit; the free end is closed by a stopper attached by means of a fine chain and the anesthetic is sprayed through this opening. To the end of the shaft which enters the bag two curved wires are fitted, so adjusted as to make a little cage in which a small sponge is placed. When ethyl chlorid is sprayed into a bag of the usual size, part of it vaporizes and the other part tends to fall to the bottom and to vaporize as the patient breathes in and out. A young infant does not make a sufficient respiratory effort to produce the necessary amount of vaporization and for this reason induction is often unduly delayed and the anesthesia is not smoothly maintained. The sponge inside the bag intercepts the anesthetic and by holding it nearer to the child obviates these defects, making it possible for the patient to inhale it more rapidly and without effort. The same result is obtained if a bag of about half the usual size is employed, but it is not always convenient to change the bag between the cases. A celluloid face-piece is generally preferable since it not only permits the anesthetist to observe the patient more readily, but also resists the action of the vapor better than rubber. For infants of a few days or a few weeks old Murray commences by spraying 3 c.c. into the inhaler; for those of six months and upward she gives 5 c.c. at once. The mask is then approached to the face but not pressed against it, so that the baby has several breaths of air and vapor mixed; it is then more closely applied so as to exclude all air except that which is already in the bag, and in a few seconds the child becomes unconscious. When one is sure that the anesthesia is deep, and the surgeon has made his incision or begun the operation, the mask should be removed from the face and a few breaths of air should be given. If it is desired to continue the period of narcosis for some time the mask should not be kept off for long, but only raised occasionally for air. If the respiration indicates the lightening of the narcosis a few more cubic centimeters may be added to the bag; on these lines the anesthesia may be prolonged indefinitely.

#### Glasgow Medical Journal.

November.

14 Case of Precocious Development. J. Devon.

15 \*Treatment of Smallpox by Ichthyol. A. Love.

**15. Ichthyol in Smallpox.**—Love describes the results obtained in the treatment of smallpox by ichthyol. The ichthyol was given in doses of 40 grains, administered in the form of chocolate-coated tablets, three times in the twenty-four hours. In a certain proportion of cases ichthyol was also applied externally in the form of an ointment. The action of the drug was observed in 100 patients, of whom 67 were males and 33 were females, their ages ranging between 3 and 60 years. The treatment was commenced as soon as the patient was admitted to the ward, and was continued until he was sufficiently convalescent to leave his bed. Of the total cases treated 6 patients (or 6 per cent.) died, but the cases were not selected in any way with regard to severity, although it is probable that the action of the drug would have been better estimated in cases of considerable severity than in those of a milder character. In 30 out of the total number of cases the eruption was sparse; in 63 it was abundant, and in 5 it was confluent, while in 2 it was hemorrhagic in character. With regard to vaccination, 4 patients were unvaccinated, but in two of these vaccination had been attempted unsuccessfully in infancy. In none of the cases observed was there any indication that the drug influenced the disease as regards either its course or severity. That pustulation was not affected in any way is shown by the fact that nearly all the cases ran a full course, and by the incidence of abscesses in some during convalescence. The course of the eruption, as well as the complications and sequelæ, were precisely those seen among smallpox patients who have not been subjected to any special treatment. The two patients in whom the eruption aborted were



persons who had been well vaccinated in infancy, a considerable degree of immunity being thus indicated, and whose eruption at the time of admission was of a small, dry character usually associated with a modified development of the rash. In a certain proportion of the cases ichthyol was applied externally in addition to the internal administration. The upper limbs were usually chosen for this purpose, because of their accessibility, and the ichthyol was applied by wrapping the arm in lint which had been thickly smeared with the preparation. The effects of this external application were as disappointing as those resulting from the internal administration; indeed, in most cases the stages of maturation and crusting were delayed on the limb treated, the pustules remaining soft and crusts forming tardily.

#### Annales des Mal. des Org. Gén.-Urin., Paris.

*Last indexed page 1830.*

- 16 (XXIII, No. 13.) Etude de l'histologie pathologique des suppurations testiculaires. E. Dalous.
- 17 (No. 14.) La cystoscopie à vision directe. G. Luys.
- 18 Recherches sur la sécrétion et l'excrétion des reins malades (diseased kidneys). F. Cathelin.
- 19 (No. 15.) Les blennorrhagies aberrantes. Jullien.
- 20 Varicocèle et obsession. L. Picqué.
- 21 (No. 16.) Inflammatory stricture of Posterior Urethra.—Rétrécissement inflammatoire de l'urètre postérieur. E. L. Keyes (New York).
- 22 Nouvelle méthode de cystoscopie. Cystoscope à air et à vision directe, sans partie optique avec lampe renversée au plafond. F. Cathelin. Id. M. Weinrich.
- 23 (No. 17.) \*De la prostatectomie secondaire à la cystostomie. André.
- 24 \*La fibrinurie. L. Imbert.
- 25 (No. 18.) \*Operative Injury of Ureter.—Traitement des blessures de l'uretère au cours des interventions chirurgicales. F. Bernasconi and S. Colombino.
- 26 Les fistules uréthro-rectales consécutives à la prostatectomie périnéale. Rochet (Lyons).
- 27 (No. 19.) Recherches sur les lymphatiques de la prostate humaine. Caminiti (Naples).
- 28 L'urotropine et l'helmitol. Leur action thérapeutique d'après les résultats des recherches expérimentales et des observations cliniques. F. P. Guiard. (Commenced in No. 7.)

23. Prostatectomy Secondary to Cystotomy.—André has performed prostatectomy in 24 cases, and in 3 it had been preceded by cystotomy. The intervals were two months, one year and two years respectively. After the bladder had been treated the patients regained strength so that an operation on the prostate became practicable. The general health forbade it at first. His patients were from 65 to 70 years old.

24. Fibrinuria.—Imbert reports 3 cases in which the urine contained fibrin or fibrinogen, independently of hematuria or chyluria. He has been able to find only 9 similar cases reported in the literature. The fibrinuria seems to be connected with some kidney affection, but the latter is extremely variable. Treatment is purely symptomatic, hot baths, injections, laxatives. A milk diet and potassium oxalate did not seem to produce any effect in his cases.

25. Treatment of Operative Injury of the Ureter.—Experimental research on dogs has shown that excellent functional results can be obtained from an anastomosis between the ureters, implanting one in the other, in case of injury to one. The various steps of the procedure are illustrated as performed on large dogs and on cadavers.

#### Presse Médicale, Paris.

- 29 (No. 85, Oct. 21.) Les consultations de nourrissons (infant consultations). L. Devraigne.
- 30 \*Le traitement du psoriasis par les maillots de pommade (salve tights). L. M. Pautrier.
- 31 (No. 86.) \*La diathèse d'autoinfection. A. Gilbert.
- 32 Bromatologie clinique du riz (of rice). A. Martinet.
- 33 (No. 87.) La structure de la glande surrénale normale de l'homme (suprarenal). L. Bernard and Bigart.
- 34 Appareil pour irrigations urétrales, vaginales et rectales chaudes, démontable et transportable, thermo-laveur (portable apparatus for hot irrigations). D. Estrabaut.
- 35 (No. 88.) \*L'isolement pratique des tuberculeux dans les hôpitaux. H. Barth.
- 36 \*Traitement sérothérapique du goitre exophtalmique. Hallion.
- 37 Tetanus neonatorum et son traitement. G. Miron.
- 38 \*Enquête sur l'alimentation de 100 ouvriers, etc. Parlsiens. L. Landouzy and M. Labbé.
- 39 (No. 89.) \*The Role of Forests and Soil in Development of Bacillosis.—Du rôle des forêts et de la constitution du sol dans le développement de la bacilliose en France. R. de Gaulejac.
- 40 Paralysie des nerfs moteurs de l'oeil chez les diabétiques (paralysis of oculomotors). Dieulafoy.
- 41 \*Hérolne et héroïnomanie. P. Sollier.

30. Psoriasis and "Salve Tights."—For several years Brocq has adopted the practice of having his psoriasis patients put

on at night a union suit or tights, to cover the entire body after it has been thoroughly smeared with the proper salve. The salve is rubbed all over the sound skin as well as into the patches of psoriasis, and the patient thus sleeps in an actual bath of salve. The salve-impregnated union suit can be taken off during the day if desired, but is worn every night. He has found that this method materially shortens the duration of treatment, while the drugs can be much less concentrated than when applied by other techniques. His favorite formula for the purpose is 15 gm. of oil of cade with 85 gm. of glycerite of starch, made into an emulsion with green soap and oil of cloves. He uses a stronger concentration when only the patches are treated.

31. Diathesis of Autoinfection.—Gilbert remarks that all the passages leading out of the gastrointestinal tract generally contain bacteria, but that these are the species normally found in the intestine. The anaërobic varieties predominate in the depths of the passages, and are always waiting for something to reduce the vitality and resisting powers of the tissues in which they are lurking, when they proceed to set up an inflammation. Appendicitis, inflammation of the gall bladder and gallstone formation are all the work of the germs normally in the intestines, as also pancreatitis and certain other affections. The predisposition to inflammation in these circumstances he calls the "diathesis of autoinfection." He gives a long list of the affections that may result directly from it. They include gallstones, cirrhosis of the liver, angio-pancreatic sclerosis, appendicitis, and probably also mucomembranous enteritis, icterus, stomatitis, tonsillitis and acute articular rheumatism. There is also a long list of affections which follow in the train of the foregoing, such as diabetes, neurasthenia, hysteria, gout, etc.

35. Practical Isolation of the Tuberculous in Public Hospitals.—Barth refers to the sweeping regulations decreed by the Paris authorities a year or so ago in regard to the isolation of tuberculous inmates of the hospitals. The regulations were chronicled in THE JOURNAL at the time; they called for the setting apart of certain hospitals exclusively for the tuberculous. These regulations have never been enforced, and tuberculous patients continue to be scattered through the wards of some of the hospitals now as before. Barth has organized a practical system of isolation in the Necker Hospital which apparently answers all the purposes without any commotion. He assigns to the "open cases" of pulmonary tuberculosis a certain part of each ward. Another section is set apart for patients entirely free from tuberculosis, and no tuberculous person is allowed to enter this section except possibly those who show no tendency to cough or spit. Certain spaces are isolated with glass walls about eight feet high, and these are reserved for the doubtful cases and for those too feeble to observe the "discipline of the cuspidor." These isolating compartments are disinfected whenever they change inmates, and the main ward is cleaned morning and evening with damp cloths. The spittoons are filled with a carbolyzed fluid and each has a cover. They are emptied and boiled each day. All who cough are given pieces of paper which they hold before the mouth when coughing and then throw into a special receptacle. The consumptive knows that he will be sent away from the hospital if he enters the part of the ward devoted to the non-tuberculous or spits on the floor. Bacteriologic examination has been made daily of the nasal secretions from several of the non-tuberculous inmates, selected at random here and there through the wards, even close to the tuberculosis section. No tubercle bacilli were found during the two months in which these examinations were made.

36. Serotherapy of Exophtalmic Goiter.—Hallion reviews the history of this subject, claiming for Ballet and Enriquez priority for the application of serotherapy to this disease in 1894. They were followed by O. Lanz, who used the milk of goats after removal of the thyroid gland, while Moebius gives the serum of sheep after thyroidectomy. All have found that fully as good results were obtained when the serum was given by the mouth as when it was injected subcutaneously. Hallion prefers the blood of sheep or horses, as these animals seem to be better adapted for serum purposes than the carnivora.



Their blood can be used a month after thyroidectomy, and he utilizes the entire blood, believing that possibly the essential curative principle may be connected with the figured elements of the blood. He adds glycerin to preserve the blood, and orders one or two teaspoonfuls a day before meals. Larger doses have not caused any inconvenience, but do not seem to be more effectual than the smaller ones. Enriquez gives three teaspoonfuls a day for one week, then three dessertspoonfuls, and then three tablespoonfuls. The results are sometimes very rapid and striking. The improvement in the patient's condition is unmistakable as the tachycardia and tremor subside. The exophthalmos is more refractory. Secondary affections and complications are also favorably affected at the same time. Breton observed a hemorrhagic pleuritis in a patient with exophthalmic goiter which was evidently arrested by the serotherapy as the general condition improved. The goiter in the exophthalmic variety is less responsive to serotherapy than the typical triad of symptoms.

**38. Food of Paris Working People.**—Landouzy and Labbé presented to the Tuberculosis Congress a large table showing the details of the average diet of 100 men and women of the laboring classes, selected from the applicants at the Laennec Hospital. Lassalle claims that "the social question is a question of the stomach," but that there is a lack of wise provision for the diet of human beings, although stock raisers have reduced it to a science for their animals. To remedy this state of things a society has been formed at Paris, Société de Hygiène Alimentaire, which aims to study the questions in regard to diet from every point of view, and to teach and popularize the lessons learned. The practical study of rational feeding to preserve health, to maintain strength and to ensure the highest working capacity, at the minimum of expense, Landouzy believes, will prove certainly one of the most effectual forces at our command in arresting the spread of tuberculosis. More than this, education in household matters, "domestic education," is one of the best safeguards of both the physical and moral health of a country, as was explicitly stated in one of the resolutions adopted by the International Tuberculosis Congress.

**39. Forests and Tuberculosis.**—Gaulejae shows by statistics that the forest regions of France are less affected by tuberculosis than others. The purity of the air, the rapidity with which the organic waste matters are destroyed by the multiple, purifying functions of the trees, the properties of the essences exhaled by certain trees, all these, he states, supplement the more natural life lived in or near the forests.

**41. Addiction to Heroin.**—Sollier asserts that heroin is proving more toxic than morphin and that addiction to heroin—which is becoming comparatively frequent—entails greater physical and moral havoc than addiction to morphin. In treating 120 cases of morphin addiction he has never had occasion to return to the morphin more than three or four times, and then only from excess of prudence, fearing possible syncope. The syncope in treatment of morphin addiction comes from heart weakness, and if all extra demands on the heart are avoided, there need be no fear of it. In heroin addiction, however, the syncope is respiratory, of bulbar origin. It does not yield to a dose of heroin as the syncope yields to morphin in morphin addiction. If the ordinary measures to restore bulbar action prove ineffectual, the patient is liable to succumb. The only way to avoid danger from this source is to substitute morphin for heroin in treating heroin addiction. After the patient is under the effects of morphin, then treatment as for morphin addiction is commenced. Sollier cites some instances of the baleful effect of heroin, which he affirms should be thrown out of the pharmacopeia, and adds that there will probably be similar experiences before long with dionin addiction. He already knows of a few instances.

#### Semaine Médicale, Paris.

42 (XXV, No. 45, Nov. 8.) \*Mode of Death in Scopolamin-Morphin Anesthesia.—Comment on meurt dans l'anesthésie générale par la scopolamine-morphine. De Maurans.

42. Death in Scopolamin-Morphin Anesthesia.—When this mode of anesthesia was introduced into France De Maurans

called attention to the 12 cases in which death had occurred during the anesthesia, and for which the anesthetic was probably responsible. He now cites 10 more fatal instances, and analyzes the reports of them published by the various surgeons. His conclusion is to the effect that any one "using this notoriously unreliable and dangerous technic incurs a heavy responsibility." Experimental research has confirmed the findings in the clinic. The method is merely the revival of the atropin-morphin technic which was abandoned long ago, although atropin is a more stable product than scopolamin. (See Answers to Correspondents, December 9, page 1817.)

#### Berliner klinische Wochenschrift.

- 43 (XLII, No. 41.) \*Ueber individualisierende diätetische Behandlung der Gicht (gout). C. von Noorden and L. Schlep.  
 44 \*Die Pathologie des Trachoms. W. Goldzieher.  
 45 \*Ueber thoracale Ostealgien. P. Hampeln.  
 46 Zwei Geschwisterpaare mit Friedreich'scher Krankheit (four cases in two families). K. Mendel.  
 47 \*Superficial Cancer Cured by Exposure to Sunlight.—Heilung eines Haut-Epithelioms durch direkte Sonnenbestrahlung. M. Hirschberg.  
 48 Accompanying Delirium.—Begleitdelirien. Rauschke.

**43. Diet in Gout Based on Tolerance.**—During the two years in which von Noorden has made a special study of the tolerance of gouty patients for food containing the purin bodies, he has learned that there is a great difference in individuals in this respect. He put his patients first on a diet free from purin bodies, and determined the proportions of endogenic uric acid. He then gave 400 gm. beef (weighed raw) on two successive days, giving 150 gm. at breakfast and 250 gm. at noon. About 0.24 gm. of purin bodies can be estimated for each 400 gm. beef. About 50 per cent. of the purin bodies vanish in the organism, either from oxidation or from lack of assimilation, but the remaining 50 per cent. may be expected to be eliminated in the urine as uric acid or purin bases. During the two days, therefore, the proportion of purin nitrogen eliminated from the 0.24 gm. purin bodies ingested each day should amount to a total of 0.24 gm. demonstrable in the urine, equal to 0.72 gm. uric acid. The elimination generally occurs during the two days of the test, but may be prolonged under normal conditions into the day or so following. In case of gout, however, the elimination drags on for several days, and the total output is much less than that of normal subjects. We learn by this test whether the gouty patient is able to tolerate this amount of the purin bodies. If he can, there is no reason why he should not be allowed them, but if not, then the amount of purin-containing food must be reduced to ward off retention of uric acid and attacks of gout. It was sometimes found that a smaller amount of the purin bodies was well taken care of by the gouty patient, who had shown himself unable to cope with the original 400 gm. of meat. The amount of uric acid eliminated increased after ingestion of 200 gm. of meat, the total amount being much higher than after ingestion of 400 gm. of meat. The details of a typical case are tabulated. The patient, a man of 55, eliminated an average of 0.462 gm. of uric acid when not ingesting any purin-containing food. After two days of 400 gm. of meat each, he eliminated from 0.458 to 0.544 gm. of uric acid. He was then given 200 gm. of meat, and the amount of uric acid eliminated rose to 0.655 and 0.647 gm. on the following days. This patient, therefore, was allowed to eat meat freely to the amount of 200 gm. a day. Larger amounts would certainly have entailed retention of uric acid and attacks of gout. The tolerance of gouty individuals should be determined just as we determine the tolerance of diabetics. In both cases, however, the tolerance is not an invariable figure; it varies in the course of the disease, and these variations should be supervised and the diet modified to correspond. In von Noorden's experience, while the intake of purin bodies was thus regulated, the therapeutic results attained far surpassed those observed with any former method of treatment, either dietetic or medicinal.

**44. Pathology of Trachoma.**—Goldzieher remarks that bacteriology has not afforded much aid in the study of trachoma, but that the history of the affection shows an unmistakable connection with gonorrhea, as he relates in detail. He does not affirm that blennorrhea and trachoma are identical, but asserts that there are certain forms of chronic, infectious inflam-



mations of the eyes, originating in blennorrhoea, which it is impossible to differentiate from trachoma. The diagnosis of trachoma should not be based on the granulations alone, but on the evidences of infectiousness and on the long duration of the process.

45. **Thoracal Ostealgia.**—Hampeln has observed cases of ostealgia affecting the body of the sternum, the xiphoid process, or the false ribs. The pains in the first group suggest those of angina pectoris. In all, the bones seem to be the seat of continuous or paroxysmal, and sometimes radiating pains, and display sensitiveness to pressure. In some of the cases a tendency to gout was probable, but in others the signs were those of a general neurosis. In a considerable proportion of the cases there were no indications of any other affection, and consequently the ostealgia must be referred to an unusual sensitiveness of the bones in question. Since he has been studying the subject he has found that many apparently healthy persons feel pressure on certain ends of bones or bony processes as pain, although previously unconscious of this sensitiveness on the part of the bones. He regards this disposition to painfulness as almost physiologic for certain bones. In times of increased irritability, hysteria or neurasthenia, this predisposition may be magnified into actual ostealgia.

47. **Cure of Superficial Epithelioma with Sunlight.**—Hirschberg relates that he spent a month last winter at Caux, on Lake Geneva, at an altitude of about 3,400 feet. He had long had an epithelioma on his ear, which measured about 1.5 cm. by 0.5 cm., but after two weeks of out-of-door life among the mountains he found that the epithelioma was being cast off. He then exposed it more systematically to the sunlight, and by the end of the month nothing was left but a minute bunch which he easily removed by cauterization after his return. The ear is now entirely normal; there have been no signs of recurrence during the eight months since. He urges the establishment of open sun-resorts among the mountains for this purpose, the solarium being open to the sun and air, as glass prevents the passage of most of the ultraviolet rays. If Boubnoff's experiences are confirmed by others, the light treatment can be much simplified. Boubnoff announces that ordinary woolen and cotton clothing does not prevent the passage of the chemical rays. They pass more readily through the uncolored than colored fabrics. Of the colored fabrics blue allows more of the rays to pass than other colors, and black least of all. His experiments were made with diffuse daylight; the results would probably be better with direct sunlight.

#### Centralblatt für Chirurgie, Leipsic.

Last indexed page 1611.

- 49 (XXXII, No. 38.) \*Klinische Beobachtungen ueber Glykosurie nach Ather-Narkosen. R. Röhricht.
- 50 Ein neues Modell einer Rippenschere (rib shears). J. Schoemaker (Hague).
- 51 (No. 39.) Zur Behandlung des Angioma arteriale racemosum der Schädeldecken (of skull). A. Krogius (Helsingfors).
- 52 Eine neue Beckenstutze (support for pelvis). J. Finck (Charkow).
- 53 (No. 40.) Zur Technik der Sehnennaht (tendon suture). Wilms and Sievers (Leipsic).
- 54 (No. 41.) Bemerkungen zur Resektion der Wurmfortsatzes (appendix). Th. Kölliker.
- 55 Recovery After Extraction of Bullet from Posterior Wall of Heart.—Schussverletzung des Herzens. Z. v. Manteuffel (Dorpat).

49. **Glycosuria After Ether Anesthesia.**—Röhricht has examined the urine of 100 patients after operations on account of cholelithiasis, struma, osteomyelitis, elephantiasis, cancer, hernia, varices, etc. Glycosuria was observed in one or more of each group, the total being 12 cases. Only one of the patients was under 20 and none over 60. Of the 12 positive cases, 8 were men. Only one out of 9 other patients who had undergone major operations under local anesthesia showed glycosuria, while it was not detected in 22 other patients after traumatism without anesthesia. On the other hand, out of 6 patients who had been anesthetized with ether, without an operation, 2 exhibited spontaneous and one alimentary glycosuria.

#### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 56 (XXXI, No. 42.) \*Zur Kenntnis der Spirochaete pallida. F. Schaudinn.
- 57 Ueber einige neue örtliche Anaesthetica (Stovain, Aitypin, Novocain). H. Braun.

- 58 Aetiologie und Statistik der primären Iritis. A. Gutmann.
- 59 \*Ein Verfahren zur biologischen Unterscheidung von Blut verwandter Tieré (to differentiate blood from closely related animals. Uhlenhuth.
- 60 Zur Frage der Herkunft des Fruchtwassers (origin of amniotic fluid). D. Grünbaum.
- 61 Zur Pseudo-Influenza-Frage. W. Korentschewsky.
- 62 Zur Kasuistik des Intentions-Tremors bei Kindern (tremor on voluntary movement, in children). E. Urbach.
- 63 Fermente und Toxine. C. Oppenheimer.
- 64 \*Distribution of Typhoid Fever.—Die Verbreitung des Unterleibstypus. A. Gottstein.

56. **Flagella of Spirochaeta Pallida.**—Schaudinn gives illustrations of the principal spirochetes and states that the pallida is the only one he has yet discovered which sometimes has a flagellum at one or both ends. In one instance he found two flagella at one end and one at the other. The old Loeffler bacterial flagellum stain shows them up best. Some of the other varieties of spirochetes have an undulating membrane, but he has never found this in the pallida. On account of these differences in the latter, setting it apart from the genus spirochaeta as well as from the spirillum, he suggests that it is evidently a new genus and proposes the name of Spironema for it.

59. **Further Improvement of Biologic Test for Blood.**—Uhlenhuth relates experiences which demonstrate that the biologic precipitation test is the most delicate means at our disposal to detect relationships between animals and birds. It shows the close "blood relationship" between hens and pigeons, between rabbits and hares, and so on, and it may solve interesting questions in racial differences between human beings. He describes a method of "crosswise immunization" which shows that the rabbit organism, for instance, is able to form precipitins active against the blood albumin of the closely related hare. He also shows that it is possible by this means to differentiate the blood of each species from that of the other with mathematic precision. He injected his rabbits with a solution in physiologic salt solution of dried hare's blood fully four years old. The serum of the animals soon showed pronounced precipitating power in respect to hare's blood.

64. **Typhoid Fever in Prussia.**—Improved methods of caring for typhoid patients have reduced the mortality in a constant ratio from 2.64 to 0.81 per 10,000 inhabitants since 1887. Gottstein comments on the rapid spread and rapid extinction of the typhoid epidemics, most of them being restricted to a few weeks, even the famous one at Gelsenkirchen in which 11,357 cases occurred in 1901. This epidemic appeared and subsided within a few weeks. The largest number of cases of typhoid in places where the disease is endemic does not always occur in July, August and September, but is sometimes observed in February and March. An increase during the late summer is frequent, but is not an essential characteristic of a typhoid epidemic. He remarks also on the way in which certain districts suffered from typhoid during the summer of 1905. They were mostly industrial regions where the disease is more or less endemic, but even in Berlin the number of cases of typhoid, which was 45 in 1904, during last summer reached the total of 113. Throughout Prussia there were 1,475 cases, while in the preceding summer there had been only 1,092.

#### Münchener med. Wochenschrift, Munich.

- 65 (LII, No. 41, Oct. 10.) \*Zur Diagnose, Prognose und Therapie der Herzkrankheiten (heart affections). G. Treupel.
- 66 Action of Sunlight on Fluorescent Substances.—Einwirkung des Sonnenlichtes auf fluoreszierende Substanzen. Edlén.
- 67 \*Explanation and Rational Treatment of Habitual Constipation.—Erklärung und rationellen Behandlung der chron. habituellen Obstipation. A. Schmidt (Dresden).
- 68 Ueber Cysten-Bildung aus Resten des Processus Vermiformis (cyst formation in relics of appendix). P. Klemm.
- 69 Intra-abdominale Netz-Torsionen (of omentum). O. Simon.
- 70 Acarus in Transmission of Leprosy.—Spielen die Kratzmilben eine Rolle bei der Verbreitung der Lepra. E. v. Bassewitz.
- 71 Fall von äusserster Pulsverlangsamung (intervals of 10 seconds after 3 pulse beats, maintained for 50 hours). A. Frey.
- 72 \*Eye Affections Due to Autointoxication.—Augenerkrankungen durch Autointoxikation. Elschnig (Vienna).

65. **Heart Affections.**—Treupel's address is the final summary of a postgraduate course on this subject. In determining the size of the heart and its parts, he has found orthodia-



graphic examination of the heart—as F. Moritz of Greifswald has worked out and perfected the technic—a great progress in this line. (Moritz' communications on the subject have been mentioned in THE JOURNAL from time to time. His latest article opened volume LXXXII of the *Deutsches Archiv f. klin. Med.*, 1905.) In conclusion Treupel announced the extremely satisfactory results of resection of the ribs in a case of extensive obliteration of the pericardium and adhesion of the heart to the thorax wall, which had been demonstrated before the operation. The patient was a man of 29 who had presented symptoms of heart trouble since an attack of articular rheumatism at 17, and had been treated for nephritis a year before. During the last few months he had experienced oppression in the heart region which increased toward evening and caused great distress and agitation. His sleep was very restless, even under morphin. There were no indications of disturbance in compensation, no edema or ascites, but waves were evident in the jugular veins and there was a positive venous pulse. The heart was excessively large, bulging out the chest wall. The mitral murmur was loud, systolic, almost musical, while the aortic murmur was diastolic, prolonged and gushing. The varying relations between the heartbeat and the carotid and radial pulse are shown in several diagrams. The heart action was moderately rapid, and occasionally the carotid pulse occurred synchronously with the retraction of the chest wall over the heart. In spite of rest, ice, digitalis and morphin, the subjective disturbances were not improved, and part of the chest wall over the heart was removed. This relieved the patient to a remarkable extent and he is now able to sleep well. About 7 cm. were resected from the fourth and fifth ribs over the heart, disjoining them from the sternum.

67. **Agar in Treatment of Habitual Constipation.**—Schmidt believes that chronic constipation in certain cases is due to the unusually good digestion and utilization of the food, leaving so little residue to be passed along that the intestines are not incited to peristaltic action. The residue being so small, there is very little putrefaction, not enough to stimulate the intestines to peristalsis by the gases and other products evolved. The feces in chronic constipation of this kind are hard, solid lumps, with little odor, and show few indications of fermentation or putrefaction. Aside from the difficulty in defecation and the accessory neurasthenic general manifestations, such individuals rejoice in undisturbed good health, not disturbed by gas formation or other phenomena suggesting excessive putrefaction. Such patients can take, without much reaction, a purgative which would cause protracted diarrhea in others. Even when entire wheat bread, salads, fruits or nuts are eaten in abundance, he states, the constipation persists, as the digestive organs are able to digest the cellulose more or less and the stools remain hard and scanty. What is needed is something that will increase the bulk of the stools and make them softer, more watery and less compact. Schmidt thinks that this result may be obtained with agar agar. It contains 0.6 per cent. cellulose, and when it swells up in water it gives up the water very slowly and is not modified by putrefaction. Bacteria do not liquefy agar. He has been experimenting with it and found that it answers the purpose very well. He uses the kind that comes in long strips, and flakes and cuts it up into small bits, like scales. It swells in the mouth and still more in the stomach, and appears unmodified in the stools. The stools become softer and more watery, and are usually passed much more readily. The agar does not irritate the alimentary canal in the least (as much as 25 gm. of the dry agar were taken daily in some of the tests without disturbance). When ingested in the form of a powder it is liable to cause diarrhea and occasionally colic, probably from the more rapid and intense swelling of the agar. The stools become soft and copious, but the intestines have been so long accustomed to the constipation that they do not respond readily to stimuli. Consequently, although the stools have the normal aspect they are not passed spontaneously in every case. To remedy this he adds a very small amount of a 25 per cent. aqueous extract of cascara to the agar—not enough to have a purgative action, but merely enough to supply the stimulation realized by the natural putrefaction in normal stools, but missing in these cases. He has treated 25 patients

with chronic, habitual constipation on these principles, and essential and permanent improvement was obtained in every instance. Fluid paraffin is the only other substance which he has found with similar properties. He has given as much as 30 gm. a day of the paraffinum liquidum of the German pharmacopeia without disturbances, and has also had favorable experiences with white and yellow vaselin. This also requires a little 10 per cent. cascara extract to ensure spontaneous defecation. The agar is taken more readily than the vaselin by the patients, even when the latter is given in capsules. Some of the vaselin is evidently assimilated. In an illustrative case cited, the patient passed 38 gm. of hard, dry stools in three days on a test diet. During the three following days he ingested 66 gm. of the dry agar scales and passed in these three days 87 gm. of feces with more than twice as much cellulose as during the preceding period. The agar not only passed unmodified, but it prevented to a certain extent the abnormal utilization of cellulose. Agar has no taste at all. A teaspoonful to two tablespoonfuls are taken during the day in apple sauce or something of the kind, a total of 1.5 to 8 gm. It has to be taken regularly day after day, and in the severer cases its action must be supplemented by other measures. Its sphere is mostly in the mild and moderately severe cases, either of the atonic or spastic varieties.

72. **Eye Affections Due to Autointoxication.**—For ten years Elschmig has been making a special study of gastrointestinal autointoxication in the etiology of ocular affections. It is especially important as a cause of interior ophthalmoplegia, more rarely of paralysis of the external muscles of the eye and affections of the optic nerve. He thinks that it is also a cause of affections of the cornea and sclerotic, recurring keratitis, scleritis and periodical episcleritis, and affections of the uveal tract, especially in recurring iritis and many cases of insidious iridocyclitis. In certain cases of the latter groups there are symptoms of inherited lues, but antisiphilic treatment gives negative results. It is more than probable that the inherited lues has caused changes in the digestive tract which predispose to gastrointestinal autointoxication. In all these eye affections, dietetic and therapeutic measures to regulate the digestive tract essentially improved or cured the eye affections after failure of all other forms of treatment.

Sei-I-Kwai, Tokyo.

Last indexed page 79.

- 73 (XXIV, No. 5.) \*Operative Treatment of Aneurisms. T. Kikuchi. (Commenced in No. 4.)
- 74 (No. 6.) Casualties of Japanese Fleets in the Great Naval Engagement of the Japan Sea.
- 75 Statistics of Russian Prisoners Taken to Japan and of Those Admitted to Hospitals.
- 76 (No. 9.) Cultivation of Bacillus of Soft Chancre. I. Yamaguchi. (Commenced in No. 6.)

73. **Operative Treatment of Aneurisms.**—Kikuchi is surgeon general of the Japanese army, and in his experience in the field he evolved a method of treating aneurism which proved remarkably simple and reliable. On consulting authorities he found that it was much like Sime's modification of Antyllus' technic. He had occasion to observe 58 cases of aneurism, the result of bullet wounds during the war. The femoral artery was involved in 18 and the popliteal in 9, the subclavian in 5 and the brachial in 8 cases. The advantages claimed for his technic are that the operation is materially shortened and simplified, and the part of the vessel resected is comparatively small. The main artery is not ligated, but merely the afferent and efferent vessels belonging to the aneurism with their branches. A tourniquet is applied to the limb and the aneurism is exposed, incised, evacuated and wiped dry. The bullet hole generally faced the center of the body of the tumor, and it was always found to be the source of the hemorrhage. In doubtful cases a bougie may be passed through it. The part containing the hole is then tied off and resected, and the injured parts of the wounded vessel are tied off and resected on the inner side of the sac membrane.

Medizinskoe Obozryenie, Moscow.

Last indexed XLIV, page 1818.

- 77 (LXI, No. 12.) \*Splenectomy for Hydatid Cyst.—Ekhnokokovaya boleyzn v. Krymu. A. T. Kablukoff.
- 78 Liver Cysts of Non-parasitic Origin.—Kist petcheni, etc. L. A. Divavin.



- 79 Formalin Pigment and Its Extraction from Tissues.—Formalin pigment i izvlecheniya ego iz tkanel. V. S. Dyevitzky.
- 80 (LXII, No. 13.) \*K kazuistikye oslozhnenii aneurizmi aortl. V. F. Reisgoff.
- 81 2 Sluchaya symptom-complexa Adams-Stokes' a. O. P. V. Panfilov.
- 82 (No. 14.) Treatment of Nasal Polyps.—K utcheniyu o tak. naz. "choanalnykh polypakh." Radtzhik.
- 83 Pathogenic Influence of Yeast Fungl.—Experimentalnoe issledovanie pathogennago vliyaniya drozhzhevykh gribkov na organizma. N. A. Solovieff.
- 84 (No. 15.) Study of Seven Cases of Leprosy at Moscow. Sem sluchayev prokazy, etc. V. Samgin.
- 85 \*Extragenital Syphilis.—Ryetskii sluchai vnyepolovogo zarazhenii syphilisom. Blanche de la Roche.
- 86 (No. 16.) Multiple Hydatid Cysts in Abdomen.—Mnozhestvennie echinokokki bryushnoi polosti. A. T. Kablukoff. Six cases.
- 87 Congenital Fistula Between Bladder and Umbilicus.—Puzirno-pupotchnaya vrozhdannaya fistula. Vasileff.
- 88 (No. 17.) \*Tumor in Cerebellum of Boy of 9.—Opukholi mozhetchka v dyetskoy vozrast. I. Y. Vinokuroff.
- 89 \*Differentiation of Noma.—O raspoznavanii vodnyanogo raka shtcheki u dyetei. A. A. Kissel.
- 90 (No. 18.) \*New Operation for Total Symblepharon.—Novii sposob operatsii pri symblepharon totale. N. G. Pravosud. Illustrated.
- 91 Radical Vaginal Method of Removing Uterine Fibromata.—Rad. vaginal'shtchnii sposob op. udaleniya fibrom matki. V. V. Uspensky.
- 92 Preservation of Anatomic Specimens.—O. prigotovlenii anat. muselnikh preparatov. G. V. Shor.
- 93 To Finish Paraffined Sections, Mounted on Glass.—O tekhnike obrabotki paraff. sryezov, prikleennykh k steklu. Id.

77. Splenectomy for Echinococcus Cyst.—Kablukoff reviews the cases of splenectomy on record to date, a total of 278, according to his figures. The operation was undertaken in 79 cases on account of malaria, with 23 deaths; in 94 on account of idiopathic hypertrophy, with 38 deaths; in 29 on account of leukemic hypertrophy, with 26 deaths; in 32 on account of displacement of the organ, with 2 deaths, and in 4 on account of cancer, with 1 death. Only 9 cases of splenectomy on account of echinococcus cyst are known to him, one of the number having been reported by a Russian surgeon. Kablukoff reports another successful case of this group. The patient was a woman of 36, and the affection had been diagnosed as a sarcoma of the left kidney. In 6 other cases he merely evacuated the cyst in the spleen by Lindemann's technic, with good results in all.

80. Complications of Aneurism of Aorta.—Reisgoff describes with great detail the clinical and postmortem findings in a case of aneurism of the aorta complicated by thrombosis with obstruction of numerous arteries. The patient was a man of 36. The case shows that obstruction originating in the arch of the aorta does not necessarily cause serious disturbance in the nutrition of the tissues previously nourished by the obstructed arteries in the neck, the carotid, subclavian and innominate. Collateral circulation develops, and the organism soon adapts itself to the altered conditions. In the present case the aneurism was in the descending aorta and in the arch, and the left carotid artery was found completely obstructed, also the mouth of the right coronary artery, while the left innominate and subclavian arteries with ramifications were only partially obstructed.

85. Extragenital Syphilis.—The patient in the case reported was a young woman of good family, who presented a chancre on the lower lid, followed by the symptoms of constitutional syphilis. When on her wedding trip a chambermaid noticed a sty on the bride's eye and offered to cure it by rubbing it. She used her saliva-moistened finger, and the result was the transformation of the sty into a syphilitic chancre, followed by the symptoms of constitutional syphilis.

88. Tumor in Cerebellum of Boy of 9.—Vinokuroff reviews the literature on the subject of tumors in the cerebellum before giving the particulars of his case. Headache, vomiting and indications of congestion in the fundus of the eyes were all the symptoms observed, but at the autopsy a large solitary tubercle was found in the left half of the cerebellum, with caseous degeneration in the center.

89. Differentiation of Noma.—Kissel's article is based on a material of 46 cases collected in the course of eleven years. There was a history of preceding measles in 25, of typhoid fever in 4, of dysentery or whooping cough in 2, and of double pneumonia in 1 case; the antecedents were not known in 12

cases. Ulcerative stomatitis developed as an independent process in most of the cases. The first signs of the affection are slight swelling of the cheek with very little pain or congestion. The infiltration shows a very hard center, feeling like cartilage. In some cases the gangrenous process develops in the bones of the face, the perforation of the cheek not occurring until just before death. In ulcerative stomatitis Vincent's bacilli and spirilla are found in great abundance, but they are scanty or absent altogether in case of true noma. In none of Kissel's cases was there a transformation of ulcerative stomatitis into noma. He urges the importance of careful, daily examination of the mouth in all children debilitated by an acute infection. If this is done systematically, then cases of noma will be detected in the incipient stages. In rare cases the destructive process may affect the bones of the face without involvement of the skin. In one case he was called in consultation to see a little girl of 10 with typhoid fever. The surroundings were hygienically of the best and the child had been under constant medical supervision. He examined her mouth and found an unsuspected extensive gangrenous process in the soft part over the alveolar processes in the right upper jaw and roof of the palate. In another case, a girl of 5 lived in a neighborhood where there had been several cases of ulcerative stomatitis. She developed a gangrenous process in the cheek which did not reach perforation, but otherwise was typical noma, terminating in recovery. As a rule, he found the lymphatic glands less involved in noma than in ulcerative stomatitis.

90. Operation for Symblepharon.—Pravosud thinks that all methods of remedying symblepharon have so many defects that a new technic is desirable. He advocates a plastic operation which consists in making a horizontal incision to enlarge the interpalpebral slit to the edge of the orbit on each side. Two incisions are then made downward from the ends of the horizontal incision, at right angles to the first incision, for a distance of 1.25 cm., slightly converging below. A knife is then passed through the lid from one of these perpendicular incisions to the other, forming a flap whose base is parallel to the interpalpebral slit, while one side follows the base of the nose and the other corresponds to the outer side of the orbit. A piece of mucous membrane is then taken from the cheek and fitted over the raw surface left as the flap is turned down. The upper edge is sutured to the eyeball and the lower edge to the edge of the turned-down flap. Three loop stitches are then taken through the applied flap and the lower lid at the base of the flap. These loops hold the mucous membrane down to form a conjunctival sac, and are tied outside of the skin when the lower lid with its new lining is turned back and sutured in place.

## Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SEXUAL NEURASTHENIA (NERVOUS EXHAUSTION). Its Hygiene, Causes, Symptoms and Treatment. With a Chapter on Diet for the Nervous, by G. M. Beard, A.M., M.D. Edited with Notes and Additions, by A. D. Rockwell, A.M., M.D. Sixth Edition. Cloth. Pp. 316. Price, \$2.00. New York: E. B. Treat & Co., 1905.

LABORATORY GUIDE IN EXPERIMENTAL PHARMACOLOGY. Directions for the Course Given in the University of Michigan. By C. W. Edmunds, A.B., M.D., and A. R. Cushny, A.M., M.D. Cloth. Pp. 246. Price, \$1.50. Ann Arbor, Michigan: George Wahr, Publisher.

GENITO-URINARY SURGERY AND VENEREAL DISEASES. By J. W. White, M.D., and E. Martin, M.D. Illustrated with 300 Engravings and 14 Colored Plates. Sixth Edition. Cloth. Pp. 1092. Price, \$6.00. Philadelphia: J. B. Lippincott & Co.

MINOR AND OPERATIVE SURGERY INCLUDING BANDAGING. By H. R. Wharton, M.D. Sixth Edition, with 532 Illustrations. Cloth. Pp. 650. Price, \$3.00 net. Philadelphia: Lea Brothers & Co., 1905.

OIL WELLS IN THE WOODS. By J. C. O'Day, M.D. With Illustrations by Miss Ethel Farmer, and Photographs Collected by the Author. Cloth. Pp. 359. Deposit, N. Y.: The Oquaga Press, 1905.

TEXT-BOOK OF MATERIA MEDICA FOR NURSES. Compiled by L. L. Dock. Fourth Edition, Revised and Enlarged. Cloth. Pp. 330. Price, \$1.50 net. New York: G. P. Putnam's Sons, 1905.

STUDIES FROM THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH. Reprints. Vol. III. 1905. Paper. New York: Rockefeller Institute for Medical Research.



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## *Address*

### **PATHOLOGIC PHYSIOLOGY, A NEGLECTED FIELD.**

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON PATH-  
OLOGY AND PHYSIOLOGY, AT THE FIFTY-SIXTH ANNUAL  
SESSION OF THE AMERICAN MEDICAL ASSOCIATION  
PORTLAND, ORE., JULY 11-14, 1905.

WINFIELD S. HALL, PH.D., M.D.

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CHICAGO.

Not many generations ago physiology was taught in connection with anatomy only, and was a simple statement of the functions, as then understood, of the various structures described by the anatomist. It was Haller, who in his "Elements of Physiology,"<sup>1</sup> outlined the field of physiology and clearly established the boundary line between that subject and anatomy. Since Haller's time physiology has been recognized as a separate branch of medicine and soon after the publication of Haller's Elements, provision began to be made by the medical faculties for the teaching of this subject in a separate department.

Begun as an appendage of normal human anatomy, it continued as normal human physiology, gradually broadening into animal and plant physiology. Great as has been the activity in the field of morphology, that in the field of physiology has been scarcely less until the mass of facts and principles of physiology already firmly established is so great that the two years' course in experimental and didactic instruction in physiology now usually given in medical schools suffices simply to present such fundamental principles and facts of the science as may be applied later in clinical medicine. Furthermore, great as this material is, it includes only the discussion of the functions of the normal individual. In other words, the course of physiology as now given is one in normal physiology only.

If we turn now to the subject of pathology as presented to-day in our medical schools, we find that histopathology—presented usually in the second year—deals almost exclusively with modifications of the structure of the cells and tissues of the body, while the didactic course accompanying the microscopic work deals usually with the field of general pathology covering such topics as hydremia, anemia, hemorrhage, transudation, thrombosis and embolism; atrophy, degeneration, pigmentation and necrosis; hypertrophy, hyperplasia, metaplasia and regeneration; inflammation; parasites, animal and plant; the relation of micro-organisms to disease, infection and immunity; infectious diseases; tumors.

One searches the chapters of general pathology in vain for any sections that deal adequately with the problem of the physiology of disease.

Taking up the field of special pathology as usually

presented in the third and fourth years of the medical course, one finds that the postmortem furnishes the material for study. The points of fundamental importance at the postmortem as it is conducted by our leading pathologists are: (1) To confirm, or disaffirm, the diagnosis of the condition as made by the attending physician; (2) to gain information that will make the diagnosis of similar cases more secure in the future; (3) to increase our knowledge of diseased conditions of the body. With these ends in view it is customary to preface the postmortem examination by the reading of the clinical history of the case in hand, followed by, first, an examination of the body to determine gross conditions, demonstrating all evident changes of the gross conditions as the examination proceeds; second, preserving portions of each diseased tissue or organ for later microscopic examination. Such a postmortem examination requires from one to two hours, not including the many hours that may be later devoted to the study of microscopic changes.

The accumulated material from the numerous post-mortems affords museum material for gross study as well as microscopic material for study in connection with various topics in clinical pathology.

I believe that the above account, though brief, gives a fair summary of the work now being accomplished in our pathologic laboratories. I think it is not unfair to other departments of the medical school to say that the work of the pathologic department is the most important work in any one department of the medical course, and the work now given in the larger institutions could hardly be improved on in the time that is devoted to it.

It appears to me, however, that a very important phase of pathology and physiology has as yet received scant attention from medical teachers. The postmortem affords a golden opportunity for the study of the clinical history, particularly of the symptomatology, of the case in the light of the postmortem findings. The symptomatology of disease represents nothing more or less than modified functions as observed in diseased conditions. That there is a definite relation between the symptoms observable in a disease and structural changes that go on in the cells, tissues or organs can not be gainsaid. It may be difficult to establish this relation, but the pathologists should not be satisfied with their work until every disturbance of function has been traced to some disturbance of structure. The disturbance of structure accompanying malnutrition might be so slight as the simple difference in the zymogen granules of the pancreas, or in some obscure physical or physico-chemical change in the cells of the thyroid gland, while a derangement of the mind might be associated with a slight change in the Nissl granules in the cortical cells of the brain, or in a slight modification in the space relations ("contiguity") of cell-processes in the brain centers.

As stated above, the postmortem affords an opportu-

1. *Elementa Physiologiæ*, in six volumes, 1757-1765.



ity for the study of the relation of disturbed function (symptomatology) to the diseased structure. Such an attempt on the part of the pathologist to enter into the discussion of this problem in connection with the post-mortem examination would involve the expenditure of at least twice as much time as is usually now spent on a postmortem examination. In many cases this would entail the necessity of making fewer postmortem examinations than is desirable.

The question might be asked, "Why should not the physiologist cover this field and present to the students normal and pathologic physiology?" We will say in answer to that question: The physiologist presents normal physiology during the first two years of the medical course. The students have not progressed far enough in the study of pathologic conditions to enter understandingly into a consideration of the relation between symptomatology and pathology. Thus we find that important as this field is, neither the physiologist nor the pathologist—one for the lack of preparation of his students, the other for the lack of time—can take up this most important subject. The student therefore enters on the study of clinical medicine and surgery with a knowledge of normal structure and function, and also a knowledge of diseased structure, but no knowledge of diseased function. The clinician, in his presentation of a clinical case, may or may not discuss the symptomatology of a case from the standpoint of physiology. If an attempt is made at this at all it is more or less incidental to the discussion of diagnosis, of differential diagnosis and therapeutics. The relation of symptomatology to diagnosis on the one hand and to therapeutics on the other, so far overshadows in the mind of the clinician its relation to pathology on the one hand and normal physiology on the other, that very little attention is given to these last two phases of symptomatology.

I believe that the most important step to be taken in scientific medicine is, first, to determine and next to teach every student of medicine the relation between symptomatology and pathology, and this teaching should be a systematic course given to students taking clinical medicine and surgery, and should be divorced from any discussion of diagnosis or therapeutics, so that the undivided attention of both student and instructor would be directed to the solution of problems of the relation of modified function (symptomatology), to modified structure (pathology). It might be given by a pathologist, a physiologist or a clinician. In either case the preparation of the instructor could not be deemed adequate unless he were well versed not only in physiology and pathology, but also in clinical medicine.

One naturally asks at this point whether there exists a literature of this subject. Krehl, professor of internal medicine, University of Strassburg, Germany, has prepared a most admirable work of 600 pages entitled "Pathologic Physiology; A Treatise for Students and Physicians."<sup>2</sup> The third edition of this work was published in Leipsic in 1904. The first edition appeared about a decade ago. Earlier editions were not translated into English, and it has had a very limited use in Germany and among advanced men in other lands. An English translation of this admirable work is just now completed by Dr. Hewlett of Johns Hopkins University. Professor Krehl treats this subject from the standpoint of the clinician following the classification of the pathologist, and harmonizing his treatment at every point with the latest findings in physiology.

The question of the classification of the subject-matter is one of no small importance, and is a question to which I have given considerable thought. For the purposes of the physiologist and the pathologist, Krehl's method is advantageous. It is, however, questionable if such a classification would make the work as convenient as a manual for the student and practitioner as would a classification on the basis of diseases, following that of works on internal medicine.

A preliminary chapter or "part" of such a treatise should deal with general pathologic physiology, setting forth the relation between the various disturbances of function and various lesions of disease. For example: Variations of pulse, with causes of same; variations of peripheral circulation, with causes for same; variations of distribution of blood, with causes of same; variations of rate or character of respiration, with causes; variations of digestive processes, with causes of same; and so on briefly throughout the list of body functions.

Following this should be the main body of the treatise in which diseases of the circulatory system might occupy the opening chapter. Taking up any particular disease there should be a brief description of a typical case as to etiology, pathology and symptomatology. Under the head of pathologic physiology, each symptom should be discussed as to its causes and its relation to the pathologic findings. Diagnosis and treatment need not be mentioned. The discussion of typical cases of each disease would suffice.

I present a plea for the preparation of such a manual as above outlined and for such a course as above suggested, because I believe these are the most urgent needs of medical pedagogy.

## Original Articles

### THE ABRUPT ONSET OF TYPHOID FEVER.\*

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NEW YORK CITY.

There must be many variations in the onset of a disease, the course of which may be so mild as to be practically unnoticed, or which may kill after an explosive course of only a few days.

Especial stress has recently been laid on the variations in the onset of typhoid fever, as if these irregular cases were a new feature. It is probably nearer the truth to assume that the great improvements in the diagnostic methods in typhoid fever, especially the Widal reaction, have established the identity of a fairly large number of cases which formerly escaped recognition, and by reason of this, it may be added, were undoubtedly largely instrumental in spreading the disease. These irregular cases are much more frequent in infants and children than they are in adults; yet I prefer to restrict my remarks to-day to some of the irregular cases in adults which are characterized by an abrupt onset. These cases are of great practical importance, since rarely is the diagnosis more essential and at the same time more difficult to establish than in some of these patients.

A striking proof of these contentions may be found in the paper published by Curschmann<sup>1</sup> of Leipsic, which was rendered necessary by the sudden and dra-

2. Pathologische Physiologie, 3rd Edition, by Dr. Ludolph Krehl. Published by Vogel, Leipzig, 1904.

\* Read before the Twenty-second Annual Meeting of the New York State Medical Association, held at the New York Academy of Medicine, Oct. 17, 1905.

1. Deutsche Med. Wochenschrift, April 21, 1904.



matic death of a member of the royal house of Hessen from an abrupt case of typhoid fever.

The high mortality of these cases makes their early recognition imperative, a task which is frequently made difficult by the great variations in the clinical picture. These variations emphasize the general nature of the infections of typhoid fever, since any part of the body may be the seat of the initial manifestations, and it is the sudden development of these local symptoms, combined with the features of a general infection which renders the picture so protean.

As regards the frequency of this form of onset, a careful study of the cases at Mt. Sinai Hospital showed that it occurred in about 10 per cent. of all cases.

The recognition of the abrupt onset is by no means new, since it was first described by Chomel in 1834, in a number of cases presented in his *Clinique Medicale*. No further attention was paid to these observations until Maurice Raynaud referred to them in 1876. In 1884 De Mussy reported a number of cases, terming this method of onset "explosive." Since then a number of French writers, chief among whom are Potain and Widal, have added cases. In this country Pepper and Stengel<sup>2</sup> have also called attention to this subject. The statement of these authors, however, that Moore was the first to call attention to this class of cases in his text-book on Eruptive and Continuous Fevers in 1902, is incorrect, as is shown by the references which I have just given.

The most complete presentation of this subject is that of Wormser,<sup>3</sup> who draws attention to the high mortality in this class of cases, a statement which my own experience confirms. Widal has also studied these cases and has noticed the very early occurrence of his reaction in this group, it being positive on the third to the sixth day, and he therefore believes that the explanation of the sudden invasion is in many cases not to be traced to the shortness of the disease, but to the fact that the typhoid bacilli have "developed silently" in the organism. In these cases it is also probable that the bacilli may be unusually virulent, or that they may be associated with other antecedent infections, such as grip, malaria, tuberculosis, etc., which have lessened the powers of resistance of the individual, or, on account of the presence of a mixed infection, have favored the unduly rapid and virulent growth of the typhoid bacillus.

Before proceeding further we must carefully distinguish two important groups of cases with an abrupt onset. First, those which really are abrupt and which are the cases especially referred to in the preceding remarks; and second, those which seem to be abrupt and yet are actually not so—I refer to those melancholy cases of walking typhoid, by no means infrequent, in which the onset of the disease has been insidious and which invite medical aid only after the appearance of some catastrophe, such as perforation, hemorrhage, peritonitis, etc. These cases are too familiar to require any special consideration. How common they are may be readily inferred from the fact that in England typhoid fever is included among the causes of sudden death.

Cases of abrupt onset may be ushered in variously, either with chills, single or repeated, severe pains in the abdomen, head or other parts of the body, or violent delirium; or they may simulate cases of appendicitis, nephritis, pneumonia, pleurisy, grip, etc. Then, too, we have cases of sudden onset which act like diphtheria

with throat lesions, or cases with marked hyperpyrexia: while of still another type are the hemorrhagic cases. An unique form of sudden onset to which I have seen no reference occurred ten years ago in a young adult, in which the initial symptoms were a marked tachycardia and heart failure. It will thus be seen that the abrupt onset presents a very considerable degree of variation which will tax the diagnostic skill of even those who are expert in the disease.

Closely allied to the cases of abrupt onset and to be differentiated from them, are some of the cases of paratyphoid fever, the sudden onset of which brings this class of cases into close relationship with the group under discussion.

A few illustrative cases may be cited. The meningeal type is one of the most common of these cases of abrupt onset.

An interesting example of this occurred a number of years ago in my service at Mt. Sinai Hospital. A boy of 14 was admitted comatose, with a high fever, slow pulse and all the evidences of severe brain mischief. The history given by his parents was that while at play some days before he had fallen down a flight of steps and had been picked up unconscious, in which state he had continued, the fever having also persisted for the same length of time.

Examination of the optic discs by Dr. Gruening showed congestion; a lumbar puncture yielded clear cerebrospinal fluid, which was under increased pressure; examination of the ears and skull negative; moderate enlargement of the spleen was referred to the fever. The case was considered a surgical one until on evening rounds, Dr. I. Straus, who was house physician at the time, discovered a few roseola. On the next day a blood examination gave a positive Widal reaction.

Some of these abrupt meningeal typhoids closely resemble cases of cerebrospinal meningitis. In passing, I might state that the differentiation of these two classes of cases is usually very easy, since a simple leucocyte count will usually make a differential diagnosis possible, as never have I failed to find a high leucocyte count (above 16,000) in cases which proved to be cerebrospinal meningitis, while a low count of 3,000 to 5,000 was invariably present in the cases which developed as typhoid. The lumbar puncture, of course, gives additional diagnostic information. Clinically, however, the cases for a number of days may run an absolutely identical course.

The lungs and pleura when primarily attacked by the typhoid bacilli give us still another form of sudden onset, viz., the pneumo-typhoid and pleuro-typhoid, which are too well known to require any further description. This group may include cases where the sudden onset is so distinctly pulmonary that for a long time they are regarded as being acute tubercular pneumonia. An example of this kind occurred in the practice of Dr. S. V. Haas, where the exact diagnosis of typhoid fever was not made until the Widal reaction was positive in the fourth week. Until that time the case was regarded as being probably an acute pulmonary tuberculosis, the onset, course and the physical signs in both lungs fully warranting this supposition.

Another type of abrupt onset is where the patient is able to give not alone the day on which the disease began, but the exact hour from which he passed from a condition of apparent health into that of being seriously ill. These cases of abrupt onset are associated either with severe chills, fever, violent pains in the head or general pains in the back or other parts of the body, so that an attack of rheumatism or grip is suspected.

Of the cases with an onset of pain I need not say much, since this is a form which is sufficiently common.

2. Philadelphia Med. Jour., vol. 1, 1898.

3. "De Début Brusque de la Fièvre Typhoïde," Thèse de Paris, 1901.



Two classes of pain might, however, deserve a little further consideration. One is that form of abdominal pain which is especially referred to appendicitis. The clinical association of appendicitis and typhoid fever has been discussed so fully that I may permit the simple mention of this type to suffice without citing any special cases, except two, which may deserve some notice.

1. The patient was a boy, 10 years old, in the practice of Dr. W. G. Eckstein, who, while playing, received a kick in the abdomen. After reaching home he suffered from nausea and vomited; the temperature rose to 100.5 degrees, but on the next day he was perfectly well. Two weeks later, after eating lunch, he vomited and then complained of abdominal pain. Four hours later the temperature suddenly rose to 105 degrees; there was very marked prostration, but there were no other symptoms except abdominal pain and distension and the fever. On the next day the same conditions persisted, and the boy looked very sick. The tongue was dry and coated; the abdomen was distended; there was tenderness over the abdomen, being especially pronounced over the appendix. The temperature persisted at 105 degrees. Dr. Gerster, who saw the case in consultation, made a probable diagnosis of appendicitis, but advised waiting for further developments before operating. On the following day the same conditions prevailed, the temperature being still between 104.5 and 105 degrees. The Widal reaction was positive only in high dilutions. On the following day the roseola appeared. The subsequent course was an uneventful recovery.

2. Another example of abrupt onset, with severe abdominal pain, like appendicitis, but which was peritonitic, has just been published and deserves mention.<sup>4</sup> The patient was a 6-year-old child who had a very short attack of measles of only three days' duration. Two weeks later she was suddenly taken ill with fever, vomiting and abdominal pain. Two days later the vomiting became freed and the intensity of the pain was so great and their localization such that the diagnosis of appendicitis seemed probable. Ten days after the onset the patient died. At the autopsy the peritonium was found to be cloudy, with deposits of fibrin in the vicinity of spleen. Otherwise the abdomen was absolutely normal, except in the lower portion of the ileum, where there was a superficial typhoid ulcer.

Josias directs especial attention to the sudden onset of the symptoms, with vomiting, to the rapid and fatal cause and to the perforations, which were not due to a perforation, but to the dissemination of the toxins through the intestinal walls.

The other variety referred to of sudden onset with pain is that of severe pain in the head, which is often very puzzling. The meningeal type I have already mentioned, but this does not include all these cases. As you know, the headache of typhoid fever is usually the characteristic frontal headache. This frontal pain may indeed be so severe that diagnostic errors may result, an example of which is the following case which occurred in the practice of a competent physician in a neighboring city. A young man was suddenly taken with fever and very severe frontal headache. Examination of the nose revealing a marked swelling of both middle turbinates, and there being marked local tenderness over the sinuses and the corresponding portions of the nose, the diagnosis of local disease of the nose was not unwarranted. This view was confirmed by a specialist who was summoned from this city, and the middle turbinate bones were immediately operated on to secure drainage. The headache, local tenderness and fever persisting in spite of this, the specialist was again called in, and he again insisted on more drainage from the frontal sinuses. To secure this both frontal sinuses were opened. To the chagrin of the attending physician typical roseola appeared on the following morning, and the patient suc-

cessfully passed through an ordeal of typhoid fever.

Another type of sudden onset is that which is marked by sudden high fever, which may or may not be associated with chills. The rise of the temperature is so rapid that within twenty-four to thirty-six hours it reaches its maximum of 105 to 107 F., and the course reminds one of some severe poisoning rather than of typhoid fever. Death occurs usually at the end of the first week, the patient seldom surviving beyond the second. These foudroyant cases, as they have been called by Curschmann, are fortunately rare. I myself have seen but one, the temperature rising to 111 F. shortly before death on the tenth day. The only complication present was a lobar pneumonia, which developed on the ninth day.

The hemorrhagic form of typhoid fever is also often ushered in with sudden onset and runs a brief and rapidly fatal course. These cases are often mistaken for typhus fever. The hemorrhagic form is not always ushered in suddenly, for the only case of this form which I have seen developed in the ordinary fashion and did not show its hemorrhagic form until the latter part of the disease.

Malaria may be associated with the sudden onset of typhoid fever, the relations of which have been well brought out by the experiences in the recent Spanish war, namely, that malaria is apt to complicate the beginning and the end of the disease, but is not a factor of the disease in its fully developed stages. Closely allied to this question is the occurrence of chills at the onset of the disease. Chilliness or repeated small chills are extremely common, occurring in 33 per cent. of the cases at Mount Sinai Hospital. Repeated severe chills without any malarial affection also occur (2 per cent. in all cases). Some forms of this have already been given in some of the variations previously noted. I believe that the abuse of coal tars and other antipyretic drugs has been given undue prominence as the causation of chills at the onset of typhoid fever. While this might have been true some years ago when the coal tars were so recklessly used, yet now it is scarcely to be assumed.

Sudden onset in the throat characterizes a class of cases which is rather rare, the onset in the throat being either in the shape of characteristic Bouveret ulcers or severe pharyngitis. Diphtheria of the pharynx may be associated with a sudden onset of the disease in some cases, examples of which I have already published.<sup>5</sup>

Another type of sudden invasion is illustrated by a case which occurred in the practice of Dr. Berg of this city. A young married woman who was well enough to be out to hear the returns of the presidential election, was suddenly taken ill two days later with high fever, for which no explanation could be found beyond an acute nephritis, the urine boiling almost solid and containing characteristic casts. For four weeks she ran a continuous temperature with delirium, and although she was seen by some of the best clinicians of this city, no explanation could be given beyond the fact that she had nephritis and continuous fever. Independently, the Widal reaction was continually sought for in vain by Drs. Park and Libman. With the fall of the temperature the urine cleared up. A few days afterward the temperature again rose, again the urine contained large quantities of albumin and casts, and now for the first time the Widal reaction was independently obtained by both Drs. Park and Libman.

4. A. Josias: "Fièvre typhoïde à début péritonique," *Méd. Moderne*, 1905, No. 8.

5. "Pharyngeal Diphtheria and Typhoid Fever," *Amer. Med.*, June, 1901.



The grip type is another form of sudden onset and one which presents features of peculiar interest and gravity as regards the diagnosis. Let me cite a case. Eight years ago I was called to see a young man, 26 years of age, who for four days presented the group of symptoms: fever, general pain and aching, injection of the eyes and throat, bronchitis, etc., so characteristic of the catarrhal type of grip. The termination of the attack was as abrupt as its onset, and he immediately went off to a suburban club to recuperate. When I saw him before he left he was absolutely well. I was called to see him six days after and found him suffering from a fully developed attack of typhoid fever, to which he succumbed from perforation.

For a long time this case caused me much concern, for I was never sure whether I had not been guilty of an error in diagnosis in falsely considering his first attack to have been one of grip. Indeed, at a discussion on typhoid fever at the Metropolitan Medical Society five years ago, I referred to this patient and also called attention to the diagnostic difficulties offered by this class of cases, the exact relations of which I could not then understand. It was with no small amount of comfort that I read the last paper written by the late distinguished Parisian clinician, Potain.<sup>6</sup>

Potain discusses the occurrence of typhoid fever in direct succession to influenza and reports six cases of this character. In all these cases there was an abrupt onset characteristic of influenza, and they ran the course of influenza for a variable period. Then doubtful signs of typhoid fever developed, and the typical course of typhoid fever ensued with positive Widal reaction. Potain lays stress on the fact that the roseola appeared only after the eleventh to the thirty-first day had elapsed, and therefore infers that there could be no doubt of the existence of a preceding influenzal affection in these cases. His cases ran a mild course.

In the discussion of his paper<sup>7</sup> similar cases were reported. Le Gendre reported two cases of the same kind, one of them having been a physician who had been studying the pathologic anatomy of typhoid fever, and the other was a nurse who had been attending a case of typhoid fever. Widal, Vincent, Rendu and others presented similar observations. Wormser also calls attention to theses published by Millée<sup>8</sup> and Sabathier,<sup>9</sup> in which the sudden onset of typhoid presented phenomena which absolutely recalled the grip. Vernon<sup>10</sup> has also discussed the clinical association of grip and typhoid fever. The general consensus of French opinion is that the antecedent attack of grip has predisposed to the typhoid affection. With this view I am not absolutely in accord, since the subject can not be considered settled until further opportunity has been given to study the Widal reaction in the earlier attacks, nor should we lose sight of the fact that there are undoubted cases of typhoid fever, the onset of which is exactly the same as influenza.

The differential diagnosis of these two conditions, an influenza and some forms of early typhoid fever with abrupt onset with marked catarrhal symptoms and general muscular pains, is by no means easy. Some of the important characteristic diagnostic symptoms of typhoid may usher in an influenza. Thus in no other disease

(except typhoid fever) is bradycardia so common as in grip. Furthermore, a moderate enlargement of the spleen is quite frequent in grip. Intestinal symptoms may also be present, while the general symptoms may be absolutely identical. The progress of the case, the roseola, the Widal reaction, etc., alone enable us to differentiate these cases.

How can these cases of sudden onset be explained? One explanation is that already given, viz., that the typhoid bacilli have developed silently in the organism and without presenting any marked clinical features until the disease was well developed. The early development of the Widal reaction, which has already been referred to, would seem to corroborate this view. In many cases, however, this explanation will not hold, and the explanation of the sudden onset must rather be found in the rapid development of the organism within the body. As an example of this I might mention the case of a physician in this city, who, while working with typhoid cultures, accidentally swallowed some of the bouillon mixture. Seven days after he was suddenly taken ill with high fever, marked prostration and diarrhea. Within two days a complete picture of typhoid was fully developed.

The rapid growth of the typhoid bacillus is favored either by a pre-existing infection, such as grip, tuberculosis, malaria, etc., which has debilitated the patient, or by other causes which have enfeebled the patient and lessened his power of resistance, and thus favored the rapid growth of the organism. I refer to the effects of severe physical exercise, as in soldiers or athletes, and the effect of severe mental strain, etc., since in many of these patients physical or mental strain has preceded an attack of typhoid fever. The future must alone decide which of these explanations is correct. Probably both are of importance.

Be the explanation what it may, the clinical fact remains that in about 10 per cent. of the cases of typhoid fever an abrupt onset is possible, the clinical manifestations of which are so varied and so uncharacteristic of the classic typhoid fever of gradual onset, that in any case of severe acute illness of sudden onset in which there is a disproportion between the severity of the symptoms of infection and the clinical findings, a properly applied test for the Widal reaction should never be omitted. The fact that the Widal reaction develops so early in the cases of typhoid fever with abrupt onset lends particular value to this test in these cases.

## A CRITICAL STUDY OF THE VARIOUS METHODS EMPLOYED FOR ENUMERATING BLOOD PLATELETS.\*

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The two chief characteristics of the blood platelets are their marked tendency to undergo speedy dissolution in shed blood and their property of adhering to one another and to foreign objects. These characteristics explain the difficulties that have been experienced in attempts to count accurately the number of platelets.

The early investigators used various preserving fluids in their attempts to prevent the disappearance of the

6. "Grippe et fièvre typhoïde intercurrente," *Gaz. des hôp.*, April, 1900.

7. *Gaz. des hôp.*, June 8, 1900.

8. "Étude de la fièvre typhoïde à début grippal," Thèse de Paris, 1884.

9. Thèse de Paris, 1899.

10. *Arch. Med. et Phar. Mil. Paris*, 1899, vol. xxxiv, pp. 369-387.

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

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platelets from freshly drawn blood, and the counts were made with the ordinary hematocytometer. The results were regarded as so unsatisfactory by Halla<sup>1</sup> that he concluded from his study that it was impossible to determine the absolute number of blood platelets, and that the relative number could be estimated best in fresh preparations. Only a few years ago Türek<sup>2</sup> employed the same procedure, evidently because he regarded even the newer methods of counting the platelets as quite untrustworthy. The investigations of Eberth and Schimmelbusch<sup>3</sup> on the relation of the platelets to thrombosis strongly impressed them with the opinion that there were more platelets in the circulating blood than the counts indicated.

#### DESCRIPTION OF METHODS.

Havem,<sup>4</sup> with his students, used a variety of diluting and preserving solutions in his enumeration of blood platelets. One that he highly recommended was the amniotic fluid of the cow, to which tincture of iodine had been added. This was prepared according to a method devised by Max Schultze.<sup>5</sup> The dilution of the blood was made in the graduated capillary pipette, and the counting chamber was employed. Hayem<sup>6</sup> states that the average number of platelets in the blood of man is 250,000 per c.mm. Tables published by his pupil, Cadet,<sup>7</sup> showed that of 108 healthy individuals only two had a plate count below 200,000, and only four above 300,000. The highest count was 310,000.

Afanassiew<sup>8</sup> found that a weak peptone solution had advantages over the fluids previously employed. It preserved the erythrocytes as well as the platelets, and staining of the platelets was rendered possible by the addition of an anilin dye. The fluid was prepared by mixing 0.6 per cent. of dried peptone with a 0.6 per cent. solution of sodium chlorid; 1 to 10,000 or even 1 to 20,000 of methyl violet was added. The fluid was boiled and filtered; then preserved in sterile flasks. For the enumeration of the platelets the ordinary blood-counting apparatus was used. Afanassiew found that the number of platelets in healthy adult men varied usually from 200,000 to 300,000 per c.mm. In fourteen counts of his own blood using various preserving fluids, most commonly Pacini's fluid and osmic acid, the average number of plates was 231,000, the average number of erythrocytes was 5,278,000. In eight determinations made with the aid of peptone solution the average was 250,000 per c.mm. Tables published by his pupil, Cadet,<sup>7</sup>

Fusari<sup>9</sup> used the melangeur. He gave the number of plates as varying from 180,000 to 250,000 per c.mm. Muir<sup>10</sup> likewise used the graduated pipette. He pointed out that the blood should be quickly drawn into the tube, and the dilution made rapidly. He found 200,000 to 250,000 per c.cm. in normal individuals.

Kemp and Laker found independently that the use of the graduated pipette (melangeur potain) introduces an error, because many of the platelets adhere to the wall of the pipette, and hence the counts are too low. Laker found that counts of the same blood

varied greatly. Both Laker and Kemp, and later Brodie and Russell, Determann and myself avoided the use of the pipette, and employed indirect methods for counting the platelets. The ratio of platelets to erythrocytes is determined in a drop of diluted blood, and then the number of erythrocytes being known, the number of plates can be easily calculated. Laker<sup>11</sup> ascertained the number of erythrocytes in the ordinary way; then he mixed a small drop of blood as quickly as possible with a large drop of fixing fluid. The mixture was made homogeneous by stirring and a portion of it was placed in the Thoma-Zeiss counting chamber and the number of erythrocytes and platelets within the same ruled areas in different parts of the chamber was determined. Kemp, without knowledge of the work of Laker, devised the same year a similar method. Van Emden,<sup>12</sup> employing Laker's method and using as a preserving fluid, 1 per cent. osmic acid, obtained in health counts of 200,000 and 300,000 platelets per c.mm.

Pizzini<sup>13</sup> used 1 per cent. osmic acid colored with methyl violet, and placed a drop of the fluid on the finger tip and pricked the skin through the drop. A portion of the diluted blood was at once placed in a Thoma-Zeiss counting chamber and the ratio of platelets to erythrocytes determined. It differs from van Emden's method chiefly in the fact that no attempt is made by stirring to distribute the platelets equally through all parts of the diluting fluid.

Prus<sup>14</sup> used the following modification of Flemming's solution:

Sol. acidi osmici, 1 per cent. ....	10
Sol. acidi chromici O, 1 per cent. ....	10
Acid. acetici glacial ....	1

The ordinary hematocytometer was employed. The erythrocytes were completely dissolved so that the plates were not obscured in the counting chamber by their presence, as was the case with other fixtures, unless the blood was greatly diluted. Larger quantities of blood could thus be examined, and this would lead to greater accuracy. In health he found as an average 500,000 platelets per c.mm.

Van Emden<sup>12</sup> used Pru's fluid. Before being used the pipette was cooled in a freezing mixture, as Hayem had shown that 0° C the platelets underwent less rapid destruction. He compared the method with that of Laker and found that the results agreed. Platelet counts of the blood of normal individuals yielded an average of 245,000 per c.mm.; the lowest was 208,000 and the highest 269,000.

Rabl<sup>15</sup> devised a method of counting the platelets in dried preparations. It involved the use of a complicated stain and the necessity of counting all the plates on the two cover-slips between which the drop of blood was spread.

Brodie and Russell used solutions of glycerin of various strength, colored and dahlia. Excellent results were obtained with a solution composed of equal parts of glycerin, saturated with dahlia, and 2 per cent. sodium chlorid. In solutions containing a high per cent. of glycerin the platelets are freely movable. Unfortunately, glycerin dissolves out the hemoglobin from the erythrocytes. They found, however, that an enumeration can be made before the fluid renders the

1. Halla: Zeit. für Heilkunde, 1883, vol. iv, p. 331.  
 2. Türek: Klinische Untersuchungen über das Verhalten des Blutes bei acuten Infektionskrankheiten. Wien, 1898, p. 6.  
 3. Eberth and Schimmelbusch: Die Thrombose nach Versuchen und Leichen befunden, Stuttgart, 1888.  
 4. Hayem: Du sang, Paris, 1889, p. 14.  
 5. Schultze: Virchow's Archiv., 1864, vol. xxx, p. 260.  
 6. Hayem: Du sang, Paris, 1889, p. 374.  
 7. Cadet: Thèse de Paris, 1881, cited by Hayem.  
 8. Afanassiew: Deutsches Archiv für klin. Med., 1884, vol. xxxv, p. 217.  
 9. Fusari: Arch. per le Scienze med., x, p. 231. Cited by Brodie and Russell.  
 10. Muir: Journal of Anatomy and Physiology, 1891, xxv, p. 259.

11. Laker: Sitzungsbericht der Akad. der Wissenschaft. Wien, vol. xciii. Cited by van Emden.  
 12. van Emden: Fortschritte der Medicin, 1898, vol. xvi, p. 240.  
 13. Pizzini: Riforma medica, 1894, ii, Nos. 32 and 33. Cited by van Emden.  
 14. Prus: Medycyna, 1886, Nos. 39 and 40. Abstracted in the Cent. f. Inner. Med., 1887, p. 469.  
 15. Rabl: Wiener klin. Wochenschrift, 1896, No. 46, p. 1061.



erythrocytes invisible. They determined the ratio of platelets to erythrocytes. In a properly prepared specimen the platelets moved freely across the field of the microscope and were never clumped. A series of fields taken at random were counted until three or four hundred erythrocytes had been enumerated. The erythrocytes numbered on an average 5,400,000 per c.mm., and the platelets 635,000 per c.mm. They fail to state whether these figures are based on the examination of one or many individuals.

Determann<sup>16</sup> determined the ratio of platelets to erythrocytes in a counting chamber. He preferred as a preserving and diluting fluid a 0.9 per cent. solution of sodium chlorid, to which was added a drop (to 10 c.cm.) of a concentrated aqueous well-filtered solution of methyl violet. He tried a variety of other fluids, including a mixture composed of 1 per cent. sodium chlorid and 5 per cent. potassium bichromate, as recommended by Wlassow,<sup>17</sup> and also Hayem's, Pacini's and Müller's fluids, 1 per cent. osmic acid. In a study of twenty-five healthy individuals he found the ratio of platelets to erythrocytes varied from 1-18 to 1-30. The average was 1-22. Assuming the number of erythrocytes to have been 5,000,000 per c.mm., the average number of platelets was 227,000.

Kemp and Calhoun<sup>18</sup> used the indirect method of enumerating the platelets. The number of erythrocytes was estimated with the hematocrit, and the ratio of platelets to erythrocytes determined in a Thoma-Zeiss counting chamber. The preserving fluid was composed of formaldehyd, 40 per cent. solution 1 part, sodium chlorid 1 per cent. solution, 15 parts, with methyl green enough to color. The average number of platelets per c.mm. was found to be 862,000 for men and 833,000 for women. These figures were based on fourteen different counts of blood from eleven men and of six counts of specimens from two women. In another series<sup>19</sup> of determinations the average number of platelets per c.mm. taken from a mean of seventy-two observations on nineteen individuals was 778,000. The maximum was 961,500 and the minimum 730,000. In a later communication Kemp<sup>20</sup> stated that the average of five counts on five consecutive days on the same individual was 457,000 platelets per c.mm.

The most recent paper on the enumeration of platelets is that by Helber.<sup>21</sup> He used a 10 per cent. solution of sodium metaphosphate, which was first employed as a preserving fluid for platelets by the writer.<sup>22</sup> Helber had a special counting chamber constructed which was 0.02 mm. deep. In other respects it resembled the ordinary Thoma-Zeiss chamber of 0.1 mm. depth. A cover-slip 0.10 mm. thick (No. 16 in Zeiss' Catalogue for 1902) was used. The system of Zeiss lenses usually employed was objective E and compensation ocular 6. The graduated pipette designed for a dilution of 1-31 was carefully cleaned with sulphuric acid, water, alcohol and ether. Blood was drawn to the mark 1, then the melangeur was quickly filled with 10 per cent. sodium metaphosphate solution to the mark 31. The number of platelets was determined in the blood of twenty-four healthy men. The lowest count was 192,000, the highest 264,000; the average was 228,000. Four

times the number was under 200,000, seven times between 200,000 and 220,000, eight times between 220,000 and 250,000, and five times above 250,000.

#### CRITICISM OF THE FOREGOING METHODS.

The results obtained vary considerably. Hayem gives the average number of platelets as 250,000 per c.mm.; Afanassiew, 200,000 to 300,000; Fusari, 180,000 to 250,000; Muir, 200,000 to 250,000; Brodie and Russell, 635,300; Prus, 500,000; van Emden, 245,000; Determann, 227,000; Kemp and Calhoun, 778,000; Helber, 228,000.

There are four main sources of error:

(1) *Fragments of erythrocytes (Arnold's bodies) have been mistaken for blood plates.* The platelets which Hayem described as containing hemoglobin were probably of this nature. Van Emden maintained that if the melangeur filled with a mixture of blood and Pru's fluid were shaken too vigorously artefacts of traumatic origin are formed from the red blood corpuscles. Van Emden thinks that Prus mistook these bodies for platelets and attributes his high count to this error.

(2) *The use of a graduated pipette.* The tendency of the platelets to adhere to glass has been overlooked or disregarded by many in selecting a method of counting platelets. The investigators who have taken account of this are Brodie and Russell, Laker, Determann, and Kemp and Calhoun. The counts of those who used the capillary pipette were always too low, as many platelets adhered to the walls of the tube. This error, as I have shown in my observations recorded later, may amount to 50 per cent. Halla, as early as 1883, pointed out that if blood is drawn into a capillary pipette clumps of platelets are formed. None of the methods can be regarded as trustworthy which involved the use of the pipette. Hence the platelet counts of Hayem, Cadet, Afanassiew, Fusari, Muir, Prus, van Emden and Helber can not be accepted.

(3) *The use of the ordinary counting chamber.* Halla<sup>1</sup> recognized that in this chamber foreign bodies might easily be mistaken for platelets. It should be remembered that the depth of fluid on the Thoma-Zeiss micrometer slide is 100 microns, which is about fifty times the diameter of the platelet. The erythrocytes quickly settle to the bottom of the drop, but the platelets tend to float in the upper layers of the fluid, and it is difficult not to miss some of them in the count. Helber has indicated clearly the unreliability of platelet counts made in the ordinary counting chamber. On account of the distance of the cover-slip from the ruled lines on the slides a high objective with its slight focal distance can not be used. But in order to distinguish platelets from the degeneration products of erythrocytes (Arnold's bodies) a high power is needed. Professor Krehl and I attempted to overcome these difficulties by using a specially constructed Zeiss counting chamber of half the regular depth (0.05 mm. instead of 0.1 mm.). Later, Helber in Krehl's clinic solved the difficulties by employing a counting chamber 0.02 mm. deep, and replacing the usual cover-slip by one only 0.1 mm. thick.

The investigators whose results may be questioned owing to their employment of the ordinary counting chamber are Laker, Pizzini, Determann, Kemp and Calhoun, as well as Hayem, Afanassiew, Fusari, Muir, Prus and van Emden, who, as I have shown, introduced an additional error into their counts by employing the graduated pipette.

(4) *The lack of satisfactory preserving fluids was the source of error in many of the methods.* Brodie and

16. Determann: Deutsches Arch. für klin. Med., 1898, vol. lxi, p. 365.

17. Wlassow: Ziegler's Beiträge, vol. xv, p. 543.

18. Kemp and Calhoun: Amer. Jour. of Phys., 1901, vol. v.

19. Kemp and Calhoun: Brit. Med. Jour., 1901, vol. li, p. 1539.

20. Kemp: Amer. Jour. of Phys., 1902, vol. vi.

21. Helber: Deutsches Arch. für klin. Med., 1904, vol. lxxxii.

22. Pratt: Arch. f. exp. Path. u. Pharm., 1903, vol. xlii, p. 299.



Russell tested the solutions used by earlier investigators, and discarded all of them. None was found in which the platelets did not stick to one another or to the erythrocytes or to the leucocytes or to the glass. The solutions tested included Hayem's fluid, Pacini's fluid, Afanassiew's fluid, and formic aldehyd of different strengths. Some fixed the platelets well, but could not be used, as the platelets did not remain freely movable in them. This study of Brodie and Russell would lead to the rejection of the methods of Hayem, Afanassiew, Muir, Determann, Kemp and Calhoun.

#### THE WRITER'S METHOD OF COUNTING PLATELETS.

Deetjen,<sup>23</sup> in 1901, found that the agar containing sodium metaphosphate had the property of preserving blood platelets when a film of blood was spread on it. At Deetjen's suggestion, Professor Krehl and I tested a weak solution of sodium metaphosphate as a preserving fluid. We found that the platelets speedily disappeared. In a 10 per cent. water solution of sodium metaphosphate, however, both platelets and erythrocytes were well preserved. For the past two years I have employed the following solution which gives equally good results:

Sodium metaphosphate (Merck).....	2 grams.
Sodium chlorid .....	0.9 grams.
Distilled water .....	100 c.cm.

This solution keeps indefinitely unless molds or bacteria develop.

The number of erythrocytes is determined with the Thoma-Zeiss apparatus, and the ratio of platelets to erythrocytes in fresh preparations of the blood. The slides and cover-slips must be perfectly clean. Immediately before use it is well to test the cleanness of the glass by placing a drop of water on it; if the drop can not be spread out in a uniform thin layer the slide or cover-slip should be rejected.

Glassware is placed first in sulphuric acid, saturated with potassium bichromate, then washed in water and alcohol and placed in jars containing 95 per cent. alcohol, where they are kept until needed. They are then removed from the alcohol and wiped dry on a clean towel. I have found this procedure more reliable than the one I formerly advocated of heating the cleaned glass to 200 C. and storing in Petri dishes.

A few c.cm. of the sodium metaphosphate solution are poured into a watch-glass. The ear is cleaned with soap and water, alcohol and ether, and then stabbed deep enough to permit drops of blood to flow freely. A sterilized platinum loop, similar to those used in bacteriologic work, with a diameter of about 3 mm., should be filled with the preserving fluid, and the center of the loop is brought in contact with a fresh drop of blood on the ear. There should be three or more parts of fluid to one of blood. If desired, further dilution may be made on the slide. A portion of the mixture should without delay be covered with a cover-slip. The spread of blood should be so thin that the erythrocytes are well separated. It is not necessary to mix the blood and fluid intimately by long stirring, as without it the platelets and erythrocytes will be found evenly distributed in good specimens, and the platelets will not be clumped. Two preparations should always be made, and if the ratio of platelets to erythrocytes varies markedly in the two, then new specimens should be prepared. An oil immersion lens should be used in counting and a Leitz 3 ocular or its equivalent. A square diaphragm in the ocular facilitates counting. This can readily be made from thick paper or a card. It forms a simple substi-

tute for Ehrlich's ocular. The platelets and erythrocytes are counted in fields taken at random in different parts of the specimen, until 250 to 500 erythrocytes in each of the two preparations have been seen.

#### COMPARATIVE COUNTS BY DIFFERENT METHODS.

It was thought desirable to test the various procedures by counting the platelets in the blood of the same individual by different methods.

TEST 1.—March 7. Healthy man, aged 25. Erythrocytes, 5,552,000. Platelet count by Helber's method, using the original Helber-Zeiss apparatus, 330,000. This platelet count was kindly made for me by Dr. Cadwalder of the Pennsylvania Hospital.

*Platelet Count.*—By my method, 550,000. Dr. Cadwalder had previously made several counts, by Helber's method, of blood from this same individual and never obtained a higher figure than 350,000.

Additional tests have shown conclusively that even the momentary contact of the blood with the walls of the glass pipette in the method used by Helber destroys many platelets.

TEST 2.—A leucocyte counter was cleaned and filled as Helber directs, then a drop was expressed on a slide and the ratio of platelets to erythrocytes determined.

*Platelet Count.*—By my method, 1,443,000; after the blood had been drawn into a pipette according to the method of Helber, 561,000. In both counts 10 per cent. sodium metaphosphate was the preserving fluid used.

TEST 3.—June 7. Healthy man, aged 46. Erythrocytes, 5,480,000.

*Platelet Counts.*—Brodie-Russell method, 288,000; Kemp-Calhoun, 304,000; Determann, 498,000; my method, 668,000.

Determann specimen after standing one hour, 171,000 per cm.; my specimen after five hours, 637,000 per cm.

TEST 4.—June 8. Woman, aged 32. Posthemorrhage anemia. Erythrocytes, 3,768,000.

*Platelet Counts.*—Determann, 410,000; Kemp-Calhoun, 488,000; von Emden, 508,000; my method, 1,142,000.

TEST 5.—June 23. Erythrocytes, 4,304,000.

*Platelet Counts.*—My method, 1,196,000 per c.mm.; 1 per cent. osmic acid substituted for sodium metaphosphate solution, 130,000 per c.mm. The same proportions of blood and preserving fluids used in both determinations, the dilution being about 1 to 4.

#### PLATELET COUNTS IN NORMAL INDIVIDUALS BY MY METHOD.

	Sex and age.	Platelets. per c.mm.	Erythrocytes. per c.mm.	Leucocytes. per c.mm.
1.	M., 26.....	556,000	5,008,000	....
2.	M., 25.....	555,000	5,552,000	....
3.	M., 27.....	326,000	4,560,000	....
4.	M., 32.....	280,000	5,040,000	....
5.	M., 29.....	226,000	5,660,000	....
6.	F., 27.....	344,000	5,848,000	....
7.	M., 41.....	482,000	5,800,000	2,400
8.	M., 43.....	422,000	5,904,000	5,600
9.	M., 20.....	449,000	5,840,000	2,200
10.	M., 46.....	564,000	6,200,000	4,000
11.	F., 26.....	725,000	4,712,000	6,800
12.	M., 27.....	328,000	5,904,000	4,400
13.	F., 27.....	416,000	4,576,000	....
14.	M., 32.....	478,000	5,018,000	5,800
15.	F., 29.....	505,000	5,184,000	4,200
16.	M., 29.....	472,000	5,144,000	....
17.	M., 28.....	572,000	5,552,000	6,000
18.	M., 32.....	589,000	6,424,000	6,400
19.	M., 34.....	436,000	5,232,000	6,400
20.	F., 29.....	575,000	5,008,200	4,600
21.	M., 23.....	426,000	5,112,000	....
22.	M., 23.....	572,000	5,032,000	5,200
23.	F., 22.....	388,000	4,656,000	9,400
24.	M., 15.....	658,000	5,464,000	6,400
25.	M., 22.....	377,000	4,520,000	....

The maximum count in this series was 725,000 per c.mm.; the minimum 226,000, and the average 469,000.

#### DISCUSSION.

DR. GEORGE T. KEMP, Champaign, Ill., said that, in addition to the paper under discussion, he had had the pleasure of listening to a paper by Dr. Pratt, read before the Johns Hopkins Medical Society, on the subject of the enumeration of blood platelets in different forms of anemia, and that he regarded such work as of great value. He looked forward to seeing important discoveries made in the near future by the

23. Deetjen: Virchow's Archiv, 1901, clxiv, p. 239.



study of blood platelets in disease—discoveries which would be of decided use in diagnosis and prognosis. The importance of hitting on a reliable method for enumerating the platelets is obvious. Dr. Kemp called attention to two criticisms which Dr. Pratt had made of the Kemp and Calhoun method, and said that neither of them would apply. The first was that formaldehyd could not be used as a fixative. This was based, as Dr. Pratt stated, on a quotation from Brodie and Russell. Dr. Kemp said that he was familiar with Brodie and Russell's work, and, as he recalled it, they did not have sodium chlorid in the aldehyd fluid they tried. The Kemp and Calhoun formula calls for this, and it is essential.

If the proper percentages of salt and aldehyd are present, and if the blood is taken into a drop of the fluid placed over the puncture to receive it the instant it emerges, the platelets do not clump and the reds do not lose their hemoglobin. Another precaution is to take a small drop of blood into a large drop of the fluid and to mix them instantly. A gentle stir or two is sufficient.

Regarding the second criticism—namely, that the Thoma-Zeiss counting-chamber could not be used because the platelets floated at the top and, therefore, could not be brought into focus with the red corpuscles and the lines—Dr. Kemp said that, while this might apply with fluids used by Dr. Pratt and by Helber, as stated by these observers, it did not apply when the Kemp and Calhoun fluid was used. He had not used the Pratt nor the Helber fluid, but the specific gravity of the Kemp and Calhoun fluid was such as to allow the platelets to settle to the bottom readily so that the platelets, the red corpuscles and the lines are easily in focus at the same time. In the Kemp and Calhoun experiments a thin cover-glass was always used. Arnold-bodies are not formed in the fluid employed, and, as a rule, a one-sixth objective enabled an experienced observer to decide whether a given body was a platelet. It sometimes happened, however, that it was desirable to use a higher power, and for that reason Dr. Kemp said he regarded the Helber chamber as a great improvement over the ordinary form. He stated, further, that several different kinds of ruled eye-pieces had been used, and the counting-chamber dispensed with altogether. The results were not different from those obtained with the Thoma-Zeiss instrument. In conclusion, Dr. Kemp said that some of the platelet-counts given by Dr. Pratt, running over a million to the cubic millimeter, were larger than he had ever seen, except at high altitudes. He did not wish to offer any unfavorable criticism of the Pratt method, however, because he had not yet tried it.

## VARIATIONS IN THE RATIO OF DIAMETERS OF THE NORMAL CHEST AT DIFFERENT AGES.

THE FORM OF THE PHTHISICAL CHEST.\*

W. A. BESSESEN, A.M., M.D.

CHICAGO.

### INTRODUCTION.

It is proposed to give in concise form records on which may be based deductions of the changes in proportions of the chest, in its development from the fetal state to the adult form. Information will be offered to emphasize the special periods where development is particularly marked, as this study has been but slightly touched on. A general knowledge of the changes in the human chest is given in most of our standard anatomic works without, however, a grouped record on which the statements are based; and the material collected in late years by clinicians and physical examiners, can be very profitably supplemented by using a practical method of summarizing the observations. The study of the human chest is always one of much interest to the medical prac-

titioner for the valuable deductions that may be obtained. The skill with which the diagnostician of the present day utilizes the chest conditions in their various aspects has reached a high degree of perfection.

The statistics here presented include measurements on 502 subjects to illustrate the normal chest. To these are added 54 tubercular cases, which were studied in order to aid in substantiating Woods Hutchinson's<sup>1</sup> conclusions of the form of the chest in phthisis and its significance, as he emphasized the importance of the subject and wishes to see more extended measurements made. Besides, data are given which were taken from dogs, rabbits and guinea-pigs, numbering 46 animals. These data illustrate the typical quadrupedal chest sufficiently for comparison with the human chest. And, finally, there is an additional group of measurements from 16 monkeys. Though the observations are not very extensive, still they are sufficient to furnish a basis for proper deductions with a fair degree of accuracy.

### METHODS.

In all the chest measurements I used steel calipers which registered in centimeters and millimeters. By familiarity with the instrument, the touch is schooled to give every measurement a like degree of pressure in applying the tips. By practice in palpating the chest and sighting the planes, the diameters are evenly placed and regularity is secured in the system of data. Fuller data were taken on the adolescent and adult chests than on the fetus, infant and child.

The following is descriptive of the diameters of the chest and the three planes selected for the placing of all diameters except the first:

1. The length of the chest is measured from the middle of the clavicle to the junction of the tenth rib with its costal cartilage, using the left side exclusively. The length of the chest was taken on both the right and left sides in 54 adults, to determine what disparity there might be between the two. The right-handed man in practically every case gave a slightly longer right side, due apparently to the somewhat more elevated shoulder mass on that side, increasing the inclination of the right clavicle over that of the left.

Bony landmarks were chosen for this diameter, because of greater accuracy than the use of an imaginary line, passing down the chest from the clavicle to the margin of the ribs and just one inch outside the nipple. The position of the nipple is variable, always fallible for locating a diameter of the female chest; and even on the male the nipple may be above or below the fourth rib, over which it is generally considered to lie; and it may be more or less than an inch to the inner side of a line, drawn from the middle of the clavicle to the junction of the tenth rib with its costal cartilage.

The three planes, placed at different levels of the thorax, are sighted perpendicular to the long axis of the body. They are not quite parallel with each other, as can be readily conceived when the normal curvature of the trunk is considered.

2. The dorso-ventral diameter in the upper plane (clavicular) passes through the upper part of the manubrium at the interclavicular notch.

- 3 and 4. The dorso-ventral and the transverse diameters in the mid-plane (nipple) pass just below the junction of the fourth rib with its costal cartilage.

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Hutchinson, Woods: Some Deformities of the Chest in the Light of Its Ancestry and Growth, *THE JOURNAL A. M. A.*, vol. xxix, Sept. 11, 1897, p. 512. Also: Is the Consumptive Chest Flat? *THE JOURNAL A. M. A.*, vol. xi, May 2, 1903, p. 1196.



Measurements for forced inspiration, forced expiration and repose are made for each of these diameters.

The purpose of locating the mid-plane by a bony landmark was to secure more accuracy in the observations, for as already indicated the location of the nipple is a variable one. The common use of the nipple line and the nipple plane in securing anthropometric data ought to be discarded for a more exact method and one which is easily followed by the physician. Vierordt speaks of the nipple as an uncertain point, but only suggests that the errors its use in placing lines leads to "should be corrected by cultivating the eye to recognize what is to be regarded as the average location."

5 and 6. The dorso-ventral and transverse diameters in the lower plane (ensiform) pass just above the junction of the seventh rib with its costal cartilage. The end of the ensiform cartilage can not always be felt; the cartilage may be curled inward, turned abruptly to one side or the other of the median line, and it may be long or short. The variability in position of the end of the ensiform makes it an uncertain landmark to aid in placing a body plane.

I would again emphasize the use of planes, sighted perpendicular to the long axis of the body and passing through fixed bony landmarks of the thorax, in which planes the important diameters of the chest should lie. For the three dorso-ventral diameters the mid-line ventrally, represented by the sternum, and the mid-line dorsally, i. e., the spine, serve for placing the tips of the calipers. For the transverse diameters, the mid-axillary lines are used to serve this purpose.

INDICES.

In the tables, indices have been formulated to aid in presenting more graphically the principal changes in the chest as they occur. Fourmentin<sup>2</sup> was the first to determine the thoracic index by using the formula of the craniologists:

$$\frac{\text{Transverse diameter} \times 100}{\text{Dorso-ventral diameter}} = \text{index}.$$

Maurel<sup>3</sup> used this index a little later, and he was followed by other clinicians, who made numerous observations as regards the two diameters of the chest. In 1897 Hutchinson,<sup>1</sup> instead of using the index of Fourmentin, adopted the less cumbersome method of dividing the dorso-ventral diameter of the nipple plane by the transverse diameter. The tables contain both methods, with some slight modifications. Preference is given to the newer index, when comparing variations in the diameters at successive periods of time.

Breadth index  
(Hutchinson)

Mid-Dorso-ventral

Mid-Transverse

=

T

Breadth index  
(Fourmentin)

Mid-Transverse

Mid-Dorso-ventral

=

D

Length index  
(Hutchinson)

Mid-Transverse

Length of chest

=

L

Referring to the indices of Hutchinson, the lower the index the longer and wider, respectively, the chest. According to the index of Fourmentin, the higher the index the wider the chest.

2. Fourmentin. Emil J. J. F.: *Studies Precises sur les Deformations de la Poitrine avec Applications a la Pleuresie et a la Phthisie Indices Thoracique*, Paris, 1874, No. 411.  
3. Maurel, E.: *Mensuration de Cago Thoracique*, Bull. de la Soc. d. Anthropometrie d. Paris, 3<sup>e</sup> S., vol. x, p. 345.

MEDIAN VALUES.

For convenience in recording the measurements taken, printed cards of convenient size were used. These cards not only facilitated collecting data, but also were of especial value when grouped for the purpose of finding median values. The style of card used for the observations taken on individuals above 12 years of age is shown herewith:

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL.  
DEPARTMENTS OF PHYSIOLOGY AND PHYSICAL DIAGNOSIS.

Name or number.....  
Age.....  
Standing height.....  
Lung capacity.....

Weight.....  
Sitting height.....

Diameters of the chest.

1. Length of the chest: from the middle of clavicle to the junction of the tenth rib with its costal cartilage.  
(a) Right side..... (b) Left side.....

2. Dorso-ventral, manubrium.....  
Plane: Just below junction of the fourth rib with its costal cartilage.

3. Dorso-ventral:  
(a) Forced insp..... (b) Fore. exp..... (c) Repose.....

4. Transverse:  
(a) Forced insp..... (b) Fore. exp..... (c) Repose.....  
Plane: Just above junction of the seventh rib with its costal cartilage.

5. Dorso-ventral.....

6. Transverse.....

Examiner, W. A. BESSESEN,  
Date.....

The method used in summarizing the many measurements which have formed the material for the following tables is W. S. Hall's<sup>4</sup> method of handling anthropometric data, based on Quetelet's<sup>5</sup> median value. The median value may be defined as "that value which is so located in the whole series of observations of a single measurement, that there are as many below it as above it." In a small number of observations, one extreme is almost certain to overbalance the other extreme, therefore the Hall-Quetelet method is the more accurate and must be conceded to have more value than the average.

For explanation, let us take the diameter dorso-ventral manubrium, in twenty-nine young men, all aged 21 years. It varies from 13 cm. to 16.6 cm. As each measurement is in centimeters and millimeters, the cards are arranged in successively increasing values for this particular diameter. The fifteenth card will be the median diameter, which in this instance was 14 cm. To have sought the arithmetical average would have been a time-consuming method. By dividing this series of measurements just mentioned into ten groups with a difference of 0.4 cm., we get:

EXAMPLE 1.—DORSO-VENTRAL MANUBRIUM DIAMETER OF 29 MEN.

Measurement..	13+	13.4+	13.8+	14.2+	14.6+	15+	15.4+	15.8+	16.2+	16.6+
Number of observations,...	8	1	7	7	3	0	2	0	0	1

If it is desired to substitute the established mathematical formula<sup>4</sup> for securing the median value, it can be readily done:

$$M = a + \frac{d(n/2 - 1)}{m}$$

M = median value to be determined.  
a = minimum value of median group (the group containing the median value).  
d = difference between groups.  
n = total number of observations.  
i = sum of observations below the median group.  
m = number of observations in the median group. Substituting:

$$M = 13.8 + \frac{0.4(29/2 - 9)}{7} = 14.08$$

4. Hall, W. S.: *The Evaluation of Anthropometric Data*, THE JOURNAL A. M. A., vol. xxxvii, Dec. 21, 1901.  
5. Quetelet: *Anthropometrie ou Mésure des Different Facultés de l'homme*, Bruxelles, 1870.



The median value is not only of more consequence in summarizing anthropometric data than the arithmetical mean or average, but it is based on biologic and mathematical laws.

TABLE 1.—DATA FROM EIGHTY-FIVE ANIMALS AND HUMAN FETUSES.

Classification.	1 Dogs.	2 Guinea-pigs.	3 Rabbits.	4 Monkeys.	5 Human Fetuses under 30 cm. long.
Number measured . . .	29	10	7	16	23
Median values (in cm.)					
Length of body . . .					10
Length of sternum . . .	16.3	5.5	7.8	8.95	
Length of chest . . .				12.25	
Dorso-ventral, manu . . .				5.3	
Dorso-ventral, ens. D. . .	15.2	4.5	6.5	8.95	2.15
Transverse, ens. T. . .	11.7	3.95	5.9	8.55	2.05
Indices.					
Breadth, D/T . . .	1.3	1.13	1.1	1.04	1.048
Breadth, T/D . . .	0.77	0.86	0.90	0.95	0.95

The diameters of the lower plane were selected in securing the breadth indices of the animals and fetuses, because for them the greatest depth and breadth of the chest are in this plane. Even for several months after birth, the human chest normally presents its greatest dorso-ventral and transverse diameters in the lower plane. After this time the mid-plane diameters are equivalent to or slightly greater than the diameters of the lower plane.

The mid-plane is the most important one for study of the human chest, and the diameters of this plane will be used as before described in determining breadth indices from birth to maturity. The mid-transverse with the length of the chest T/L will give the length index.

TABLE 2.—DATA FROM FORTY-EIGHT BABIES.

Classification.	1 Under 3 days. (Included in col. 2.)	2 Under 26 days.	3 1 mo. to 13 mos.
Number measured . . .	8	25	23
Median values.			
Age (days) . . .	2	9	90
Weight (pounds) . . .	5.5	7	11
Diameters in centimeters.			
1. Length of chest, L . . .	8.9	9.5	11.4
2. Dorso-vent., manu . . .	5.5	5.6	6.2
3. Mid-dorso-vent., D. . .	8.35	8.6	10.3
4. Mid-transverse, T. . .	8.6	9.	11.
5. Lower dorso-vent. . . .	8.6	9.3	11.2
6. Lower transverse . . .	8.9	10.2	12.
Indices: Length, T/L . . .	0.96	0.94	0.96
Breadth, D/T . . .	0.97	0.95	0.93
Breadth, T/D . . .	1.03	1.04	1.06

TABLE 3.—THE NORMAL CHEST: 295 BOYS AND MEN.

	1	2	3	4	5	6	7	8	9	10	11
Classification (years) . . .	5 to 8	8 to 11	11 to 13	All 14	All 15	All 16	All 17	All 19	All 21	23 to 25	25 to 33
Number measured . . .	30	31	36	24	24	23	26	29	29	25	18
Median values.											
Age (years) . . .	6	9	12	14	15	16	17	19	21	23	26
Weight (pounds)* . . .				8 104.	19 108.	18 126.	133.5	139.	140.	144.5	156.
Standing height (inches) . . .				8 62.	19 64.	18 66.25	66.55	68.5	69.3	69.4	70.3
Sitting height (inches) . . .				5 31.6	6 32.8	6 35.95	18 34.75	13 35.5	6 35.		
Lung capacity (cubic inches) . . .				5 188.	6 202.	6 214.	18 243.	27 240.	27 240.	253.	262.
Diameters in centimeters.											
1. Length of chest, L . . .	20.65	22.5	25.	27.35	29.2	30.5	31.65	32.	33.	33.4	33.8
2. Upper dorso-vent. . . .	9.5	10.1	10.9	11.85	12.8	13.1	13.2	13.5	14.	14.	14.45
3. Mid-dorso-vent.											
Forced inspiration . . .				18 7	19.05	20.	20.65	21.	21 4	21.	21.8
Forced expiration . . .				15.5	16.05	16.8	17.3	17.	17.5	17.8	18 2
Repose, D. . . .	13.7	14 5	15.8	17.	17.6	18.4	18 9	19	19.45	20.	20.
4. Mid-transverse.											
Forced inspiration . . .				24.	25.25	26.5	26.75	27.5	28.	28.5	28.55
Forced expiration . . .				21 8	22.5	24.	24.55	25.5	25.9	26.5	26.9
Repose, T. . . .	18.25	19.6	21.5	23.	23.87	25.	25.65	26.	27.	27.6	27.72
5. Lower dorso-vent. . . .	13.35	14.2	15.15	16.	16.55	17.	17.55	17.2	18.3	18.	18.85
6. Lower transverse . . .	18 4	19.6	21.3	22.55	23.85	24.5	25.35	26.5	26.2	26.8	28.
Indices: Length, T/L . . .	0.883	0.87	0.86	0.84	0.817	0.81	0.81	0.81	0.82	0.82	0.82
Breadth (Hutchinson) D/T . . .	0.75	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.72	0.72	0.72
Breadth (Fourmentin), T/D . . .	1.33	1.35	1.35	1.35	1.35	1.35	1.35	1.36	1.38	1.38	1.38

\* The small figures indicate when all were not included. This also applies to tables 4 and 5.

The twenty-three babies of column three were of a foundling's home, and therefore the median values of that column would not be representative of well-nourished babies at three months.

TABLE 4.—NORMAL CHESTS; 136 GIRLS AND WOMEN.

	1	2 1	3 1	4 1	5 2	6 2
Classification (years) . . .	5 to 8	10 to 13	13 to 16	16 to 19	10 to 25	25 to 33
Number measured . . .	20	10	30	23	24	29
Median values.						
Age (years) . . .	7	12	15	17	22	27
Weight (pounds) . . .		85.	20 103.5	22 118.	132.3	130.
Standing height (cm.) . . .		149.9	157.3	22 158.5	22 158.8	158.8
Sitting height (cm.) . . .			74.9	22 82.3		
Diameters in centimeters.						
1. Length of chest, L . . .	9.	23.8	27.	29.	29.2	30.
2. Upper dorso-vent. . .	9.3	10.3	11.05	11.6	12.5	12.5
3. Mid dorso-vent.						
Forced inspiration . . .		17.1	18.05	19.	19.4	19 5
Forced expiration . . .		14.9	15.65	15.5	17.3	16.5
Repose, D. . . .	13.	16.	16.85	17.8	18.	18.
4. Mid Transverse.						
Forced inspiration . . .		22.5	25.	26.	26 4	26.5
Forced expiration . . .		20.	22.55	23.5	24.1	24.
Repose, T. . . .	17.2	21.6	23.	24.75	25.	25.
5. Lower dorso-vent. . .	12.4	14.8	15.9	17.	17.	16.5
6. Lower transverse . .	17.3	21.	23.1	24.	22.25	23.
Indices:						
Length, T/L . . .	0.90	0.90	0.869	0.85	0.84	0.84
Breadth, D/T . . .	0.75	0.74	0.73	0.72	0.72	0.72
Breadth, T/D . . .	1.30	1.35	1.36	1.39	1.388	1.388

1. The data for columns 2, 3 and 4 were furnished by Miss Lash, of the Chicago School of Physical Education and Expression.
2. The data for columns 5 and 6 were taken by Miss Ellsworth, principal of the Wesley Hospital School for Nurses.

TABLE 5.—PULMONARY TUBERCULOSIS; 54 MEN AND WOMEN.

	Men.			Women.		
	1	2	3*	4	5*	6*
Classification (years) . . .	18 to 20	22 to 37	40 to 78	22 to 39	22 to 58	26 to 58
Number measured . . .	5	16	19	6†	14	8†
Median values:						
Age (years) . . .	19	30	50	31	32	28
Weight (pounds) . . .				91.5	6 91.5	
Standing height (in.) . . .	3 65.8			62.	6 62.	
Sitting height (in.) . . .	3 33.4					
Centimeters.						
1. Length of chest . . .	33.2	33.15	31.5	29.65	29.55	29.1
2. Upper dorso-vent. . .	13.4	14.35	14.3	12.5	12.5	12.5
3. Mid dorso-vent.						
Forced inspiration . . .	19.6	†	†	18.3	18.6	19.4
Forced expiration . . .	17.6	†	†	16.3	17.3	17.5
Repose, D. . . .	18.55	19.5	20.2	17.17	17.95	18.25
4. Mid transverse.						
Forced inspiration . . .	25.9	§	§	23.75	24.4	24.
Forced expiration . . .	23.9	§	§	21.9	22.5	22.5
Repose, T. . . .	24.9	26.45	25.7	22.82	23.45	23.35
5. Lower dorso-vent. . .	17.8	18.8	19.2	15.95	16.5	17.6
6. Lower transverse . .	25.5	26.8	26.5	20.95	22.15	22.8
Indices: Length, T/L . . .	0.75	0.798	0.815	0.769	0.794	0.801
Breadth, D/T . . .	0.745	0.737	0.786	0.752	0.765	0.78
Breadth, T/D . . .	1.34	1.35	1.27	1.32	1.30	1.27

\* In columns 3, 5 and 6 an emphysematous element must be taken into consideration along with phthisis. Most of the patients from whom observations were taken presented pulmonary tuberculosis in its very early stage. † Included in 5. ‡ Expansion less than 2 cm. § Expansion less than 1.7 cm.



ANALYSIS OF DATA.

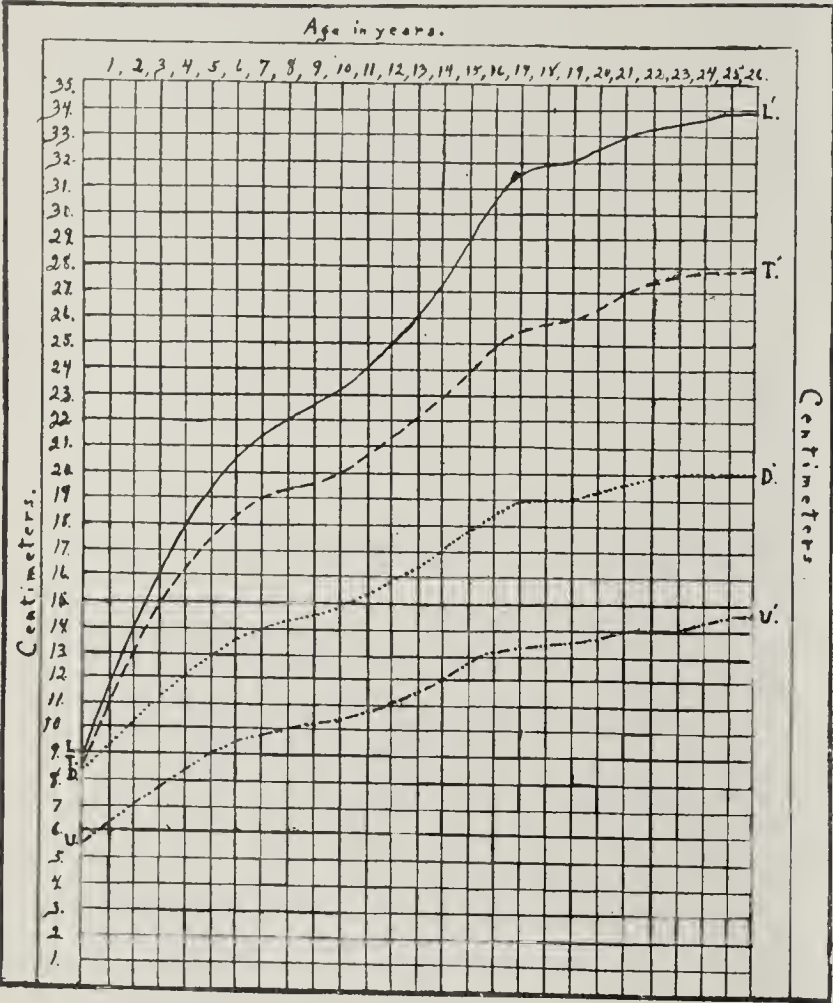
The typical quadrupedal chest with a dorso-ventral diameter distinctly in excess of the transverse, is necessitated by the backward and forward swinging of the fore limbs. This chest may be designated the deep or dorso-ventral type, represented by an index in excess of 1. See example 2.

EXAMPLE 2.—The quadrupedal chest. Dogs (29 observations). Diameter dorso-vent., D, 15.2 cm.; Transverse, T, 11.7 cm.; Breadth index, D/T, 1.3. See Table 1, column 1.

The dorso-ventral type of chest is much less marked in the monkey, correlated with a frequently assumed upright position.

EXAMPLE 3.—Monkeys (16 observations). D, 8.95 cm.; T, 8.55 cm.; D/T, 1.04. See Table 1, column 4.

In some of the anthropoid apes, measurements have shown a chest in which the transverse diameter is slightly in excess of the dorso-ventral. This chest may



Set of curves for graphic illustration of the course in development of the normal male chest from birth to maturity. The diameters at time of birth are: Length of chest, L=8.9; mid transverse, T=8.6; mid dorso-ventral, D=8.35; upper dorso-vent, V=5.5.

be designated the transitional type and represented as 1. (See Ex. 3.) With the change in position of the shoulder masses to the lateral aspects of the chest, and with the shifting of the scapulæ to the dorsal surface of the thorax, we see the transverse type of chest become more marked. In this type the index is less than 1.

The normal adult chest, with a marked increase in the transverse diameter of the mid-plane in excess of the dorso-ventral diameter of the same plane, is the type of vigor for man.

EXAMPLE 4.—The normal adult chest, representing the transverse type. Men (25 observations). Mid-dorso-vent., D, 20 cm.; Mid-transverse, T 27.6 cm.; Index, D/T, 0.72. See Table 3, column 10.

We notice that in the fetus a breadth index is obtained equal to the breadth index of the anthropoidean mammal.

EXAMPLE 5.—Fetuses 23. D/T = 1.048. Table 1, column 5. Monkeys, 16. D/T = 1.04. Table 1, column 4.

The full-term babe has a rounded, short chest with a slight predominance of the early transverse type.

EXAMPLE 6.—Twenty-five babies; age 9 days. D, 8.6 cm.; T, 9 cm.; D/T, 0.95. Table 2, column 2.

During the first six years of child life the conspicuous feature in the development of the chest, relatively speaking, is the change in the transverse diameter, which has markedly increased. At no time before or after this period is there an equal degree of rapid change in any diameter.

EXAMPLE 7.—LENGTH AND BREADTH INDICES COMPARED.

Indices	T/L	D/T
Babies, age 2 days. (8 observations)	0.96	0.97 Table 2, col. 1
Boys, age 6. yrs. (30 observations)..	0.88	0.75 Table 3, col. 1
Girls, age 7. yrs. (20 observations).	0.90	0.75 Table 4, col. 1

Having in mind the previous statement that the lower the index the longer and wider, respectively, the chest, then the change in chest diameters necessary to have brought about this drop in the breadth index over the drop in the length index, can be interpreted in no other way than the relative widening of the breadth beyond any other change. The chest has also elongated rapidly during the early years, and from the sixth year on for several years there is a gradual increase of both length and breadth, but the length develops somewhat faster than the breadth. At puberty the length of the chest takes on an active increase in growth over every other diameter, particularly in the male.

EXAMPLE 8.—INFLUENCE OF PUBERTY ON INDICES.

Indices...	T/L	D/T
Boys, age 12 yrs. (36 observations).	0.86	0.73 Table 3, col. 3
Boys, age 16 yrs. (23 observations).	0.81	0.72 Table 3, col. 6

By the twenty-fifth year the chest has reached its full length, and the transverse diameter which has been increasing gradually since the sixth year, and the dorso-ventral which has been deepening gradually since birth, are also now complete. In the male chest, from the twentieth to the twenty-fifth year, there is an apparent widening slightly in excess, relatively, over the increase in length, inferred from the increased length index.

The adult female chest does not reach so great a relative length as does the male chest.

EXAMPLE 9.—INDICES OF MEN AND WOMEN COMPARED.

Indices...	T/L	D/T
Women age 22 yrs. (24 observations).	0.84	0.72 Table 4, col. 5
Men, age 23 yrs. (25 observations)..	0.83	0.72 Table 3, col. 10

By mensuration we not only learn (1) the shape and size, but also (2) the movements, and (3) the capacity of the chest.

The difference in the diameters of the chest in the mid-plane in ordinary and deep inspiration is an important factor in estimating the freedom and fullness of respiration. E. O. Otis<sup>6</sup> has emphasized the importance of this study in his measurements of the chest and lung capacity. Comparing normal and phthisical chests, the deficiency of expansion in the latter is first noticed.

6. Otis, E. O.: Measurements of the Chest and Lung Capacity, International Med. Mag., vol. iii, pp. 85.



EXAMPLE 10.—CHEST EXPANSION.

	The Normal Chest.		The Phthysical Chest. (Very early cases.)	
	29 Boys, Age 19.	29 Women, Age 27.	5 Boys, Age 19.	6 Women, Age 31:
Diameter mid-dorso-vent.				
Forced inspiration . . .	21	19.5	19.6	18.3
Forced expiration . . .	17	16.5	17.6	16.3
Repose . . . . .	19	18.	18.55	17.7
	Table 3, col. 8.	Table 4, col. 6.	Table 5, col. 1.	Table 5, col. 4.

Such a deficiency indicates the presence of a local morbid process, notably tuberculosis. Rigidity of the chest as the concomitant of pulmonary tuberculosis has been pointed out by the clinician Fothergill. In the tubercular chest the length index is less than normal, the breadth index is greater than normal.

EXAMPLE 11,—THE NORMAL AND PHTHISICAL CHESTS COMPARED.

	Age.	Length of Chest.	Dorso-ventral, Upper Plane.	Dorso-ventral, Mid-plane.	Mid-T.	Indices.	
						T L	D T
100 men, normal. . . . .	26	33.05	14.	19.6	27.1	0.82	0.72
21 men, early pul. tbc. . . .	27	33.17	13.9	19.05	25.6	0.77	0.742
29 women, normal . . . . .	27	30.	12.5	18.	25.	0.84	0.72
6 women, early pul. tbc. . . .	31	29.65	12.5	17.17	22.82	0.769	0.752

The indices alone may not readily convey the changed formation accounting for this deviation; but by noticing the median values above, it is plainly evident that the transverse diameter has failed to keep pace with the increase in the dorso-ventral diameter, and with the lengthening of the chest during and after puberty. There is an arrest in development in the usual transverse widening, which makes the tubercular chest immature. The phthysical chest is not the so-called flat chest, as the projecting scapulæ may often make it appear, but it is a narrow chest tending to the rounded form with a relative elongation.

“Broad chests have a greater expansion than deep chests”; also “broad chests have a greater capacity (volume expansion) than do deep chests.”<sup>7</sup> The broad chest, with its attendant increased expansion and increased capacity, should offer the best resistance to the tubercle bacillus; and it is generally conceded that persons with deficient expansion are more prone to develop tuberculosis. Furthermore, a failure in the normal development most likely leads to a decreased resistance.

There being such a predilection to tuberculosis, outdoor life, climbing exercises, etc., are especially indicated to prevent pulmonary infection. An active outdoor life encourages deeper and fuller respiration, which will gradually bring about an increased chest expansion. Climbing exercises, rowing, etc., are most important means of strengthening the shoulder muscles, so that the scapulæ will be drawn back on the dorsal surface of the chest. This more favorable position, together with the increased action of all the chest muscles, will be of the greatest influence in bringing about a widening of the chest, and thus correct the static condition.

SUMMARY.

1. The method of using fixed bony landmarks for the placing of chest diameters is accurate and readily applied.

2. The use of median values for evaluating anthropometric data saves time and the results derived from this method of evaluation are more accurate than the arithmetical average.

3. Important features in the shape of the chest, as well as in the movement and the capacity, may be appreciated by an observation of its principal diameters.

4. The human chest, in the course of its development, has passed through various stages from the deep or dorso-ventral to the broad or transverse type.

5. In the fetus and young babe, the lower plane gives a greater depth and breadth than the mid-plane.

6. The fetus under 30 centimeters in length presents a dorso-ventral type of chest—it is deep chested.

7. The newborn child represents the transitional type of chest—it is round chested.

8. During the first five years of life the most conspicuous change is the rapid widening of the chest in its transverse diameter—it becomes broad chested.

9. At puberty the length of the chest takes on an active increase in growth over the other diameters—the adolescent becomes long chested.

10. From the eighteenth to the twenty-fifth year the development of the chest is fairly uniform in all its dimensions and represents the highest development—the broad long chest.

11. The dorso-ventral diameter increases at an even rate from birth to maturity.

12. The phthysical chest of adult years, in general, shows an arrest in development of the transverse diameter following puberty.

13. The phthysical chest is a narrow one, tending to the rounded form, with a relative elongation.

DISCUSSION.

DR. WOODS HUTCHINSON, Redlands, Cal., expressed his gratification that Dr. Bessesen’s independent study corroborated, in the main, the views submitted in Dr. Hutchinson’s essay. Since his attention was first directed to this question by some measurements which he made of tuberculous chests, nine years ago, a number of additional data have been collected, some by himself, but more by observers on both sides of the Atlantic whose interest was aroused by the publication of Dr. Hutchinson’s results in the *British Medical Journal* in 1900. These measurements now number some 700 and support with singular closeness and unanimity substantially the same conclusions which his first series of 40 measurements did—that is, that the tuberculous chest is not flat, as at first glance it appears and as most text-books yet describe it, but round, and, instead of its antero-posterior diameter being diminished, this is normal or slightly increased, while the shrinkage has occurred in the transverse diameter.

Dr. Hutchinson’s first measurements indicated a normal index of about 72, but he has since succeeded in accumulating a series of tables of nearly 5,000 measurements of normal individuals, chiefly soldiers in garrisons and college students and athletes in gymnasia, and on this mass the average index is slightly lowered—namely, 70 (69.9). The measurements of the 650 consumptive chests show an average index of 78, and, with the exception of one markedly aberrant series, the other 10 averages range within one point of 80, either above or below, thus making the consumptive chest 10° rounder than the normal. As these 650 measurements have been taken in three different London hospitals, in New York, in Chicago, in Leeds, England, in Portland, Oregon, in San Francisco, and in Memphis, Tenn., they may be regarded as fairly well establishing a probable average in this disease. This shape of chest is, of course, the persistence of the child chest and represents an arrested development at about the proportions, normal in the twelfth to the fifteenth year. As Dr. Bessesen has again shown, this represents an evolution from the ancestral quadrupedal chest, which in all animals outside of the human species,

7. Malone, F. F.: The Relation of Chest Contour to Lung Capacity. THE JOURNAL A. M. A., vol. xliii, Sept. 17, 1904.



except the anthropoids, some of the bats and some of the whales, is much deeper than it is wide. A similar form of chest has also been found by Drs. Evans and Hugh, of Chicago, among the paupers in Cook County Hospital, and by Arthur McGugan among the chronic insane, thus making it probable that it is the type of chest associated with arrested and imperfect development, or, as we loosely term it, degeneracy. Of this series of cases, some 70 were measured in a very early stage of the disease, and these show an index within one point of as high as the rest of the series, thus making it highly probable that this type of chest precedes the disease, although it is probably exaggerated by the increased respiratory effort and interference with proper emptying of the lungs due to the lesions of the disease. Another straw pointing in the same direction is the fact that of 31 successive cases of phthisis in his own practice, the 16 cases who did badly, 6 of them dying, presented an average index of 80.2, while the 15 who did well, 4 of them making complete apparent recovery, showed an average index of 74.6. As only 15 per cent. of the cases of tuberculosis measured failed to show a higher index than the normal, it would thus appear as if the measurements of the chest would furnish a datum of considerable value in the diagnosis of tuberculosis, and that any child or young adult presenting a higher chest index than normal, for his age, ought to be given a vigorous open-air life, with abundance of nutritious food, and every measure taken which would promote normal development and the attainment of full vigor. The round infantile chest and the small pubertal heart make the *habitus phthisicalis*. An exaggeration of this type of chest, due to the lateral pull of the diaphragm, gives rise to the pigeon breast or rachitis and adenoids.

## MYOMA OF THE ESOPHAGUS.\*

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Though myoma of the esophagus probably is not very rare, comparatively few cases have found their way into medical literature. That it is not common is shown by the fact that in the large number of autopsies recorded during the past five years at the Boston City Hospital, the Long Island Hospital and the Harvard Medical School, but two cases of myoma of the esophagus occur. On this account, it seems advisable to publish reports of these two cases and briefly to review those previously reported.

CASE 1.—A. J., male, aged 60, was admitted to the Long Island Hospital Nov. 22, 1902, in a moribund condition. Physical examination showed extreme cyanosis, edema of lower extremities, weak irregular heart sounds, and dullness with diminished breath sounds over both backs. The patient failed to respond to treatment and died at 2:35 a. m. November 23.

Autopsy.—November 26, by Dr. G. B. Magrath. L. I. H. 02.112.

Anatomic Diagnoses: Deformity of thorax; edema of legs and scrotum; chronic adhesive pleuritis; hydrothorax; hydropericardium; hypertrophy and dilatation of right ventricle; emphysema and edema of lungs; chronic passive congestion of spleen, intestines, liver and kidneys; ascites; leiomyoma of esophagus; general arteriosclerosis.

Digestive Tract: The stomach on its outer aspect at a point near its junction with the esophagus and above the lesser curvature presented a mass of the size of a horse chestnut, which on dissection was found to be continuous with the wall of the esophagus and showed a fleshy, somewhat striated, cut surface. (Changes in the other viscera were as indicated in the anatomic diagnoses.)

CASE 2.—A. D., female, aged 62, was admitted for senile

insanity to the Boston Insane Hospital three times during the five years beginning Aug. 22, 1900. On the last admission she complained of stomach trouble and ate little, presumably on account of delusions of poisoning. In the hospital she complained a good deal of pain in her abdomen. Ten days before her death, which occurred Jan. 27, 1905, she had an attack of nausea, and vomiting, which was persistent and continued until death. During the last twenty-four hours there was a slight showing of dark blood in the vomitus; otherwise none at any time.

Autopsy.—January 28, by Dr. E. E. Southard, N. 05.29.

Anatomic Diagnoses: Stricture of esophagus from pressure by leiomyoma; tumor (leiomyoma) nodules at cardiac orifice and on fundus of stomach; ulcer at cardiac opening of stomach; small healed ulcer of fundus of stomach; emphysema of lungs; edema of pia mater; chronic diffuse nephritis; biliary calculi; chronic tuberculosis of both apices of lungs; calcified thrombi in splenic artery; submucous polyp of uterus; chronic localized peritonitis.

Digestive Tract: The esophagus measured 7 cm. at a level 12 cm. above the cardia, 3 cm. at level, 9 cm. above cardia and widened to 6 cm. at level, 7 cm. above the cardia. Opposite, to the right of and behind, the stricture (the middle point of which was about 14 cm. below pharynx) was a dense ovoidal mass (Fig. 1), measuring 3.2 by 3 by 2.5 cm., smooth, loosely encapsulated, mottled gray-pink externally, cutting like a uterine fibroid, with a gray section surface which was coarsely fasciculated and varied a little in translucence, according to direction of bands. There was no invasion of surrounding structures by the mass. The mucosa of the whole esophagus was evenly reddened.

Just above the cardia, which measured 6 cm., was a flattened, bean-shaped mass, 1.4 by 0.7 by 0.5 cm., inclosed between the mucosa and the outer wall of the esophagus, set transversely to the axis of the esophagus on the right side. Opposite this mass was a shallow ulcer, 1.5 by 0.7 cm., with smoothly curving, reddened, slightly raised border and a clean base.

The stomach wall, in the main, was well injected and normal. The stomach measured 25 cm. from cardia to pylorus and 19 cm. in the greater circumference. There was a subperitoneal nodule measuring 1 by 0.8 by 0.7 cm., in the anterior wall of the fundus 8 cm. below the cardia. A smooth, dimpled scar, not over 0.5 cm. in diameter, united the normal-looking peritoneum and mucosa about midway of the anterior surface of the fundus. (Changes in the other viscera were as indicated in the anatomic diagnoses.)

Microscopic examination of the tumors in these cases showed the usual structure of leiomyomata. Bundles of smooth muscle cells ran in various directions to interlace with each other. With these there was a moderate amount of fibrous tissue best shown by Mallory's anilin blue connective tissue stain.<sup>1</sup>

There was no evidence of rapid growth or malignancy. Sections from Case 2 stained by the phosphotungstic-acid-hematoxylin method show fairly well-preserved myoglia fibrils, further indicating the smooth muscle character of the tumor.

In Case 1 there were no symptoms referable to the myoma, and the autopsy showed no signs of obstruction to the esophagus. In Case 2 there were symptoms, at least late in life, of obstruction of the esophagus, and at autopsy this was borne out by the moderate dilatation of the esophagus above the tumor. In Case 1 there was a single tumor, while in Case 2 there were multiple tumors. In both, the tumors appear to have developed in the outer coat of the esophagus. Both patients were old people.

In the literature it has been possible to find nine cases of leiomyoma of the esophagus as follows:

1. All staining methods used are to be found in Mallory and Wright's Pathologic Technic, 3d edition.

\* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

• From the Sears Laboratory of Pathology, Harvard University Medical School.



Eberth<sup>2</sup> reported the case of a patient, aged 50, with no symptoms during life referable to the tumor of the esophagus. At autopsy a leiomyoma was found situated at the lower end of esophagus, touching the cardiac end of the stomach and measuring 9.1x11.9x3.5 cm. The tumor half surrounded a dilated esophagus, and consisted of bean-sized nodules bound together by connective tissue.

Coats<sup>3</sup> reported a case of a man, aged 61, with symptoms of obstruction and death from inanition. At autopsy a pedunculated tumor was found attached 6¾ inches below the glottis and extending to the cardiac orifice of the stomach. The tumor measured 4¾x2x1 inch. The esophagus was much dilated. The



Fig. 1.—Myoma of esophagus from Case 2.

tumor was made up of spindle cells and a small amount of connective tissue.

Fagge's<sup>4</sup> patient was a man, aged 37, with no symptoms during life. At autopsy an egg-shaped tumor 2x1¼x1 inch was found just below the level of bifurcation of the trachea. Microscopic examination showed a smooth muscle structure.

Meyer's<sup>5</sup> patient was a woman, aged 78. There were no symptoms during life. At autopsy a tumor was found in the upper part of the esophagus beginning at the level of the thyroid. The tumor measured 8x4x2.5

cm. Microscopically, it was composed of smooth muscle.

Illig's<sup>6</sup> patient showed no symptoms during life. At autopsy a tumor was found at the level of the bifurcation of the trachea, almost surrounding the esophagus and measuring 5x5.5x2 cm. Histologically, it was composed of smooth muscle.

Pichler<sup>7</sup> reports the case of a man, aged 50, in whom there were no symptoms during life. A tumor was found 11 cm. below the arytenoid cartilage, composed of a mass of nine nodules, each from 2 to 17 mm. in diameter, bound together by connective tissue. Below these there were five scattered nodules.

Virchow<sup>8</sup> reports a case in which there was a myoma in the lower part of the esophagus, measuring 5 lines in diameter.

Förster<sup>9</sup> and Trastour<sup>10</sup> reported cases, but the details are not accessible.

This makes eleven cases of myoma of the esophagus. In seven the age is stated, and of these six patients were 50 or over; the others were 37. In six the sex is given, four were male and two female. In only two were there symptoms of obstruction. Of nine in which the situation is mentioned, only one occurred in the upper one-third of the esophagus, the others were in the lower third. In two patients there were multiple separate tumors.

In conclusion, I wish to express my thanks to Dr. H. A. Christian for suggesting this study and for assistance in its completion, and to Drs. S. W. Crittenden, G. B. Magrath and E. E. Southard for notes on the cases.

## REPORT OF COMMITTEE ON PROPRIETARY MEDICINES.\*

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NEW HAVEN, CONN.

AND

C. S. N. HALLBERG, PH.G., M.D.

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In the report of this committee made last year, the fundamental principles which should govern physicians in the employment of proprietary medicines were presented, and their adoption by the section was the first concrete result from several years of speculation. The enunciation of these principles, no doubt largely aided, if they did not influence, the Board of Trustees of the A. M. A., which, through the Secretary, the Editor of *THE JOURNAL*, authorized the organization of the Council on Pharmacy and Chemistry for the purpose of taking up this question in a practical manner.

During the five months the Council has been at work, many phases of the proprietary-medicine question have come up for consideration, but the one which to our mind is the most important, and which it is thought most appropriate to bring before the Section is that of the nomenclature of this class of medicines.

In order intelligently to discuss the subject, it is desirable briefly to enumerate the different kinds of names

6. Illig: "Die Myoma des Oesophagus," Inaug. Diss., Giessen, 1894.

7. Pichler: "Einen Fall von multiplen Leiomyomen des Oesophagus," Prag. med. Woch., 1897.

8. Virchow: *Die Krankhaften geschwülste*, vol. iii, p. 126.

9. Förster: *Wiener. med. Woch.*, 1858, vol. ix, 131.

10. Trastour: "Tumeur de l'oesophagus; myome avec points calcifiés," *Bull. soc. anat. de Nantes*, 1880, vol. iv, p. 7.

\* Read in the Section on Pharmacology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

2. Eberth: "Grosses Myom des Oesophagus," *Arch., f. path. Anat.*, etc., 1868, vol. xliii, p. 137.

3. Coats: "Large Polypoid Myoma of the Esophagus," *Glasgow Med. Jour.*, 1872, vol. lv, p. 201.

4. Fagge: "Case of Myoma of the Esophagus," *Trans. Path. Soc., Lon.*, 1874-5, vol. xxvi, p. 94.

5. Meyer: "Ueber einen Fall von Myom des Oesophagus," *Inaug. Diss., München*, 1882.



and the methods of naming medicinal articles, together with such legal considerations as these involve.

#### SCIENTIFIC OR DESCRIPTIVE NAMES.

The necessity for naming substances used in medicine according to a systematic plan is as essential in this as in any other branch of medical science.

The natural history sciences, botany, zoology and mineralogy, and chemistry, physics and pharmacy, all contribute to the vast number of substances used in the prevention, treatment and cure of disease. All of these sciences have their respective nomenclatures, which are an integral part of each; in fact, so much so that it is said that a superficial knowledge of these branches is often acquired simply by mastering the terminology. It is self-evident that no study of the sciences can be satisfactorily pursued without the terminology; it is the language, the expression of which gives to each substance or subject its identity, character and meaning, and affords methods of differentiation and distinction.

These terms are derived from the dead languages, chiefly because of their stability, their flexibility, and because being learned through the classics are familiar to all, and, therefore, are in a degree the universal languages.

While these facts are of such common knowledge that their mention should carry an apology, they are constantly ignored and their privileges violated in the naming of medicines.

While names must be formed to designate new substances or to indicate newly discovered facts and subjects, in the case of medicinal substances, the names should at least have the origin or derivation for their basis.

While the early generic names of plants were chosen rather arbitrarily, the differentiation of their species as a rule is indicated in their specific names. The confusion of some vernacular plant names is too great to be tolerated, as, for example, cocoa (cacao), coco (nut) and coca, three as distinctively different plant substances as could be imagined. While Alexander von Humboldt, when he discovered the chocolate nut named it theobroma (God's drink), and cacao, after the native Indian name, it has always been confused with the *cocos nucifera*, the milk-bearing cocoanut; and the oil of theobroma is to-day called cocoa-butter, instead of cacao; while coca, the leaves of *erythroxylon coca*, whence cocaine is obtained, is designated officially as *erythroxylon*.

The vernacular names of plants are so unreliable as to prohibit their use in medicine; sometimes similar names are applied to entirely different plants in different locations. There are, for example, ever so many different snake roots, viz., black, Canada, senega, Virginia, white, etc. Who could be certain of their identity unless they could be designated, respectively, *cimicifuga*, *asarum*, *senega*, *serpentaria*, etc.? No physician could safely order of these drugs without using the Latin name, or, in the case of official drugs, the Anglicized Latin titles.

In the same way, the principles of plants are named after the Latin name, usually the generic name, in the case of alkaloids, glycosides or neutral principles, and when a second one is discovered it is usually named after the specific name, such as *pilocarpin* and *jaborin* from *Pilocarpus jaborandi*. There are some exceptions to this, as, for example, *morphin*, named by Serturner for "the God of Sleep," it being the first alkaloid discovered. One hundred years ago no system of nomenclature for these principles had been evolved.

#### CHEMICAL NOMENCLATURE.

With chemical substances it may, indeed, be said that the nomenclature is the fundamental part of their knowledge. While the elements have been more or less arbitrarily named, yet there is a significance or meaning in the name of every element, devised by its discoverer from some physical or chemical property. Before the chemical terminology now *en vogue*, devised by Berzelius, the exact relation and distinction of chemical compounds was not clear, but with a better conception of chemical facts and theories a nomenclature was devised which made possible the systematic study of chemistry, and subsequently by the type theory of Dumas disclosed the infinite relations of the organic compounds. To study chemistry without understanding the nomenclature, would be as absurd as to attempt to study the human body without being familiar with anatomy. To name chemical substances without designating them in chemical terms is not only unscientific, but often misleading. No physician can safely order any chemical substance without the possibility of error, except in correct chemical terms; besides, he loses the great advantage in the use of chemical terms indicating the chemical properties, and consequently often their chemical reactions and even their therapeutic virtues.

While this should always be the aim in naming inorganic compounds, as well as many organic salts, it is not always practicable with that extensive and constantly growing list of chemicals commonly called synthetic. Owing to the complexity of the molecules of many of these, the complete chemical names can not always be used and the manufacturers employ a contracted name, or substitute a more or less arbitrarily selected title, which is also usually registered as the trade-mark of the article. The new United States Pharmacopeia furnishes several illustrations of such titles having been formed by the contraction of the chemical names: *Acetphenetidinum* for acet para phenetidine or phenacetin. *Benzosulphinidum* for benzoyl sulphonamide or saccharin. *Hexamethylenamine* for hexamethylenetetramine or urotropin. *Methylthionina* for tetramethyl-thionine or methylene blue. *Sulphonethylmethanum* for diethyl sulphone methylethylmethane or trional. *Sulphonmethanum* for diethyl sulphone dimethylmethane or sulfonal.

The deletion of the Greek numbers and adjectives in these titles does not impair their value, at least for the purposes of medicine and pharmacy, and though somewhat unwieldy, yet they certainly should be given the preference over coined and arbitrary titles, especially since these are usually protected by registration as trade-mark or by copyright.

#### PHARMACEUTICAL NOMENCLATURE.

There remains now for consideration only the nomenclature of the special forms required for the administration or therapeutic application of these drugs or natural substances of organic origin, and their various principles and educts and the chemical products. This is distinctively pharmaceutical, that is, their preparation, compounding and dispensing constitute pharmacy. Since the time that Galen first prepared the plant extracts, from the *elixir proprietatis* of Paracelsus to the latest form of elegant medicinal tablet or bon-bon of "*fin de siècle*" pharmaceutical art, a nomenclature has been evolved which is, perhaps, as well established and comprehensive for pharmacy as that of any other science or profession. The nomenclature of pharmaceutical



preparations, moreover, is given an advantage and prestige enjoyed by scarcely any other science, in that it has legal standing in every country through their pharmacopœias.

The pharmacopœias, as is well known, are the legal authority for medicines in their respective countries, which gives to the nomenclature a significance and meaning scarcely realized. There are in the United States Pharmacopœia over thirty different classes of preparations and extra-officially nearly as many more modifications of these official preparations. Yet, the question may well be asked, Have these pharmaceutical terms a purpose? If so, why are they constantly ignored? Manufacturers either ignore them or vie with each other in coining new names to substitute for them. The pharmaceutical nomenclature keeps step with therapeutic science; as soon as a new name for a new form of preparation is required, the pharmaceutical literature quickly responds and the name appears. It is safely asserted that there is not a single medicinal preparation now offered to the medical profession which could not be classified under the present nomenclature. Is it because the terms, tincture, liquor, elixir, syrup, spirit, fluid extract, pill, powder or ointment, are too simple, too commonplace, or hackneyed, and have lost their charm, or is it that the manufacturers seek to evade them in order better to be able to palm off some of these classes of preparations under mysterious and captivating titles, possibly a cloak for some old-time mixture of doubtful composition and questionable therapeutic virtues?

It is recommended that every medicinal article have a scientific title or descriptive name, and that the exclusive control of an article through registration of the name as a trade mark or through copyright, be regarded as a perversion of the purpose and function of the patent laws. The greatest manufacturers, those who have attained the greatest reputation, prestige and patronage of the medical profession, even to-day, are those who rely on their names as the criterion for the quality of their products. What trade-name product has ever enjoyed the reputation of Powers & Weightman's quinin, Rosengarten hypophosphites, Mallinckrodt's potassium iodid, Squibb's chloroform, Parke Davis & Co.'s fluid extracts, Wyeth's elixirs, etc.? Manufacturers are shortsighted to ape the methods of the anonymous and pseudochemical companies in employing trade names, thus losing the prestige their names would confer on any other products they may introduce from time to time.

## ACUTE HEMORRHAGIC PANCREATITIS.\*

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In the following case the woman was a patient at this institution under the care of Dr. Stockton, who makes the following clinical report:

*Patient.*—The woman, aged 55, was admitted to the institution ten years ago. She had delusions of persecution, hallucinations of sight and hearing and was restless, sleepless, dull and melancholy.

*History.*—Little is known regarding her life and condition previous to admission, but from what could be gathered from herself and from the commitment papers the indications are that she had led a dissolute, immoral life and that she was addicted to the use of morphia. From the time of her admission until the onset of her illness her physical health was

good except for a moderate constipation which required the use of a mild purgative from time to time. Mentally there were no marked alterations, but she manifested some retardation of thought and occasional periods of irritability and quarrelsomeness, with obscene and immoral talk. On arising on the morning of March 14, 1904, she complained of feeling ill and suffered from nausea and vomiting, but was up and about until 11 a. m., when she began to complain of great pain and distress in the region of the stomach, aggravated when lying on the back, and of more or less tenderness on examination. The severity of the pain was such that an opiate was necessary to relieve it. At 6 p. m. the temperature was 102.6 and pulse 130, with but little alteration in the local or general condition. Vomiting continued, the vomit matter being bile-stained. The pain was dull and aching, its acuteness probably lessened by the opiate. The following morning there was considerable tympanitis, rigidity and tenderness, most marked in the epigastric region, and general jaundice supervened. Vomiting had somewhat lessened. The pain was still dull and boring in character. While attempting to get out of bed about 11 a. m. she suddenly became semi-conscious and died in a very short time.

*Autopsy.*—The autopsy, performed three and one-half hours after death, revealed the following condition:

The body was that of an adult female, white, apparent age 55, weight 145 pounds, height 5 feet 5 inches. The body was well-developed, well-nourished and rather fleshy. There was considerable general jaundice. There was postmortem rigidity in the neck, hands and feet. Postmortem lividity was slight posteriorly. The abdomen was prominent, tense and tympanitic. Liver dullness was indefinite.

On opening the abdominal cavity, the omentum and the intestines protruded. The intestines were considerably distended with gas. The omentum and peritoneum were of a pink, light-red color, and a thin, dark-red, odorless fluid ran out of the incision. About 350 c.c. was diffused through the general peritoneal cavity. The appendix was 6 cm. long and lay to the inner side of the cecum, curled behind the lower end of the ileum, and was apparently normal. The pyloric half of the stomach, the duodenum and the transverse colon were pushed forward by a dark-red, rather soft mass, lying posterior to them, and apparently involving the whole of the pancreas. Scattered throughout the omentum, the mesentery and the walls of the stomach and intestines were numerous small, white nodules, varying in size from a pin head to a split pea, rather soft, white on section, and most abundant in the neighborhood of the pancreas. All the structures in the immediate surroundings of the pancreas were intensely swollen and edematous and infiltrated with a fluid similar to that lying free in the peritoneal cavity. The infiltration and edema extended into the retroperitoneal tissues, surrounding both kidneys, and down into the postcecal tissue on the right side, giving the whole a boggy, sodden appearance and a dark-red color. The mass involving the pancreas consisted of coagulated blood diffused through the whole of the pancreas, except a very small portion of the head and tail. The source of the bleeding could not be found. The mucous membrane of the stomach and intestines were pale in color, swollen and edematous.

The liver was of a pale, yellowish-red color, softened. The lobules were indistinct. The gall bladder contained about 20 c.c. of dark, reddish-brown bile and a moderate number of small, brown-colored calculi. The bile ducts were patent and opened by a separate orifice from that of the pancreas into the duodenum.

The spleen was slightly softened, and the splenic artery and vein were filled with coagulated blood.

The kidneys contained several small cysts and were markedly congested. The bladder contained a few centimeters of slightly albuminous urine, but no sugar.

Apart from the abdominal conditions, there was some fatty infiltration of the heart, marked atheromatous degeneration of the large arteries, with some calcareous deposit, bilateral chronic pleuritic adhesions, cicatricial contraction of the lower lobe of the right lung, excess of cerebrospinal fluid, consider-

\* Read before the Marion County Medical Society, Indianapolis.



able subarachnoidal exudate and marked atheroma of the arteries at the base of the brain.

## REMARKS.

Incomplete as the clinical report is, it yet indicates some of the most prominent symptoms that should lead one to suspect an acute involvement of the pancreas. The onset of this condition is usually sudden, but may be preceded by epigastric uneasiness for a day or two. It occurs more frequently in adult males, and particularly in fleshy people. It usually begins with abdominal pain, which is intense, more or less diffuse and persistent, with paroxysmal exacerbations. It is increased by movement, and is associated with well-marked tenderness above the umbilicus, distention of the superior abdominal region and by vomiting. Nausea and vomiting are early symptoms and increase in severity. No relief follows the act of vomiting. The vomited matter consists of food and mucus, later of bile and blood in various stages of degeneration.

A condition of collapse soon follows. The abdomen usually becomes distended and tender. The bowels, as a rule, are constipated, rarely there is diarrhea. Slight jaundice is usually present and increases the longer the patient lives. The mass may be palpable but usually the distention and tenderness are so great as to render palpation very difficult, if not impossible except under anesthesia. Severe attacks are usually fatal in 24 hours. When less acute, a gangrenous condition is often produced and proves fatal in from two to five days from absorption of the toxic material. When the condition is still less acute it may lead to abscess formation, or become subacute, or chronic; and in mild forms it may lead to resolution and recovery.

The hemorrhage may precede or take place during the inflammatory process. If it precedes the inflammation, the bleeding is usually within and without the glandular substance, and usually runs an extremely acute course. If it occurs during the inflammatory process, the bleeding is less profuse and runs a less acute course.

The diagnosis is difficult, as there are several conditions with a similar group of symptoms. The principal ones are: 1, Acute ptomain poisoning; 2, perforation of a gastric or duodenal ulcer; 3, gangrenous appendicitis; 4, phlegmonous cholecystitis; 5, acute intestinal obstruction.

Judging from the important part taken in the digestive process by the pancreatic secretion that is discharged into the duodenum, and in the process of metabolism by the internal secretion that is given off by the pancreas to the blood or lymph stream or both, one would expect that the clinical manifestations of a diseased condition would be so characteristic that a diagnosis would be comparatively easy, but there are several reasons why this is not the case:

1. The pancreas is rarely involved in a pathologic process without other organs being affected, particularly the biliary ducts, the stomach, and the duodenum.

2. Every function performed by the pancreas can be performed to some extent by some other organ in the body except the glycogenic function.

3. The greater portion of the gland may be destroyed and yet the remaining portion apparently may be able to carry on the normal function of the entire gland.

While these conditions may give rise to very conflicting and perplexing combinations of symptoms, yet there are some pronounced features manifested which should lead one to suspect a diseased condition of that special organ. Fitz has laid down a rule that when a previously

healthy person or sufferer from indigestion is suddenly seized with violent pains in the epigastrium, followed by vomiting and collapse, and within twenty-four hours by a circumscribed epigastric swelling, tympanitis, and resistance, with slight rise of temperature, one should suspect acute pancreatitis.

In a lecture delivered before the Royal College of Surgeons of England, Mr. P. J. Cammidge<sup>1</sup> stated that there were present in the urine certain products which were almost if not quite pathognomonic of acute pancreatitis. His method of examination to prove their presence is as follows: To 10 c.c. of filtered urine is added 1 c.c. of strong hydrochloric acid, boiled gently for 10 minutes on a sandbath. A mixture of 5 c.c. of filtered urine and 5 c.c. of distilled water is then added and the whole cooled in running water. The excess of acid is then neutralized by slowly adding 4 grams of lead carbonate. The whole is again filtered, the flask rinsed with 5 c.c. of distilled water. To this are now added 2 grams of sodium acetate and 0.75 gram of phenylhydrazin hydrochlorate and boiled for three to four minutes on the sandbath. It is then poured into a test tube and allowed to cool undisturbed, when a flocculent precipitate forms consisting of rosettes of golden-yellow crystals. The presence of sugar of albumin must be previously gotten rid of, as these substances interfere with the process and the results. As somewhat similar results are obtained in patients suffering from certain diseases in which active tissue changes are going on, a differentiating test must be applied, which consists in taking 20 c.c. of filtered urine and adding 10 c.c. of saturated aqueous solution of mercuric chlorid, filtering. To 10 c.c. of the filtrate add 1 c.c. of strong hydrochloric acid and boil as in the former process. It is then diluted with 5 c.c. of the former filtrate, and 10 c.c. of distilled water, cooled and treated as in the former instance.

The practical results of these examinations of the urine by these two methods Cammidge summarized as follows: If no crystals are obtained by either method the pancreas is not at fault, and the explanation of the symptoms must be sought for elsewhere. If crystals are obtained by the first method and not by the second, active inflammation of the pancreas is present and surgical interference is generally indicated. In acute inflammation of the pancreas the crystals are fine and dissolve in a 33 per cent. solution of sulphuric acid in about thirty seconds. In chronic inflammation the crystals are coarser and dissolve in one to two minutes. If crystals are obtained by both methods there may exist: 1, Malignant disease of the pancreas; 2, chronic disease of the pancreas; 3, non-pancreatic diseases.

In malignant disease the crystals are very coarse, and require from three to five minutes to dissolve, and operation is contraindicated. In chronic inflammation the crystals are smaller and dissolve in from one to two minutes. In non-pancreatic disease the crystals dissolve in one minute. Thus it seems that the size of the crystals and their solubility are directly dependent on the acuteness of the inflammatory process.

As regards the treatment, the pathologic condition indicates that practically only one line of treatment can be beneficial, and that is evacuation of the septic material, arrest of the hemorrhage, and free drainage by surgical methods. Even though the mortality following operation in the acute stage is very high, 36 out of 59

1. Cammidge: *Lancet*, July 1, 1905; abstracted in *THE JOURNAL, A. M. A.*, July 29, 1905, p. 359.



operative cases proving fatal, yet when one considers the fact that the disease almost invariably ends fatally when not treated surgically, an operation is strongly indicated.

## POISONING DUE TO THE PAPA (*ASIMINA TRILOBA*).

M. A. BARBER.

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LAWRENCE, KAN.

Some seven or eight years ago, in late summer, I found in this vicinity several fruits of the common papaw which had fallen to the ground and ripened prematurely. The fruit was ripe enough to be palatable, and I ate a small portion, perhaps equivalent to one fruit. About six hours later I experienced an urticaria, beginning with itching and burning in the hair at the back of the head and soon extending over a considerable part of the body. Accompanying symptoms were nausea, throbbing at the head and disturbance of the bowels. The urticaria would at times diminish suddenly; then the nausea would increase, to be relieved a few moments later with the reappearance of the "hives." The symptoms lasted several hours, but they had almost wholly disappeared by the next morning and the skin had resumed its normal condition. A friend ate some of the fruit at the same time that I did, but suffered no ill effects whatever.

I had never before experienced similar symptoms, and I suspected the papaw; but I was not sure of the cause until, a season or two later, I had an opportunity of repeating the experiment. This came when, visiting the same grove at about the same time of the year as on the former occasion, I found similar fruits and ate a small quantity to test the effect. The same train of symptoms followed after about the same interval of time, though this time the illness was considerably more severe, and I experienced a decided faintness along with the symptoms of the previous case.

In the autumn of 1904 I undertook some more systematic experiments on the nature of this poisoning. It seemed to me worth while to investigate the matter for the sake of any information I might be able to obtain on the general question of poisoning resulting from individual susceptibility to the action of certain fruits, especially since I had a subject so conveniently at hand. I desired particularly to find out if repeated poisoning confers any immunity on the susceptible person, and to ascertain if any particular condition of the fruit is necessary in order to cause the illness. I have eaten ripe papaws since childhood, but had never before experienced poisoning from them or from any other fruit. I was also interested in the papaw itself; for, while not altogether a popular fruit, it is much eaten in many parts of the Mississippi Valley, where it is abundant, and some attempts are being made to cultivate it and obtain improved varieties of the species.

The following is a brief summary of my experiments:

October 1. Ate small portions of several fruits. Eleven hours later I experienced urticaria and some of the other symptoms noted above, but the illness was very mild.

October 7. Ate 24 grams of fruit brought to me from a locality at some distance from the source of the fruits used in the other experiments. The fruit was probably picked up from the ground, because it was slightly blackened on one side. After about ten hours I experienced urticaria with slight nausea, but the symptoms were comparatively insignificant.

October 10. Ate 21 grams of the same fruit, which had been

kept in a refrigerator since October 8, and had ripened somewhat in the interval. No effect.

October 15 to October 18. Ate a whole fruit ripe from the tree and a whole fruit ripe from the ground. Also ate a whole fruit not fully ripened at the time of collection, but allowed to ripen three days after gathering, and ate 21 grams of a fruit taken green from the tree.

In none of these four experiments was there any effect. All of these experiments were made with fruit apparently in a normal condition, and differing only in the degree and manner of ripening.

On account of all these failures I began to suspect that I might have acquired some degree of immunity to this fruit, but the next experiment disproved this theory.

October 19. Ate 23 grams of a fruit which had fallen prematurely from the tree. The quantity eaten was equivalent to about one-third of a fruit of average size. It had been kept four days at room temperature and had ripened somewhat at the center, but the outer part was still hard. Its taste was bitter.

The effects began to be noticed three and one-half hours later. An urticaria began on the crown of the head, then appeared on the body where suspender or garter pressed the skin. Then it spread over the whole body, the face, hands and feet being the latest to be covered. Nausea with vomiting, faintness, chill and disturbance of the bowels followed, the symptoms being decidedly more severe than in any previous case. The following day little remained of the illness, except that the face and hands were slightly swollen, the throat a trifle sore and the skin ready to break out into a mild urticaria on irritation.

This experiment, the most decisive of all, indicated that the four previous poisonings, two of them within twenty days, had not conferred any great degree of immunity; and, further, that an abnormal condition of the fruit seems, in my case, at least, to be necessary in order that poisoning may take place.

During the autumn of 1905 I resumed the experiments, trying smaller doses of fruit similar to the one which had caused the poisoning of the previous year.

September 11, I ate 3 grams of such fruit, and September 12, 10 grams of the same specimen kept on ice over night. October 10, I tried 25 grams of a fruit taken from the tree soft but not fully ripe.

In none of these experiments was there any effect. It would seem that the dosage was too small, or more probably, the fruit not in the condition in which it is poisonous for me.

During the past year or so I have made many inquiries of physicians and others in regard to poisoning from this fruit, and I have learned of fifteen or twenty cases attributed to this cause. Dr. Cleveland of Burlington, Kan., a locality where the papaw is abundant, told me of two cases, in one of which he found the patient unconscious. On recovery to consciousness the patient exhibited urticaria. Dr. Manson of the same locality reports several cases of poisoning due sometimes to eating the fruit and sometimes to the mere contact of the surface of the fruit to the skin. Dr. J. E. Buckman of Modesto, Ill., wrote me of three cases which he attributes to the eating of papaws. In all three cases the patients reported that the fruit they had eaten was so ripe that the surfaces had begun to turn black. One case was characterized by fever, a burning sensation in the stomach and throat, with an eruption on the membrane of the throat. There was an eruption externally also, especially on the face where pustules formed which were large and slow to heal. The other two cases exhibited similar characteristics, except that there was no in-



ternal symptoms. Both patients stated that they had been poisoned before by papaws.

Professor Havenhill of the department of pharmacy in the University of Kansas has reported a case to me in which an urticaria appears several days after eating the fruit whenever the skin is irritated. Mr. Benjamin Buckman, a horticulturist of Farmingdale, Ill., reports to me that poisoning from papaws occurs in his family and that one member is affected by merely being in a room with the fruit without any contact with it. I am told that there are persons who can eat the fruit with impunity if care is taken to avoid touching the face with the exterior of the fruit, and it is believed by some that persons who are susceptible to ivy poisoning are more likely to be sensitive to the papaw. In my own experiments I have several times rubbed the skin with the surfaces of fruit, but never noticed any effect. I am not in the least subject to ivy poison.

Horticulturists report two varieties of papaw, in one of which the mature fruit has white flesh, in the other yellow; and one person told me that there is a notion current that white-fleshed variety is poisonous to susceptible persons, while the yellow-fleshed one is harmless. I have been unable to get any confirmation of this view. In only a few cases could I get exact data regarding the condition of the fruit eaten, but it is presumed that the fruit was in most cases ripe, since the unripe fruit is hardly palatable.

Many persons whom I have interviewed on this subject had lived where papaws are abundant, and had been accustomed to eating them, but had never heard of poisoning of any kind resulting from their use, and the majority of physicians of whom I inquired have never had a case of this kind. So it may be presumed that severe poisoning is comparatively rare, and that the milder poisoning may often be attributed to some other plant.

Summarizing the results of my observations and experiments, it may be stated that poisoning due to the papaw exists, but a special predisposition on the part of the person is necessary. The surfaces of the fruit may act as an external poison as well as the pulp an internal, though persons susceptible to the one form of poisoning are not necessarily susceptible to the other. The condition of the fruit is, with some persons at least, of importance; and there is evidence that normally ripened fruits are less likely to be harmful. The symptoms of internal poisoning resemble those of poisoning due to oysters or strawberries in susceptible persons, and in my case there was some relation between the strength of the dose and the promptness with which the symptoms appeared. There could hardly be any question of ptomain poisoning, since the fruits which were poisonous to me, at least, were rather under than over-ripe; and in one experiment a fruit which had caused illness became harmless in nearly the same dose after ripening somewhat. The external poisoning varies from a mild urticaria to a condition resembling severe ivy poisoning. There is no evidence of immunity resulting from previous attacks.

## New Instrument

### AN INHALER FOR ETHERIZATION

BY THE OPEN DROP METHOD.

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It is not the purpose of this article to discuss the merits or advantages of the different methods of producing anesthesia by the inhalation of the vapor of ether. Whatever advantages may be claimed for the semi-open method or for the closed method, a large number of surgeons and anesthetists prefer the open method, which, to be of advantage, must be conducted by dropping the ether for inhalation rather than by pouring it into the inhaler. The number of those who prefer this open drop method is increasing, and while inhalers for the other methods are in abundance and modifications of the old ones are constantly being made, little has been done in the development of an inhaler for the open drop method.

Dr. Laplace, of the Medico-Chirurgical Hospital in Philadelphia, devised an inhaler for this method and deserves credit for the ingenuity manifested in producing so excellent an apparatus, but, ordinarily, no special mechanism is employed. Many etherizers practice the method of laying over the face a certain number of layers of surgical gauze and dropping the ether on them. To prevent irritation of the skin it is neces-

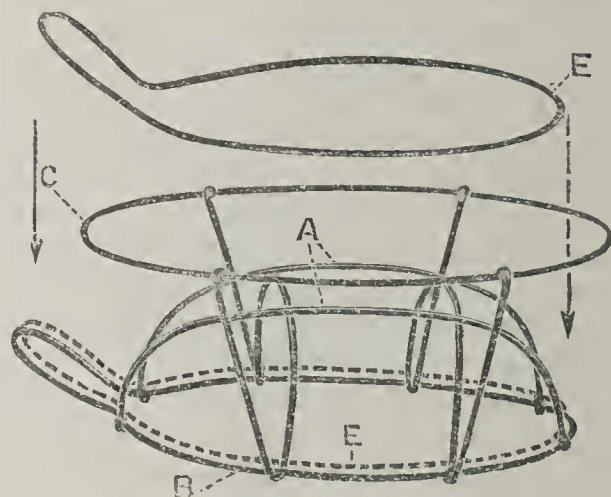


Figure 1

sary to anoint the patient's face with some unguent, which, as a rule, permeates the lower layers of the gauze and renders them more or less impervious to the ether vapor. Further, if gauze alone is used there is much waste of ether, for, although the actual quantity lost may not be great, the proportion renders anesthesia more tardy and difficult. To obviate these troubles some cover the gauze with a sheet of absorbent cotton, in which a hole is torn and through this hole the ether is dropped on the gauze, which is sometimes kept away from the face by placing it over an ordinary Esmarch's chloroform inhaler. By this method, also, much ether is wasted, as the cotton absorbs it by capillary attraction.

A description of the inhaler which I devised and which I have used for years with perfect satisfaction may be of general interest and is, therefore, here submitted.

This inhaler is intended to administer only air saturated with ether in only the quantity necessary to produce and maintain surgical anesthesia, although profound anesthesia may be maintained if desired. It consists of a metal wire frame (Fig. 1) over the convex portion of which (A) are stretched several thicknesses of surgical gauze (Fig. 2).

This gauze is held taut and in contact with the face wire (B) by means of a flexible wire (E). It will be seen that when thus arranged the apparatus embodies all the essentials of an Esmarch chloroform inhaler. It differs from the Esmarch, however, in that the face wire (B) should so come in contact with the face of the patient as to allow no admission of air between the inhaler and the face, a condition the reverse of what is necessary when chloroform is administered. The amount of gauze which should be employed depends on the size of the mesh of the gauze, for as much should be used as can be

Resection of Thirteen Feet of Intestine.—The *Semaine Médicale* states that Pauchet of Amiens recently resected a part of the ileum, on account of irreducible hernia, in a man rather below the ordinary height. The resected portion measured exactly 4 meters, or more than 13 feet. The patient was affected with diarrhea when he was dismissed and resumed his usual diet, but it was controlled by a drier diet. Our exchange thinks that this is the most extensive resection of the kind on record.



employed without in any way embarrassing the respiration of the patient. Ordinarily six to ten layers are sufficient. The wire frame with the gauze in place is then covered by a cotton flannel bag (Fig. 3), so arranged that it fits snugly around the face wire (B) without impinging on the free space, and on top it draws up so as to leave an opening about an inch in diameter, through which the ether is to be dropped on to the gauze inside (Fig. 3, G).

When the apparatus is complete (Fig. 3) it is adapted for the administration of ether to a patient in the supine position. If it is necessary to have the patient in a lateral position, a cover may be used with an opening in the side instead of in the top.

When put together for use the apparatus consists of two chambers (K and M, Fig. 4), and when the ether is dropped through the opening (G) in the cover (F) it falls on the layer

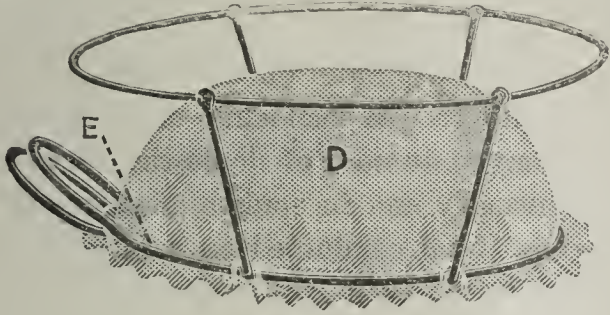


Figure 2.

of surgical gauze (D), supported by the convex wire frame (A), and evaporates, thereby saturating the air in chamber K. This air saturated with ether vapor is of higher specific gravity than pure air and falls through the gauze into chamber M, which is supported below by the face wire (B), so bent as to fit the patient's face and thereby to prevent the admission of air from below. Hence the patient inhales only the etherized air in chamber M.

When in use the wire frame first should be fitted accurately to the face of the patient by bending slightly the flexible face wire, and after the instrument is put together, as described above, it should be laid gently on the patient's face, who should be allowed to breathe through it and thus know that his respiration is not impeded. Tell him that the odor of ether may not be very agreeable, but if he breathes deeply he will not mind it. This will inspire confidence when he first smells the ether. Then, while deep respiration is in progress, allow a drop of

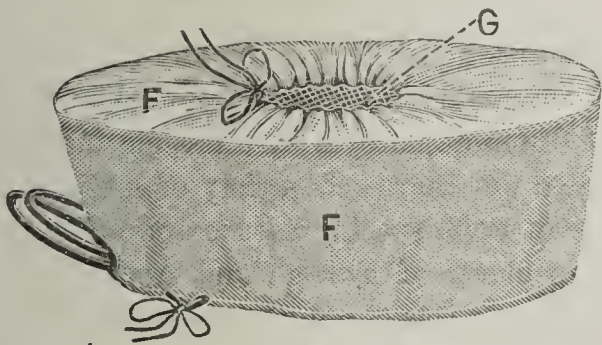


Figure 3.

ether to fall through the opening on to the gauze and follow this in a few seconds by another drop, and so on. Soon the respiratory passages become tolerant of the ether vapor, and the patient passes quietly into the first stage of anesthesia. The ether now may be dropped more frequently and surgical anesthesia will be induced, generally without any manifestation of a secondary stage, unless, possibly, a fixation of the chest for a few seconds, during which the ether should be continued and pushed by dropping it more frequently.

A profound anesthesia may be maintained by continually dropping the ether on the gauze, but, by carefully watching the condition of the patient during the operation, an anesthesia just sufficient to keep the patient relaxed may be maintained. On removal of the inhaler a speedy recovery, usually free from nausea or vomiting, takes place.

By means of this inhaler surgical anesthesia may be produced in from two to five minutes with from four to six drams

of ether, and for hysterectomy, lasting one hour and three-quarters, anesthesia has been kept up for one hour and forty minutes by using only three and one-half ounces of Squibb's ether for the total operation, and this is an average result. With alcoholic patients the inhaler works well. It is rare that anesthesia in such cases is not produced in from eight to ten minutes, although, of course, there are patients who do not respond easily to the administration of ether by this inhaler or by any other. The above figures are those of actual practice, when effort has been to see not how quickly but how well and comfortably to the patient the anesthesia could be induced.

At the end of each anesthesia the gauze should be thrown away, the cover put in the wash and the wire dipped in some non-corrosive antiseptic solution. For the next operation clean gauze and a fresh cover should be employed.

It has been claimed by some that bronchorrhea or bronchitis is often a necessary sequela of the open method of ether anesthesia. This is a mistake. Such difficulties are due to the erroneous use of the method. If the ether is too cold when introduced into the inhaler, or if it is poured into the instrument in such quantities as to reduce its own temperature by evaporation, some bronchial difficulty may be experienced, but if a few cans of ether are kept in the operating room so that when used the ether may be of the temperature of the room, or if the anesthetist warms the can thoroughly by immersing it in tepid water before opening it, and then drops (not pours) the ether into the inhaler, no difficulty will be experienced except in cases of idiosyncrasy, in which the mucous membrane is very susceptible to the slightly irritant properties of ether.

Further, it should be remembered that bronchorrhea, bronchitis and the so-called ether pneumonia are due more to the chilling of the patient's body than to the inhalation of the

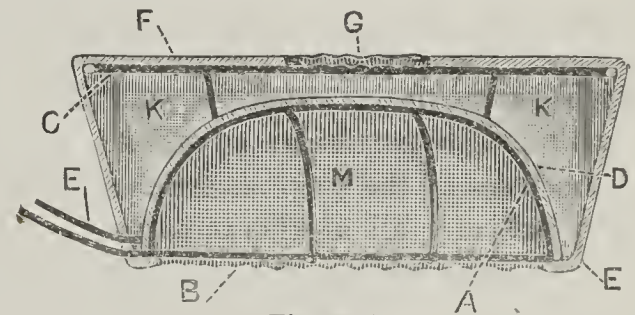


Figure 4.

ether. This may take place either during the operation from necessary or unnecessary exposure, or after the operation because the bed in which the patient is placed has not been sufficiently warmed, or from a draft in the recovery room or ward. Since rubber hot water beds for the operating table have been provided, as also proper care for the warmth of the patient after the operation, post-anesthetic bronchial and lung troubles have been greatly reduced in number. It is hardly necessary to add that only ether of a very low specific gravity and a high degree of purity should be used.

This inhaler can also be used as an Esmarch chloroform inhaler for the administration of chloroform, as well as for ethyl bromid, but not for ethyl chlorid. The apparatus is simple, small, compact, cleanly and cheap.

## Clinical Report

### A CASE OF AINHUM.

Q. CININNATUS SMITH, M.D.

SAN DIEGO, CAL.

The following case came under my notice several years ago: The patient was a negress between 35 and 40 years of age, the daughter of a native African father, who was captured in Africa, sold into slavery when a boy, lived a slave in Tennessee, and died at the age of 115 years. The patient lost both small toes by ainhum and suffered great pain during their spontaneous amputation, which required several months to complete. During this time her general health was not seriously disturbed. This patient was the property of my father, the late Moab Stephen Smith, and lived to be about 90 years of age. I send this for record in the list of ainhum cases.



# THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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## THE INDEX.

It may be considered unusual for a journal to refer editorially to its index, because an index is an ordinary affair and is supposed to accompany the last number of the volume of all periodicals. But for several years we have been issuing with each volume an index to current literature, aside from the ordinary index, and as many of our readers, even those who have been reading *THE JOURNAL* for years, do not know what we are doing in this regard, we make it a point to call attention to it in this manner. The index that accompanies this number is something more than an index to the matter that has appeared in *THE JOURNAL*—it is a guide to the current medical literature for the six months covered.

Included in the pages from 2039 to 2058 is the ordinary index, but commencing on page 2059 is the Index to the Current Medical Literature, and it is to this that we want to call particular attention. In this will be found the titles of the original articles that have appeared in practically all of the important journals of this and foreign countries. On page 2085 commences the authors' index. While the Current Medical Literature is not as complete as, nor is it expected to take the place of, the *Index Medicus*, it will be found more practical for those who wish to look up the important articles that have appeared on any subject, and who do not want every case report, etc., that has been published.

We reprint this index, and with it the titles of the articles that are indexed. In this form it is much more convenient for reference than if the bound volume of *THE JOURNAL* has to be referred to. This reprint we supply at fifty cents a copy or seventy-five cents a year.

We respectfully ask those of our readers who are in the habit of looking up literature, and who have not used this index, to test its value, and to make any suggestions that may occur to them. We ask for criticisms so that we may make this index still more satisfactory and more practical.

## SOME INTERESTING RESULTS OF TUMOR TRANSPLANTATION.

Within a very short time we have witnessed the method of research in the problems of malignant growth, which was limited almost entirely to histologic and statistical studies, changed to an experimental method that is fairly comparable with those of bacteriology. The discovery that many spontaneous tumors in the lower animals are capable of successful transplantation from

one animal to another of the same species has made it possible to follow out careful cultural methods, in which the chief difficulty is the limited variety of culture media on which the tumors can be made to grow, namely, the bodies of animals of the same species as the host of the original tumor.

The first important experiments of this sort were those of Hanau, later followed by Leo Loeb and M. Herzog in this country, and by Jensen, Borrel and Michaelis abroad. In Ehrlich's laboratory in Frankfort, besides the well-known work on the problems of immunity there is a "carcinoma department," in which large series of transplantations of this kind have been undertaken. Some time ago<sup>1</sup> we described a number of experiments on transplantation of tumors in dogs made in this laboratory. Experiments on the much more easily transplanted tumors of domesticated mice, which occur spontaneously and in epidemics in laboratory animals, have also been conducted on a large scale, tables of the results having been exhibited at St. Louis. These tumors always arise primarily in the mammary glands of female mice, and the epidemics seem to be brought about by inoculation by the suckling young, which nurse one another's mothers most promiscuously. Of seventy-one such tumors ten were successfully transplanted, and at the time of the last report<sup>2</sup> had been carried as far as to the sixtieth generation. Among numerous observations one of the most significant is that while only the mammary glands of adult females are affected by the primary tumor, the transplantations are unaffected by the age or sex of the inoculated animal, indicating that the conditions necessary for the natural origination of a malignant tumor are very different from those under which the existing malignant cells can take root and grow.

We are particularly interested in this series of experiments in connection with our comments recently<sup>1</sup> on the subject of the occurrence of multiple primary malignant tumors of different natures in the same individual. We there pointed out that each variety of malignant tumors seems to be of quite specific nature and origin. In these mouse experiments of Ehrlich and Apolant, however, a remarkable result was obtained, not apparently in accord with this rule. A carcinoma had been transplanted from one mouse to another, preserving its original characteristics, until suddenly in the tenth generation it was observed that part of the growth was sarcomatous. The sarcomatous elements increased and the carcinomatous decreased with each generation until the fourteenth, when no more carcinoma was left, and for twenty-six more generations inoculations produced only purely sarcomatous tissue. This is certainly a most unique observation, and the proper interpretation of its meaning is of great importance. There is nothing to suggest that the carcinoma cells had undergone a metaplasia into

1. *THE JOURNAL*, Dec. 17, 1904, p. 1872.

2. *Berl. klin. Wochft.*, 1905, vol. xlii, p. 872. Brief abstract in *THE JOURNAL*, xlv p. 880.



mesoblastic tissue. Perhaps as promising a suggestion as any yet made is that the result of transplanting from one animal to another for many generations a strain of connective tissue (namely, the stroma of the primary tumor, which always seems to live and grow in each implanted piece), has resulted in its acquiring a greatly increased power of growth in foreign organisms, until at last the energy of growth has been so exalted that it passes the normal bounds and becomes truly malignant.

This is analogous to the increase of virulence that results from passing bacteria from one host to another, and opens a new field of experiment.

It must be also considered, however, that these mouse tumors, which are now being used so much in the study of cancer problems, present several differences from typical carcinomas, even though histologically they are practically identical. One difference is their frequent epidemic occurrence among caged mice. Another is the frequency with which they spontaneously cease growing and undergo natural cure, which has made possible the experiments on the development of immune serum in mice with such healing tumors that are being carried on in Gaylord's laboratory in Buffalo. There can be no question about the histologic nature of the elements of the mixed tumors in Ehrlich's mice, a number of the leading pathologists in Germany having agreed with the diagnosis of sarcomatous and carcinomatous growth.

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#### MEDICAL INSPECTION OF SCHOOL CHILDREN IN THE UNITED STATES AND IN ENGLAND.

There can be no doubt but that in many respects the physical and economical conditions of the poor in England in general and in London in particular are giving rise to widespread feelings of misgiving among the more intelligent of the community at large. The number of unemployed, many of whom would not work if they had the opportunity, is appalling. Another feature of sinister import in the large manufacturing towns of England is the increasing physical, and it may be said also, mental degeneration of their workers. The fact is recognized at its full significance that this evil must be attacked at its root and that in any attempts to improve the race attention must be paid to the health of the young. The English Local Government Board has already initiated a revolution in poor-law procedure by an order last April for the feeding of hungry school children, and now the Board of Education department committee has followed suit with a report on the same subject and on the question of the medical inspection of children attending public elementary schools. This committee has issued recently a report dealing more or less exhaustively with these two subjects. The results of medical inspection, the committee says, "leave something to be desired and there is much opening for improvement." It is shown, however, so far as results of medical inspection are recorded, that diphtheria is now under such complete control in several areas that an out-

break can be stopped in a few days. Much also has been effected in the direction of securing greater cleanliness and freedom from vermin, and the inroads of ringworm have been appreciably checked. The condition of the children's eyesight has received close attention; defects have been discovered and spectacles have been provided. Steps have also been taken toward dealing with the difficult question of defective hearing.

In the section of the report referring to the feeding of children attending public elementary schools a series of recommendations for better organization has been made by the committee. One recommendation is to the effect that parents should be told clearly that they are in receipt of charitable relief when such is the case, and that greater effort might be made to obtain payment from parents for the whole or part cost of meals supplied to their children. The suggestion is further made that the children of families in temporary distress should be made the first care of any feeding agency.

Drunkenness in the parents is commented on as introducing a serious difficulty into any system of feeding the children. It is stated that when help is refused the children continue to starve, but that when assistance is given it only means more money for the parents to expend on drink.

Several of the large cities of this country preceded England in the medical inspection of school children, and with us the innovation has been attended with the most satisfactory results. With regard to the feeding of indigent school children, such a procedure is entirely opposed to the American spirit of independence. The only places in which its introduction is likely to take place is in those cities in which there is a large alien population. In European countries overcrowding is the rule, and in many cities in Great Britain, especially in England, improvidence and drunkenness have undoubtedly tended to aggravate matters. The concentration of the population in the large cities is a phase of the overcrowding question which is manifested almost to as great an extent in America as in Europe, and the evils connected therewith must be dealt with. On account of the size and resources of the United States the situation has not reached the acute stage, but, at the same time, signs are not lacking that the time is not far distant when the problem of how to deal with the surplus poor, ill-fed and degenerate population of the cities of this country will engross the attention of sanitarians and sociologists.

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#### THE CHAMBER OF HORRORS.

After all the revelations concerning the venality of the trade in patent medicines it was not to be expected that anything worse could be said. It now seems that the first dissections were only preliminary. In the *Ladies' Home Journal*, January, 1906, are two articles on the subject by Mr. Mark Sullivan that are well calculated to make any decent man or woman shudder and in amazement to ask if human beings in this age are capable of such abject depravity. After this exposure



men in the patent medicine trade should hardly expect to associate with any but the criminal classes. We learn that poor suffering deluded women are cajoled into writing their troubles—their most confidential secrets, their sexual relations, their defects in development of bust, and the rest—to the “doctor” of the company under the solemn promise of absolute secrecy. It is then set forth that these letters are first sorted by male clerks and answered by various “stock letters,” after which the “richest” ones for young men and young women to read are passed around, even taken home by clerks and handed around among the neighbors. Finally, after salacity is satisfied and the poor victims cease to buy any more of their medicines the officers of the company gather up the letters and sell them to letter brokers and to other patent medicine concerns for a half cent each. Is not this “the limit?” Shall the postal service be used in this immoral traffic? Will the enlightened newspapers still continue to play their indispensable part in this worse than swindle? The horrors of the slave trade were no worse. The additional facts adduced regarding testimonials for patent medicines are less shocking, but no less interesting. We are informed that “testimonial brokers,” through newspaper correspondents chiefly, offer for sale for any nostrum the testimonial of a United States Senator for \$75 and of a Congressman for \$40. Our representatives seem pretty cheap, but Mr. Sullivan’s story shows how the price has been brought so low. The sales are often made in \$5,000 lots, so that the trade is wholesale and affords the broker a considerable margin. In the last twelve months of exposure of corruption in American politics and business there has been nothing to approach the villainy of the “patent medicine” business.

#### CONVICTS AND HYGIENE.

From state after state there come complaints of the insanitary conditions of penitentiaries. Great efforts have been made to rectify these ill conditions, but governments proverbially move slowly. In the meantime, those who are segregated from society in order to limit their anti-social proclivities are in reality frequently condemned to death by tuberculosis. Some prisons are reported to be veritable hot-beds of this disease. The expense of meeting this state of affairs appears almost insurmountable when viewed in the light of the usual public inertia in regard to reforms. Meanwhile an increasing number of keen students of these problems turn to a proposal that seems revolutionary and that presents some practical difficulties of execution, but which nevertheless appeals strongly to the humane instincts and the scientific knowledge of physicians. This proposition is that “imprisonment at hard labor” shall be corrected to “compulsory farm labor” and perhaps to roadmaking. Farm work is healthy. As compared with confinement in a dingy prison, the promise of a chance of reform of the criminal is multiplied many fold by the healthy occupation, while the community would thereby cease its efforts to breed and to spread the infection of tuberculosis. It appears certain that this departure in penology will soon be under discussion by state legislatures, and there can be no doubt that the voice of the medical profession will join in the appeal of humanity and hygiene.

#### HYGIENIC METHODS OF EATING.

Apparently more provision is made to prevent our domestic animals from eating too hastily than is provided in the case of human beings. The horse frequently suffers from his unbecoming and unnecessary haste in eating; confronted by a generous display of oats in the feed-box, he can not resist the inclination to bolt one mouthful so that he may take another, at the expense of his health. According to the *Scientific American*, a feed-box has been invented in which only a mouthful is in sight at the bottom, and the horse has to eat this before more feed enters the feed-box. The horse is thus compelled to eat his meal in a more wholesome manner. It would be a wise provision to have some such arrangement in connection with the “quick-lunch” counters of the cities for men who feel the necessity or the inclination to bolt their food. It is certainly wise to safeguard the health of horses, but why allow human beings to go their own sweet way in unhygienic habits? We shall look for an adaptation of the horse feed-box scheme, at least for the quick-lunch counter.

#### UREMIC DERMATITIS.

Chiari of Prague<sup>1</sup> recently reported an interesting case of chronic nephritis with stomatitis and pharyngitis, enteritis and dermatitis (*akne et impetigo cachectica*). From the results of his careful anatomic study, gross and microscopic, Chiari reaches the conclusions that the different inflammations mentioned were of the same etiology, namely, uremic, and caused by the toxic action of urinary poisons on the mucous membranes involved and on the skin. The degree of dermatitis was unusually severe in this case, which was one of granular atrophy of the kidney following chronic nephritis. Various authors have described cutaneous eruptions in connection with uremia, and the occurrence of enteritis in this condition is well known, but the correlation of these processes as essentially of the same toxic origin seems to be a new departure of interest to clinicians and pathologists. The question as to the exact chemical nature of the substance or substances causing the inflammatory changes naturally suggests itself at once, as well as the great difficulties that now appear to stand in the way of its solution.

#### PHYSICIANS AND TARIFF.

Physicians have no professional interest in the tariff, but when the subject of tariff revision comes up there are several schedules in regard to which medical men of right have definite convictions. The duties on scientific instruments and books stand first in importance. The following duties of the present tariff were listed recently in a newspaper and are worth attention: Boric acid, 122 per cent. In 1904 \$30,000 worth was imported, paying \$36,000 in duty. Tannic acid, 103 per cent.; spirits of nitrous ether, 250 per cent.; sulphuric ether, 236 per cent.; spectacles and eye glasses, higher grades, 50 to 70 per cent., and cheaper grades, 116 per cent. Physicians will not protest because firecrackers pay 126 per cent. duty, even though the imports in 1904 were \$266,000 and the duty \$334,000.

1. Prag. med. Wochft., 1905, xxx, p. 36.



## Medical News

### CALIFORNIA.

**Beriberi.**—A young Japanese is lying ill at the County Hospital, Los Angeles, suffering from beriberi combined with typhoid fever.

**Loses Suit.**—Dr. Peter A. Kearney, San Francisco, who sued Mrs. Theresa Ball for \$25,000 for medical services alleged to have been rendered to her and her children, lost his suit, the jury finding a unanimous verdict in favor of Mrs. Bell.

**Communicable Diseases.**—Six cases of smallpox have been found at San Lorenzo, and all infected houses have been quarantined.—It is reported that there is no sign of abatement of the epidemic of diphtheria which is prevailing at Sierra City.

**Personal.**—Dr. Edward Hanlon, Marysville, has gone to Europe.—Dr. Thomas W. Prose, Woodland, has been appointed superintendent of the Odd Fellows' Home, Thermalite.—Dr. and Mrs. William E. Hopkins, San Francisco, have returned from Europe.

**Banquets.**—Dr. William J. Walsh, San Francisco, coroner-elect, was the guest of honor at a banquet December 2, given by his associates in the Emergency Hospital service.—A banquet was given December 5 at the Claremont County Club, Oakland, in celebration of the fortieth anniversary of the incumbency of Dr. Warring Wilkinson as superintendent of the California Institute for the Deaf, Dumb and Blind at Berkeley.

### DISTRICT OF COLUMBIA.

**Police Surgeon Injured.**—Dr. C. C. Marbury, police surgeon, was seriously injured by being thrown from his automobile in a collision with an electric car.

**To Repeal Anti-Canteen Law.**—Representative Morrell of Pennsylvania has introduced a bill repealing the anti-canteen law. The bill is in keeping with the report of the Committee on National Legislation of the American Medical Association adopted at the St. Paul meeting in 1901.

**Health of the District.**—The report of the health officer for the week ended December 16 shows that the total number of deaths was 106, and that there were 140 births. At the close of the week the following cases of contagious diseases were under treatment: Diphtheria, 62; scarlet fever, 29; typhoid fever, 105, and smallpox, 6.

### IDAHO.

**Personal.**—Dr. Robert L. Nourse and family, Hailey, left for New York, on their way to Europe, December 14.

**Hospital Notes.**—Josephine Sanatorium, Weiser, has been opened to the public by Dr. Joseph R. Numbers.—Wallace Hospital is now in charge of Drs. J. E. St. Jean, Burke, and C. R. Mowery, Wardner, who purchased the institution from Dr. Charles W. Craik.—Pocatello General Hospital has been incorporated by Drs. William F. Howard, Hubert A. Castle and others, with a capital stock of \$25,000.

### ILLINOIS.

**Hospital Nearly Completed.**—The Dr. John Warner Hospital, Clinton, is already enclosed and will, it is expected, be dedicated February 15 next.

**Diphtheria.**—During the past six weeks diphtheria has occurred in more or less epidemic form in about 125 cities and villages spread over 61 of the 102 counties of the state. As a rule, the disease has been mild in character.

**Smallpox.**—The State Board of Health reports smallpox in Greene, Macoupin, Knox, Jersey, Logan, McLean, Adams and Pike counties. The disease has spread from Jerseyville, Jersey County, into Macoupin and Greene counties, which are adjacent.

**Personal.**—Dr. Grant Irwin, Quincy, was fined \$32.95 December 3 for hunting in Missouri without a license.—Dr. Thomas Crowell, Streator, was made an honorary member of the Northern Central Illinois Medical Association at its recent meeting in Streator.—Dr. John B. Meigs, Manito, who was recently injured by a broncho, is recovering.

**Another Victory for the State Board of Health.**—In the case of the People vs. Peter R. Langdon, Kankakee, noted two weeks ago, the Supreme Court has rendered a decision in favor of the State Board of Health. Suit was brought against Langdon for practicing medicine without a license. His defense was based on the wording of section 2 of the Medical Practice Act providing that "no person shall hereafter begin the practice of

medicine," etc., and the contention that he had not "begun" practice after the passage of the act. In this he was sustained both by the Circuit Court of Kankakee County and the Appellate Court. Following its policy of pushing all cases involving the validity of any section of the law to courts of the last resort, the State Board of Health appealed to the Supreme Court. In the opinion of the Supreme Court, delivered by Chief Justice Cartwright, it is held that section 9 of the act is specific and unmistakable in providing that "Any person practicing medicine or surgery or treating human ailments in the state without a certificate issued by the board" shall forfeit and pay certain penalties. It is further provided that the act is penal in character and to be strictly construed, but not with such technicality as to defeat its purpose; and further, that a single section of the act should not be construed to annul the apparent true meaning and intent of the whole act. The judgment of the appellate and circuit courts is reversed and the case remanded to the Circuit Court with directions to overrule the demurrer.

### Chicago.

**The Health Department's Forecast.**—Should present conditions continue until the end of the year, the forecast made in July by the department of health that 1905 would have the lowest death rate on record, will be fully verified. The death rate for 1904 was 13.62 per 1,000, and 1905 promises to go below 13.5 per 1,000.

**Deaths of the Week.**—During the week ended December 23, 496 deaths were reported, equivalent to an annual death rate of 12.99 per 1,000. There were 54 deaths less than in the corresponding week of 1904, and 7 more than in the previous week of 1905. Pneumonia caused 83 deaths; consumption, 63; nephritis, 45; heart diseases, 38; violence, including suicide, 33; nervous diseases, 22, and cancer, 20.

### INDIANA.

**Buys Hospital Site.**—The governor has paid \$36,975 for the site of the Southeastern Indiana Hospital for the Insane at Madison.

**Hospital Dedicated.**—The new City Hospital, Bloomington, has been completed at a cost of \$10,000, and was dedicated November 30.

**Personal.**—Dr. James A. Mattison, National Military Home, returned December 20 after a four months' stay in Europe.—Dr. John W. Ballard, Logansport, has been appointed physician of Cass County.—Dr. James K. Hawes, Clifford, has been appointed secretary of the Bartholomew County Board of Health.

**November Deaths from Violence.**—Of the 159 deaths from violence in November, 10 were homicides, 27 suicides, and the remainder accidental. Eight women committed suicide; 7 used poison and 1 burned herself to death with coal oil. Of male suicides 5 chose hanging, 6 shooting, 1 cutting throat and 7 poison. The railroads killed 37 persons and street cars and interurbans, 1 person. There were 5 deaths from accidental drowning, 36 from crushing injuries, 7 from gunshot wounds, 24 from burns and scalds, 5 from drowning, 1 from electricity, 2 from horses and vehicles, 7 from mining, and 2 from poison.

**November Deaths.**—The total number of deaths reported in the state was 2,687, 121 more than in the corresponding month of last year. Tuberculosis caused 344 deaths; typhoid fever, 101; diphtheria, 33; scarlet fever, 11; whooping cough, 10; pneumonia, 219; diarrheal diseases, 42; cerebrospinal meningitis, 32; influenza, 13; puerperal fever, 10; cancer, 120, and violence, 159. The death rate for the state was at the annual rate of 12.3 per 1,000. The death rate for cities was 15, and the death rate of the country was 10.8. Of the cities having over 10,000 population, Lafayette reports the highest death rate, 20.5, and Marion the lowest, 11.2. Indianapolis shows a death rate of 16.1 and Evansville, 15.2 per 1,000.

### MARYLAND.

**Smallpox.**—Four cases of smallpox have developed among the colored workmen in a brickyard at Dundalk, a river suburb of Baltimore.

**Miltenberger's Estate.**—The late Dr. George W. Miltenberger left his entire estate to his nephews and nieces, being a widower and having no children. His personalty amounted to \$175,000.

**Report of School for Feeble-Minded.**—The ninth biennial report of the visitors of the Maryland Asylum and Training School for Feeble-minded, Owings Mills, has been completed. It has been found necessary to ask the Board of State Aid and Charities for an additional appropriation of \$140,000,



\$75,000 of which is required for additional buildings. There are 102 male and 98 female inmates, representing 21 counties, an increase of about 37 per cent. The majority of the inmates are between 11 and 16 years of age.

**Withhold Aid from Private Institutions.**—The Board of State Aid and Charities refuses to make appropriations for medical colleges, claiming that these institutions are essentially business enterprises in which the profits are divided among the owners. Two years ago the board left these institutions out of its list of recommendations, but they took the matter into their own hands and went direct to the legislature and got their appropriations, and it is understood they will endeavor to do the same thing this year. The hospitals and charitable institutions are all provided for, and the Johns Hopkins University will receive the same amount recommended two years ago.

#### Baltimore.

**Jury Warns Against a Dangerous Nostrum.**—The death of an infant from the use by its mother of a proprietary remedy known as "Kop's Baby's Friend" (concerning the composition of which, see THE JOURNAL, Nov. 25, 1905, page 1678), caused the jury of inquest to issue a warning to the public not to use that agent. The evidence before the jury showed that there was no way to account for the death unless the 10 drops of the medicine administered to it contained morphia sufficient to kill it. The state's attorney calls attention to the case in the newspapers and urges the need of a law prohibiting the sale of any patent or proprietary medicine containing any deadly drug unless it is labeled poison.

#### MASSACHUSETTS.

**New Hospital.**—The Bishop Stang estate, Fall River, has been purchased by Dr. Philemon E. Truesdale, and the building has been equipped as a private hospital with accommodation for 12 patients.

**Bequests.**—Mrs. Helen G. Coburn leaves, among many other large bequests, \$50,000 to the Children's Hospital, Boston; \$75,000 to the Massachusetts General Hospital, \$25,000 to the Lawrence City Hospital, and \$10,000 to the Instruction District Nursing Association.—By the will of John Bartlett of Cambridge the Woman's Aid Association of the Cambridge Hospital receives \$5,000.—The Free Hospital for Women, Boston, will receive \$1,000 by the will of Harriet M. Gilbert.

**Deaths and Diseases.**—There were reported to the Boston Board of Health for the 10 weeks ended December 2, 1,886 deaths, as compared with 1,962 during the same period last year. Of these 364 were under 1 year old, 514 under 5, and 417 over 60. There were 341 cases of diphtheria, with 16 deaths; 203 of scarlet fever, with 3 deaths; 256 of typhoid fever, with 34 deaths; 733 of measles, with 9 deaths; 423 of tuberculosis, with 220 deaths. Pneumonia caused 197 deaths; whooping cough, 5; heart disease, 209; bronchitis, 51, and marasmus, 67.

#### MICHIGAN.

**Personal.**—Dr. Johnston B. Kennedy has been appointed a member of the Detroit health board.—Dr. Thomas M. Koon, health officer of Grand Rapids, fell on the ice December 17 and injured his knee.

**Historic Building Unsafe.**—The regents of the State University, Ann Arbor, have decided to condemn the west end of the old medical building. No classes will be heard in its halls after the close of the first semester.

**Accused Go Free.**—In the second trial of George E. Bliss, Maple Rapids, for manslaughter through an alleged criminal operation, the jury disagreed and the case was dropped from the calendar.—J. F. Hare, Detroit, against whom the charge of attempted illegal operation was made by Elsie Priemel, was acquitted, the judge saying that he did not think any jury would believe the prosecuting witness.

**Valedico.**—With an editorial in the December *Bulletin*, bearing this title, Dr. Créssy L. Wilbur announces his retirement after 13 years of service as chief of the division of vital statistics of the State Board of Health. The editorial closes as follows:

I have seen the mortality statistics develop from a weak, discredited system to a model service awarded the highest honors among the registration states.

Michigan now stands on the threshold of a new period of achievement dependent on the enforcement of the new law for births.

God speed the work! I have only thanks and best wishes for all the friends of the past years who as registrars, health officers, physicians, undertakers, officials of the Department and members of the Legislature have aided to make the service effective and a credit to the state, but must especially remember the faithful workers in the office force who have carried out the details of administration. Good bye!

**November Mortality of Michigan.**—The total number of deaths for November was 2,644, representing an annual death rate of 12.6 per 1,000. There were 445 deaths of infants under 1 year of age; 164 deaths of children aged 1 to 4 years, inclusive, and 791 deaths of persons aged 65 years and over. Important causes of death were as follows: Tuberculosis, 189; typhoid fever, 93; diphtheria, 71; scarlet fever, 22; measles, 3; whooping cough, 11; pneumonia, 187; diarrheal diseases of infants, 74; influenza, 17; cancer, 143, and accidents and violence, 158. The deaths from pneumonia more than doubled in number, as compared with the preceding month, and influenza also increased, although the total number of deaths from this cause was only 17. A marked decrease was shown in diarrheal diseases. There was only one death from smallpox.

#### MISSOURI.

**New Dispensary.**—On December 14 the St. Louis Obstetric Dispensary was formally opened in its new quarters at 711 Carr Street. This institution was founded in October, 1904, under the auspices of the St. Louis University, and is at present maintained with funds provided by a ladies' auxiliary board.

**Indecent Advertiser Fined.**—As a result of the prosecution of the medical firms who insert indecent advertisements in the St. Louis press, which is contrary to a city ordinance, one of these practitioners has been fined \$50 and costs in the City Court. This crusade was undertaken by the city attorney as a result of resolutions introduced and passed by the St. Louis Medical Society. The next order of business along this line will be the prosecution of the newspapers who insert the advertisements, as they are equally guilty under the ordinances referred to. It is worthy of note in this connection to observe that not a line referring to the above conviction was seen in the daily press, although such a conviction should naturally be regarded as a news item by the papers. Is this another indication of the "criminal alliance between the newspapers and the outlaw practitioners"?

#### NEW YORK.

##### New York City.

**Varioloid at Governor's Island.**—Two military prisoners recently sent to Governor's Island for confinement in Castle William, developed varioloid and are quarantined in tents near the post hospital.

**Hospital Fire.**—Fire occurred in the boiler room of the Cumberland Street Hospital, Brooklyn, December 17. At the time there were about 200 patients in the hospital, but the firemen performed their duties so carefully that the patients were not alarmed. The damage was about \$500.

**Personal.**—Dr. and Mrs. Valentine Mott returned on the *Koenig Albert*, from the Mediterranean, December 20.—Dr. William S. Bainbridge has recently been appointed consulting surgeon to St. Andrew's Convalescent Hospital.—Dr. Rudolph F. Herriman, Brooklyn, has been appointed consulting surgeon to Jamaica Hospital.

**Contagious Diseases.**—There were reported to the sanitary bureau for the week ended December 16, 673 cases of measles, with 5 deaths; 409 cases of diphtheria, with 30 deaths; 406 cases of tuberculosis, with 144 deaths; 170 cases of scarlet fever, with 4 deaths; 117 cases of typhoid fever, with 17 deaths; 29 cases of cerebrospinal meningitis, with 17 deaths, and 196 cases of varicella, a total of 1,900 cases, with 217 deaths.

**Hospital Bequests.**—Isaac Guggenheim has announced to the board of directors of the Sydenham Hospital that he will give \$250,000, provided the board raises a like amount, and stipulating that the money should go toward the erection of a new building. Mr. Guggenheim has just given the hospital \$20,000 to be used in paying running expenses.—According to the will of Frederick Uhlmann, who died at the German Hospital on December 13, the Mount Sinai Hospital and the German Hospital will each receive \$5,000.—In the new hospital shortly to be opened by the Sisters of St. Francis, which is located between One Hundred and Forty-second and One Hundred and Forty-third streets, there will be a ward of 50 beds equipped by Mrs. Clara Greenhut.

#### NORTH CAROLINA.

**Personal.**—Dr. Paul V. Anderson, Wilson, N. C., has recently been elected assistant physician of the State Hospital for the Insane, Morganton, vice Dr. Richard H. Speight, Jr., resigned.

**New Hospital.**—In addition to the three small hospitals of excellent grade and several sanatoria, another addition has



recently been made to the medical institutions of Asheville in the Asheville Medical and Surgical Institute, in charge of Drs. Lewis B. McBrayer and Willard P. Whittington.

**Many Convicted.**—At the recent session of the Superior Court in Murphy, Cherokee County, N. C., more than 50 per cent. of the practicing physicians of the county were placed on trial for illegal practice of medicine. All were convicted and the judge sentenced each to a term on the county roads of an adjoining county some 90 miles away, but enjoined the clerk not to issue any capias to enforce the road duty until complaint that attempts to continue the practice of medicine was made to him.

#### OHIO.

**Marion County Society Meeting.**—At the annual meeting of the Marion County Medical Society, held at Marion, December 5, the following officers were elected: Dr. Elmer O. Richardson, president; Dr. Filmore Young, vice-president; Dr. John W. Adair, secretary; Dr. J. M. Hoskins, treasurer; Dr. Dana O. Weeks, delegate to the state medical association; Dr. A. Melville Crane, alternate, and Drs. C. T. Wiant and Francis M. Baldwin, censors, all of Marion.

**Shipping Liquors by Other Names Stopped.**—The commissioner of internal revenue has decreed that shipping liquors by names other than those by which they are known to the trade is contrary to the internal revenue laws and must be stopped. It does not make any difference, he adds, that these names have been registered. Under the names of "cream of hops" and "hop tea," among a number of other names equally fanciful, many brands of malt liquors have been slipped into places regardless of local option laws. The commissioner also states that dealers must stop billing whisky as "witch hazel," "oil" and "tonic" when shipping to customers. Bills of lading must show just exactly what is contained in the package.

**Privileged Communications.**—The Supreme Court of the State of Ohio, in the recent case of the Metropolitan Life Insurance Company vs. Howe, has made the following ruling: "It is not competent to prove by a physician the communication made to him in that relation, but such physician may testify as to facts which are within his knowledge, independent of such communication. He may testify as to the condition and state of his patient as well as the treatment by him prescribed for his patient." In this connection it is reliably stated that the efforts of the counsel of Major Taggart in the recent Taggart divorce trial to obtain the hospital records of his wife's illness would have been successful had it not been that the law of the state explicitly says that such documents can not be conveyed from one county to another for purposes of evidence. Had the trial taken place in Hamilton instead of in Wayne, County, these hospital records must have been produced. Both of these institutions show that there must be something radically wrong with the heretofore highly cherished confidential relationship of physician and patient. It is expected that a bill will be introduced in the next legislature to relieve this condition.

#### PENNSYLVANIA.

**Hospital Gift.**—Mr. George F. Baer, president of the Reading Railroad Company, presented a check of \$500 to the Reading Hospital as a Christmas gift.

**Personal.**—Dr. Isaiah F. Everhart, Scranton, has announced that he will present his natural history collection to the city of Scranton, and will erect a \$50,000 building for its accommodation at Nayaug Park.

**Vital Statistics Law.**—All births and deaths on and after January 1 next must be registered within ten days of their occurrence, according to the new law regulating vital statistics, which will go into effect at that time. A failure to comply with this law entails a fine ranging from \$5 to \$50. The registration must be made at the bureau of health. The law requires that in the absence of the services of a physician and nurse, the father or mother or other person on the premises must report a birth. Births to the number of 28,832 were reported between Jan. 1 and Dec. 1, 1905. There were 32,137 births last year. The figures for 1904 were about 1,100 more than those reported in 1903. The reports of the health bureau show that January, July and August were the heaviest months for births in 1905, while March and September were the lightest.

#### Philadelphia.

**Land for Hospital.**—The estate of H. H. Houston has presented to the Chestnut Hill Hospital a plot of ground 20x225 feet.

**Bequest.**—By the will of Mary A. Cooper the Methodist Home for the Aged received \$1,000, the Methodist Hospital \$1,000 and the Methodist Orphanage \$500.

**Personal.**—Dr. J. William White was the guest of the President in Washington, December 21.—The coroner has selected Drs. J. Albert Bolin and William S. Wadsworth as his physicians at a salary of \$2,500 per annum.

**Medical Men Entertained.**—Dr. Alfred R. Allen gave a dinner to members of the medical faculty of the University of Pennsylvania at his residence, December 21. The guests included Drs. Alfred Stengel, Allen J. Smith, William G. Spiller, John Marshal, Richard C. Norris, J. P. Crozer Griffith and George C. Stout.

**Appropriation for Blockley.**—Since the exposure of the conditions at the Philadelphia Hospital by the director of public health and charities, Dr. William M. L. Coplin, the institution has been inspected by council's finance sub-committees on appropriations, which found the conditions of the hospital practically as reported in THE JOURNAL, December 16, and recognized the importance of immediate relief. They, therefore, will recommend to councils an appropriation of \$100,000 for the immediate amelioration of the present conditions.

**Health Report.**—The total number of deaths for the week ended December 23 aggregated 524, as compared with 509 last week and 509 for the corresponding week of 1904. The principal causes of death were: Typhoid fever, 14; diphtheria, 15; tuberculosis, 55; cancer, 20; diabetes, 5; apoplexy, 20; heart disease, 49; acute pulmonary disease, 114; enteritis, 10; appendicitis, 6; Bright's disease, 46; suicide, 5; accidents, 19, and marasmus, 4. Of the deaths reported, 96 were due to pneumonia. There were 274 cases of contagious disease reported, with 29 deaths, as compared with 240 cases and 26 deaths reported in the previous week.

#### GENERAL.

**Yellow Fever in Cuba.**—Dr. Carlos Finlay, chief sanitary officer of Cuba, reports that the total number of yellow fever cases in Cuba since October 17 till December 14, is 57. Of these one developed in Matanzas City, another at Alacranes, and a third at Real Campina, Santa Clara province. All the patients apparently were infected in Havana. The largest number in treatment at any time, 22, December 6; December 14, only 16.

**Inspection of Immigrants.**—Public Health Reports states that on request of the Secretary of the Treasury the Department of State issued the following amended instructions by telegraph, December 5, to the consuls at Liverpool, Southampton, Hamburg, Bremen, Antwerp, Rotterdam, and Havre, and a circular of instruction was issued to the other consuls at seaports in continental Europe and in Great Britain:

All immigrants from Russia must be detained five days at the port of embarkation for the United States under medical observation, and if during such detention any quarantinable disease appears or is suspected among them further detention and disinfection must be imposed, as provided by the Treasury regulations. If, however, the American consul or consular agent is satisfied that inspection of Russian immigrants and whatever disinfection of baggage that may be necessary has been accomplished at the Russian frontier, the time occupied in transit by said immigrants from the Russian frontier to the port of embarkation to the United States may be counted in the five days detention required by the United States regulations.

**Medical Officer Honored.**—A congressional medal of honor has been bestowed on Captain James Robb Church, assistant surgeon United States Army, now at Fort Robinson, Nebraska, who was one of the medical officers attached to Colonel Wood's regiment of rough riders in the fighting at Las Guasimas, June 24, 1898. The following letter from Assistant Secretary Oliver of the War Department makes this explanation of the award:

On this occasion Captain Church, who was then serving as assistant surgeon, 1st United States Volunteer Cavalry, in addition to performing carefully the duties appertaining to that position, voluntarily and unaided carried several seriously wounded men from the firing line to a secure position in the rear, in each instance being subjected to a very heavy fire and exposure to danger.

Dr. Church was born in Washington, D. C., in 1866. He was graduated from Columbia Medical College in 1893. After receiving his degree in medicine he served as resident physician of the Emergency Hospital for several years. When the First United States Volunteer Cavalry—the rough riders—was organized, he was commissioned therein as assistant surgeon, with the rank of first lieutenant. During the greater part of the stay of the organization in Cuba, Dr. Church, by reason of the enforced absence of the senior medical officer, served as the regimental surgeon and was in charge of the hospital during the trying days after the fighting ceased and the dread Cuban fever was making its appearance.



## Correspondence

### The Burning of the Books.

FRIAR'S POINT, MISS., Dec. 23, 1905.

*To the Editor:* In THE JOURNAL, December 16, is an article by Dr. Bayard Holmes, in which the doctor takes the position (if I understand him) that *all* text-books of medicine should be burned after being in print ten years. He says: "If a man has done his work before he is 50 and ought then to step aside and give place to the young, the medical text-book has outlived its usefulness in one-tenth of that time." In the first place, I feel sure there are very many men in the medical profession, as well as in other walks in life, who can and do a great deal of good work after they are 50. Dr. Osler would hardly admit his work complete, and doubtless would enter a very vigorous protest to being "laid on the shelf." While I am as strong an advocate of progress as any man, and although I have reached the age when I should step aside, I try to keep up with the times and do not feel like stepping aside, as I am sure that there is much work for me to do yet. I have in my library works on practice extending from Dunglison, 1842, to Hare, 1905. I find it interesting and instructive to refer to these "antiquated" works occasionally and sometimes I refer to them to find "where we are at," as it is an indisputable fact that "the pendulum swings," hence authorities often find a reversal of opinion forced on them. I for one am not willing to admit that the experience and observations of those old "fathers in medicine" are absolutely worthless to us, for I find, by comparison, that in many instances authorities of the present era have not made any very perceptible progress over the theories as advanced several years ago. I feel sure that those old fellows stumbled on the truth occasionally (perhaps by accident), as can be proved by reference to some of those books and those of the present era. For instance, 50 years ago "blood letting" was routine practice, 25 years ago it was obsolete, to-day it is advised as being beneficial in some cases. In those older works calomel was advised in large doses in certain cases, later small doses only were advised. We find in Hare's "Practice," page 248, "treatment of intermittent fever": "It is, therefore, essential in almost every case (I find it essential in every case) of intermittent fever that the bowels shall be thoroughly unloaded, preferably by full doses of calomel, of which not less than 5 nor more than 20 grains are required, this in turn being followed by a saline purge." Experience and observation during an active practice of over 30 years in the malarial sections of Tennessee and Mississippi lead me seriously to doubt the anopheles mosquito or any other mosquito as being the only means by which the human system can be infected with malarial poison. Verily the pendulum does swing; therefore, it is not impossible that those old books may be useful later; at all events in this "neck of the woods" we have plenty of fuel without "burning the books."

H. C. BUCK, M.D.

## Association News

### The Constituent Branch of the American Medical Association for New York.

All legal and other details for the amalgamation of the New York State Medical Association having been completed, and the constitutional requirements for becoming the constituent branch of the American Medical Association having been fulfilled by the reorganized Medical Society of the State of New York, the following letters have been sent to the executive officers of the society by the corresponding officers of the American Medical Association:

LOUISVILLE, KY., Dec. 22, 1905.

*Dr. Joseph D. Bryant, President of the Medical Society of the State of New York, New York, N. Y.*

*Dear Doctor:* I have the honor to acknowledge your communication conveying official notice that the final details of procedure in the consolidation of the New York State Medical Association and the Medical Society of the State of New York

have been completed. I beg to congratulate you on this consummation, which has been long desired by the profession of the United States. Since the organization formed by the union of these two societies becomes the constituent branch of the American Medical Association in the state of New York, I beg to extend, in behalf of the American Medical Association, a cordial greeting to your Society and a welcome to the councils of an united profession.

With much respect, I am

Very sincerely yours,

LEWIS S. MCMURTRY,  
President of the American Medical Association.  
CHICAGO, ILL., Dec. 24, 1905.

*Dr. F. C. Curtis, Secretary, Medical Society of the State of New York, Albany, N. Y.*

*Dear Doctor Curtis:* Since all details have been completed for the amalgamation of the New York State Medical Association with the Medical Society of the State of New York, and since the constitution of the American Medical Association regarding constituent branches has been complied with, the society of which you have been secretary for so many years is now the constituent branch of the American Medical Association for the state of New York.

I wish to take this opportunity to congratulate you, and the medical profession of New York and of the whole country, on this union. I sincerely hope that the results of this consolidation will prove not only a united profession in name, but a united profession in fact, one that will work together for the best interests of the public, of the medical profession, and of each individual member of the profession in the Empire State.

With the compliments of the season, I am,

Very truly yours,

GEORGE H. SIMMONS,  
General Secretary, American Medical Association.

## Queries and Minor Notes

### NO STATES ACCEPT NEW YORK CERTIFICATES.

ROCK RAPIDS, IOWA, Dec. 20, 1905.

*To the Editor:*—Please inform me through THE JOURNAL what state boards of registration, if any, accept the license of the New York State Board without further examination. INQUIRER.

ANS.—No states at present. New Jersey will after Jan. 1, 1906.

### INFECTION WITH RAT-TAILED LARVA OF DRONE FLY.

CARBONDALE, ILL., Dec. 14, 1905.

*To the Editor:*—In THE JOURNAL, December 9, p. 1800, the account of this case by Dr. Hanby is interesting as the second case on record of this parasite. In the November number of the *Alkaloidal Clinic* for 1900, vol. vii, p. 879, under the heading "Fly Larvæ in Bowels" was published over my name, the first and only notice I have seen of this condition before last week. A number of these larvæ were sent me by Dr. Littell for identification. After writing the brief notice referred to I bred one of the larvæ to the imago, and found it to be *Eristalis tenax*, as I had surmised. I had bred this fly from spring water before and wrote Dr. Littell that if he would look after the drinking water of his patient he would have no further trouble in that line. It may be of interest to note that I had also larvæ of a sarcophagus fly as human parasites from the same physician.

G. H. FRENCH, A. M.

## State Boards of Registration

### COMING EXAMINATIONS.

- UTAH State Board of Medical Examiners, Salt Lake City, January 1. Secretary, W. Fisher, Salt Lake City.
- ARIZONA Board of Medical Examiners, Phoenix, January, 1-2. Secretary, Ancil Martin, Phoenix.
- WASHINGTON State Medical Examining Board, Spokane, January 2. Secretary, C. W. Sharples, Seattle.
- OREGON State Board of Medical Examiners (Regular), Portland, January 2. Secretary, Byron E. Miller, Portland.
- NORTH DAKOTA State Medical Examining Board, Grand Forks, January 2. Secretary, H. M. Wheeler, Grand Forks.
- MINNESOTA State Board of Medical Examiners, Old Capitol Building, St. Paul, January 2-4. Secretary, C. J. Ringnell, Minneapolis.
- RHODE ISLAND State Board of Health, State House, Providence, January 4-5. Secretary, G. T. Swarts, Providence.
- ARKANSAS Medical Board, Little Rock, January 9. Secretary, J. P. Runyan, Little Rock.
- NEW HAMPSHIRE State Board of Medical Examiners, State House, Concord, January 9-10. Secretary, H. C. Morrison, Concord.
- VERMONT State Board of Medical Registration, Montpelier, January 9-11. Secretary, W. S. Nay, Underhill.
- WISCONSIN Board of Medical Examiners, Pfister Hotel, Milwaukee, January 9-11. Secretary J. V. Stevens, Jefferson.



SOUTH DAKOTA Board of Medical Examiners, Sioux Falls, January 10-11. Secretary, H. E. McNutt, Aberdeen.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, January 11. Secretary, W. C. Woodward, Washington.

ILLINOIS State Board of Health, Great Northern Hotel, Chicago, January 18-20. Secretary, J. A. Egan, Springfield.

NEW YORK State Boards of Medical Examiners, January 30-February 2. Secretary, Charles F. Wheelock, Albany.

Vermont Change in Place of Examination.—The place of meeting of the Vermont State Board of Medical Registration will be Montpelier instead of Burlington, Jan. 9-11, 1906.

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending December 23:

Davis, Wm. B., deputy surgeon-general, will proceed to Vancouver Barracks, Washington, for temporary duty as chief surgeon, Department of the Columbia.

Flagg, Chas. E. B., asst.-surgeon, will proceed to Vancouver Barracks, Washington, for duty.

Brownlee, Charles Y., asst.-surgeon, will proceed to Alcatraz Island, Cal., for duty.

Grissinger, Jay W., asst.-surgeon, will proceed to Fort Jay, N. Y., for duty.

Talbott, Edward M., asst.-surgeon, will proceed to Fort Leavenworth, Kans., for duty.

Clark, John A., asst.-surgeon, will proceed to Fort Oglethorpe, Ga., for duty.

Coffin, Jacob M., asst.-surgeon, will proceed to the Army and Navy General Hospital, Hot Springs, Ark., for duty.

Fife, James D., asst.-surgeon, will proceed to Fort Slocum, N. Y., for duty.

Powell, Wm. A., asst.-surgeon, will proceed to Jefferson Barracks, Mo., for duty.

Kilbourne, E. D., asst.-surgeon, will proceed to Army General Hospital, Presidio of San Francisco, Cal., for duty.

Foster, Charles L., asst.-surgeon, assigned to duty in the U. S. Transport service and will report in person to the medical superintendent of that service in San Francisco, Cal., for duty.

Smith, Herbert M., asst.-surgeon, relieved from duty at Army General Hospital, Presidio of San Francisco, Cal., and ordered to Fort Apache, Ariz., for duty.

Willcox, Charles, surgeon, granted four months' leave about March 24, 1906, with permission to go beyond sea.

Lewis, Wm. F., asst.-surgeon, granted 30 days' leave of absence, to take effect on arrival at Chicago.

Lyster, Wm. J. L., asst.-surgeon, granted 15 days' leave of absence about December 18.

Marrow, Charles E., asst.-surgeon, left Fort Sheridan, Ill., on 10 days' leave of absence.

Davis, Wm. B., deputy surgeon-general, granted 30 days' leave of absence, with permission to apply for two months' extension.

Coffin, Jacob M., asst.-surgeon, granted 15 days' leave of absence.

Skinner, Geo. A., asst.-surgeon, ordered to accompany headquarters and 1st Battalion, 24th Infantry, from Fort Harrison, Mont., to Presidio of San Francisco, Cal., and thence to return to station.

Steer, Samuel L., asst.-surgeon, ordered to accompany the 2d Battalion 24th Infantry from Fort Assiniboine, Mont., to Presidio of San Francisco, Cal.

Greenleaf, H. S., asst.-surgeon, granted 16 days' leave of absence, to take effect Jan. 1, 1906.

Clark, John A., asst.-surgeon, granted 30 days' leave of absence, with permission to apply for 30 days' extension.

Dutcher, Basil H., asst.-surgeon, leave of absence extended to April 14, 1906, with permission to go beyond the sea.

Mason, George L., dental surgeon, left Fort McPherson, Ga., and arrived at Fort Fremont, S. C., for duty.

Boak, S. Davis, dental surgeon, left Fort Myer, Va., and arrived at Columbus Barracks, Ohio, for duty.

Reagles, James, contract surgeon, ordered from Fort Keogh, Mont., to Fort Yellowstone, Wyo., for temporary duty.

Casaday, George H., dental surgeon, relieved from duty in the Philippines Division, and will sail on first transport after Feb. 1, 1906, for San Francisco, Cal.

Bernheim, Julien R., dental surgeon ordered from Fort Porter, N. Y., to Plattsburg Barracks, N. Y., for duty.

Wing, Franklin F., dental surgeon, ordered from Jefferson Barracks, Mo., to Fort Riley, Kans., for duty.

Ware, William H., dental surgeon, granted leave of absence for two months from Fort Logan, Colo.

Jones, George H., contract surgeon, relieved from duty at Fort Fremont, S. C., and ordered to duty at Fort Moultrie, S. C.

Thorp, Charles W., contract surgeon, left Fort Ethan Allen, Vt., on leave of absence for one month.

Byars, Caspar R., contract surgeon, left Fort Sam Houston, Texas, and arrived at Fort McIntosh, Texas, for temporary duty.

Merrick, John N., contract surgeon, ordered to accompany troops from Fort Missoula, Mont., to San Francisco, Cal.

Stuckey, Harrison W., contract surgeon, ordered to Fort Snelling, Minn., to Fort Assiniboine, Mont., for temporary duty.

Mount, James R., contract surgeon, arrived at San Francisco on the transport *Thomas* on three months' leave of absence, from the Philippines Division.

Leeper, John F., contract surgeon, arrived at San Francisco, Cal., on the transport *Thomas* on two months' leave of absence from the Philippines Division.

### Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending December 23:

Ransdell, R. C., asst.-surgeon, ordered to Naval Hospital, Newport, R. I., December 16.

Richardson, F. A., acting asst.-surgeon, detached from naval recruiting station, Baltimore, Md., and ordered to duty with naval recruiting party No. 3, Hutchinson, Kans., January 2.

Duncan, G. F., acting asst.-surgeon, detached from naval recruiting party No. 3, Wichita, Kans., and ordered home and granted leave until January 23.

Diehl, O., surgeon, ordered to *Lancaster*, December 19.

Riggs, C. E., surgeon, ordered to naval medical supply depot, navy yard.

Michels, R. H., asst.-surgeon, New York, ordered to naval recruiting station, St. Louis, Mo.

Riggs, R. E., asst.-surgeon, detached from *Franklin*, December 26, and ordered to command naval hospital, Port Royal, S. C.

Blackburn, T. C., acting asst.-surgeon, detached from naval recruiting station, St. Louis, Mo., and ordered to *Franklin*.

Keene, W. P., acting asst.-surgeon, detached from naval hospital, Port Royal, S. C., ordered home and granted leave until expiration of appointment as acting assistant surgeon.

De Valin, C. M., surgeon, detached from *Lancaster* and ordered to naval recruiting station, Baltimore, Md.

Schwerin, L. H., acting asst.-surgeon, detached from *Hancock* and ordered to *Yankton*, January 3.

### Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending December 20:

Irwin, Fairfax, surgeon, granted leave of absence for five days from December 26.

Carmichael, D. A., surgeon, on being relieved by Asst. Surg. W. C. Rucker, directed to proceed to Buffalo, N. Y., and assume command of the service at that port.

Carrington, F. M., surgeon, leave of absence granted for seven days from December 14, amended to read four days only.

Oakley, J. H., P. A. surgeon, granted leave of absence for one day.

Kerr, J. W., P. A. surgeon, assigned to duty at the Bureau, Washington, D. C.

Holt, J. M., P. A. surgeon, relieved from temporary command of the service at San Francisco, Cal., and directed to report to Surgeon H. W. Sawtelle for duty.

Warren, B. S., P. A. surgeon, expiration of present leave status, relieved from duty at Cape Fear Quarantine Station and directed to proceed to Boston, Mass., reporting to the medical officer in command for duty and assignment to quarters.

Burkhalter, J. T., asst.-surgeon, granted leave of absence for five days from December 24.

Bogges, J. S., asst.-surgeon, granted leave of absence for one month from December 22.

Rucker, W. C., asst.-surgeon, relieved from duty at Boston, Mass., and directed to proceed to Vineyard Haven, Mass., assuming temporary command of the service at that port and relieving Surgeon D. A. Carmichael.

Foster, S. B., A. A. surgeon, granted leave of absence for ten days from December 12.

Holsendorf, B. E., pharmacist, granted one day's leave of absence under paragraph 210 of the Regulations.

### BOARD CONVENED.

Board convened to meet at the Marine Hospital, San Francisco, Cal., Dec. 22, 1905, for the purpose of conducting a medical survey of an officer of the Revenue Cutter Service. Detail for the board: P. A. Surgeon Hugh S. Cumming, Chairman; P. A. Surgeon J. M. Holt, Recorder.

### Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ended December 22:

#### SMALLPOX—UNITED STATES.

California: Los Angeles, Dec. 2-9, 4 cases; San Francisco, Nov. 25-Dec. 2, 5 cases.

Illinois: Galesburg, Dec. 9-16, 1 case.

Kentucky: Covington, Dec. 9-16, 1 case.

Maryland: Baltimore, Dec. 9-16, 1 case.

Michigan: Gratiot County, Nov. 1-30, 1 case.

Washington: Spokane, Nov. 1-30, 1 case.

#### SMALLPOX—FOREIGN.

Brazil: Bahia, Oct. 28-Nov. 25, 99 cases, 5 deaths; Peruambuco, Nov. 1-15, 43 deaths; Rio de Janeiro, Oct. 22-Nov. 19, 29 cases, 12 deaths.

Canada: Toronto, Nov. 25-Dec. 9, 5 cases.

Chile: Autogasta, Oct. 24-Nov. 7, 48 cases, 13 deaths; Coquimbo, Oct. 22-Nov. 4, 17 cases, 4 deaths; Iquique, Oct. 26-Nov. 9, 20 cases, 22 deaths.

Ecuador: Guayaquil, Nov. 19-26, 5 deaths.

France: Paris, Nov. 25-Dec. 2, 22 cases.

Great Britain: Plymouth, Nov. 25-Dec. 2, 6 cases.

India: Calcutta, Nov. 4-11, 1 death; Karachi, Nov. 4-19, 2 cases.

1 death; Madras, Nov. 11-17, 2 deaths.

Italy: General, Nov. 16-30, 23 cases.

Mexico: City of Mexico, Nov. 18-Dec. 2, 7 cases, 4 deaths.

#### YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Oct. 22-Nov. 19, 20 cases, 6 deaths.

Cuba: Habana, Oct. 16-Dec. 15, 60 cases, 14 deaths; Matanzas Province, Dec. 8-17, 7 cases, 1 death; Santa Clara Province, Dec. 5, 1 case.

Ecuador: Guayaquil, Nov. 18-26, 3 deaths.

Honduras: Choloma, Nov. 15-21, 2 cases, 1 death; Puerto Cortez, 2 cases, 1 death; San Pedro, 4 cases, 1 death.

Mexico: Coatzacoalcos, Dec. 2-9, 1 case, 1 death; City of Mexico, Nov. 25-Dec. 2, 1 case, 1 death.

#### CHOLERA—FOREIGN.

India: Calcutta, Nov. 4-11, 33 deaths; Madras, Nov. 11-17, 12 deaths.

#### PLAGUE—FOREIGN.

Brazil: Bahia, Dec. 15, 5 cases, 3 deaths; Pernambuco, Nov. 1-15, 5 deaths.



India: Calcutta, Nov. 4-11, 21 deaths; Karachi, Nov. 5-19, 10 cases, 10 deaths.  
 Japan: Kobe, Nov. 8-15, 7 cases; Osaka, Oct. 21-Nov. 15, 18 cases, 14 deaths.  
 Mauritius: Nov. 2-16, 23 cases, 13 deaths.  
 Peru: Callao, Oct. 11-31, 1 case, 1 death; Chiclayo, 1 case, 6 deaths; Lima, 8 cases, 1 death; Mollendo, 1 case, 28 deaths.  
 Rio de Janeiro: Rio de Janeiro, Oct. 22-Nov. 19, 48 cases, 17 deaths; Sao Paulo, Oct. 15-22, 1 death.  
 Zanzibar: Oct. 8-21, 37 cases, 21 deaths.

## Medical Organization

### WHAT A COUNTY SOCIETY MAY DO.

The following letter from one of the leading surgeons of Indiana contains so much of interest to county societies, indicating as it does what may be done in any section where as many as three or four wide-awake men can be gotten together, that we are glad of the opportunity to put it before the profession. "What one man has done, other men can do."

VALPARAISO, IND., Dec. 21, 1905.

Dr. J. N. McCormack, Chairman Committee on Organization, Bowling Green, Ky.

My Dear Doctor: Your letter asking me to elaborate our plan of postgraduate work here, with the view that such an account may be used in inducing other medical societies to do likewise, has been received.

I am greatly pleased to have the privilege of doing this, not only for your personal gratification, but because I am confident that it will redound to the very great benefit of such societies as may deem it wise to adopt our plan, as well as to the individual members. It will enable them to do better and more efficient work for the public as a whole, and will aid each individual physician in rendering the best possible service to the unfortunate sick.

Our work was begun two years ago by getting every physician interested in becoming more familiar with scientific and practical knowledge which would be of advantage to him at the bedside, and which would broaden him as a physician. With this end in view, we rented a room, formed a club, and endeavored in every way to appeal to and to build up the social, scientific and material spirit and welfare of the profession. From every point of view I desire to report that we have been eminently successful.

In carrying out this plan we divided our work in such a way that each physician was required to act as a teacher of some special subject, and all the others took their places as students once more. Anatomy and surgery were assigned to one, physiology and practice to another, and so on through the list of subjects, one fundamental and one practical branch being allotted to each teacher. Our meetings were held twice a week, regular lessons were assigned, and we were expected to be present and to give one hour's time to the recitation and study of the subject for the evening's work. In this way we were enabled not only to exchange our individual views as to what we believed, but could always have some good medical authority to place us right if it was found that we were wrong. This plan proved very satisfactory, and we soon learned that the physician who was teacher of the topic assigned derived far greater benefit from his course, for the reason that he was required to study more to hold his ground, sometimes against the combined opinions of the members of his class.

After going along in this way for a time it soon became apparent that the general good demanded that our faculty should be changed from time to time, in order that the teachers could become proficient in more than one subject. I desire to report to you that we found this plan most satisfactory and that it has resulted in a marked improvement of the professional attainments of every individual member of our profession, which means, of course, of the profession as a whole.

The social feature of our plan has done as much, if not more, for the general good of the profession, as the scientific work, and I am now able to report to you that we have no one in this county not on the most friendly terms with the others, and that this is not because they have to be friendly, but because they actually desire to be friendly.

In connection with this work our county society has kept up its regular meetings, always with increased interest, until to-day, although ours is not one of the large counties, I believe I can honestly report to you that we have one of the best, if not the best, county medical society in the state of

Indiana, and we are resolved to go on and to keep it well to the front.

It did not take us long to determine that in consideration of the increase in the cost of living in recent years our services were inadequately paid for, and we concluded it was nothing but justice that the general scale of prices should be increased one-half. In order that this might be uniformly done, we each signed a schedule of fees and caused this to be published, with the signatures of every physician in the city attached, definitely fixing the prices of services during the day, and also during the night. The new schedule went into effect without a single ripple, and it has been strictly maintained. I have never known any complaint on the part of the public, or of the agreement being violated by any member of our profession. The public seemed to understand the necessity for the change of schedule, largely because it knew our profession was making a heroic effort to give the people better service. The results have been that our physicians are paid one-half more for their services and the night work has been reduced to a minimum, giving us the evenings for postgraduate work and to spend with our families.

While we have not accomplished all that we set out to do, we have certainly made rapid progress, and are still determined to go on in the same way and never to stop or to falter until our ideals are attained.

Probably this very crude plan might be radically elaborated and improved with benefit, but it has worked so well, and has given such universal satisfaction, that I think none of our profession would be willing to disturb our present satisfactory condition.

Should you in your work be able to use what we have done as an incentive for others to do likewise, or to elaborate it in any way for the promotion of medical organizations, I am sure that you will have the very best wishes of every member of our profession here in your work.

With personal best wishes, I am, most sincerely yours,

DAVID J. LORING, M.D.

## Marriages

MILTON M. HESS, M.D., to Mrs. Sarah King, both of Morris-town, Ind., November 27.

HOWARD V. DUTROW, M.D., to Miss Emma Agnes Thomas, at Frederick, Md., December 14.

DONALD B. FREDERICK, M.D., Atlanta, Ga., to Miss May King of Marshallville, Ga., December 27.

ELLET ORRIN SISSON, M.D., Denver, Colo., to Miss Maze Vernon of Keokuk, Iowa, December 27.

CARROLL FLIPPIN, M.D., Charlottesville, Va., to Miss Isabel Anderson of Auburn, Ala., December 19.

HERBERT E. ZEPP, M.D., St. Michael's, Md., to Miss Grace L. Northam, at Kegotank, Va., December 6.

WILLIAM G. REEDER, M.D., to Miss Maude Van Heusen, formerly of St. Louis, recently of Chicago.

PEYTON R. DENMAN, M.D., Lufkin, Texas, to Miss Frances Wootters of Crockett, Texas, December 5.

ROBERT E. DAVISON, M.D., Pittsburg, Pa., to Miss Nettie May Kratzer of Glenfield, Pa., December 20.

JOSEPH HAROLD HOLT, M.D., Sherman, Texas, to Miss Norma Lucile Strickland of Athens, Ga., November 8.

FREDERICK GREEN BARFIELD, M.D., Cuthbert, Ga., to Mrs. Helen Denham of Jacksonville, Fla., November 29.

CHARLES PRESTON EICHELBERGER, M.D., to Miss Mary Alexandria Arrington, both of Danville, Va., December 20.

CHARLES HENRY CONLEY, M.D., Adamstown, Md., to Miss Helen Abell Baughman of Frederick, Md., December 12.

THOMAS STRINGFIELD, M.D., Waynesville, N. C., to Miss Mary Elizabeth Moore of Birmingham, Ala., December 26.

HAROLD CAPRON BAILEY, M.D., to Miss Sarah Pauline Kennedy, both of Buffalo, N. Y., at Brooklyn, N. Y., December 15.

OTTO CHARLES QUITMEYER, M.D., Parker's Prairie, Minn., to Miss Jean Elizabeth McEwan of Alexandria, Minn., December 12.

CHARLES THOMPSON CHAMBERLAIN, M.D., Portland, Ore., to Miss Deborah Boatner of Vidalia, La., at Natchez, Miss., November 29.

MARION F. MARVIN, M.D., acting assistant surgeon, United States Army, to Miss Ella Constance Johnson of South Carolina, at Chadron, Neb., December 12.



## Deaths

**William Josiah McMurray, M.D.** University of Nashville Medical Department, 1869; president of the Tennessee State Board of Health; a veteran of the Civil War, in which he lost his left arm; member of the Tennessee State Medical Association, Nashville Academy of Medicine and Royal Anthropological Society of London; physician of Davidson County in 1872; alderman of Nashville in 1876; one of the most prominent practitioners of Nashville, died at his home in that city, December 4, from pneumonia, after an illness of one week, aged 63.

**Daniel Maxon Cool, M.D.** Rush Medical College, Chicago, 1861; for several years professor of diseases of children in the Chicago Medical College; surgeon of the Third Iowa Volunteer Infantry during the Civil War; some-time member of the American Medical Association, Minnesota State Medical Society, and Rice County Medical Society; for nine years health commissioner and for many years city physician of Faribault, Minn., died at his home in that city, December 14, from heart disease, after a long period of invalidism, aged 82.

**Nathan Bozeman, M.D.** University of Louisville Medical Department, 1848; formerly of Mason, Ga.; a surgeon in the Confederate service during the Civil War; for many years proprietor of a hospital in New Orleans, died at his home in New York City, from cerebral hemorrhage, December 16, after an illness of one week, aged 80. His contributions to the literature and armamentarium of gynecology were numerous and valuable.

**Hiram N. Rucker, M.D.** University of California Medical Department (Toland Medical College), San Francisco, 1870; resident physician and superintendent of the Masonic Widows and Orphans' Home, Decoto, Cal.; a member of the American Medical Association; formerly superintendent of the Stockton State Hospital, and of the Soldiers' Home of Yountville; for a time health officer of Oakland, was run over and instantly killed by a train at Decoto, December 13, aged 55.

**Colonel Cyrus Tracy Peckham M.D.** Harvard University Medical School, Boston, 1879; assistant surgeon general United States Public Health and Marine-Hospital Service, stationed at Buffalo, N. Y., died at his apartment in the Markeen, in that city, December 10, from cerebral hemorrhage, after an illness of two days, aged 52. Colonel Peckham's most notable services were in the study of malaria and trachoma, and in the care of the afflicted in Galveston, after the flood.

**Richard H. Tullis, M.D.** Northwestern University Medical School, Chicago, 1890; a member of the American Medical Association and of the national auxiliary legislative committee in 1904-5, and president of the Oklahoma State Medical Association; one of the most prominent physicians of the Southwest, died at his home in Lawton, Okla., December 12, from typhoid fever, after an illness of ten days, aged 41.

**Gustav Adolph Prieson, M.D.** University of Würzburg, Germany, 1852; assistant surgeon of the Sixth Pennsylvania Volunteer Cavalry and surgeon of the Thirty-eighth Pennsylvania Emergency Militia; local surgeon to the Pennsylvania System; some-time coroner and sheriff of Clinton County, Pa., died at his home in Lock Haven, from nephritis, December 2, after an illness of eight weeks, aged 73.

**Albert Thompson, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1864; assistant surgeon and surgeon of the Third Michigan Volunteer Cavalry; for two years state senator; for several years a practitioner of Colton, Cal., and mayor of that city, died at his home in Danbury, Conn., November 22, after a long illness, from heart disease, aged 74.

**Lafayette O'Mahoney, M.D.** St. Louis College of Physicians and Surgeons, 1896, of Columbia, Mo., who was crushed between a train and a station wall in August of last year, necessitating the amputation of both legs, died from tuberculosis at Denison, Texas, December 13, after a lingering illness, aged 32.

**Putnam S. Fulkerson, M.D.** Jefferson Medical College, Philadelphia, 1854; collector of Lafayette County, Mo., from 1876 to 1881; postmaster of Lexington for four years, and president of the Lafayette County Medical Association, died at his home in Lexington, December 16, after a short illness, aged 80.

**William Pfisterer, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1890, for three years a practitioner in Minnesota and thereafter an invalid from paralysis, dropsy and mental disease, died at the home of his sister in New Ulm, Minn., November 23, aged 40.

**Augustus Louis Jukes, M.D.** Trinity Medical College, Toronto, 1865; College of Physicians and Surgeons of Ontario, Toronto, 1866; senior surgeon of the Northwest mounted police in 1882, and member of the Board of Medical Examiners of the Northwest Territories in 1886, died recently in Vancouver, B. C., aged 84.

**James Elliott, M.D.** New York University, New York City, 1850; said to have been the oldest practitioner of Newark, N. J.; one of the founders of St. Michael's Hospital, and for many years a member of its staff, died at his home in Newark, December 15, from senile debility, aged 88.

**J. Edwin Hughes, M.D.** College of Physicians and Surgeons, Keokuk, Iowa, 1876, of Almira, Wash., after confinement in the Yakima County jail for several months on charges of rape and bigamy, committed suicide, December 8, by hanging himself with a towel, from a bunk-hook.

**Benjamin W. Inman, M.D.** Tulane University of Louisiana Medical Department, New Orleans, 1885, a member of the Mississippi State Medical Association, and of the Washington County Medical Society, died at his home in Leota Landing, Miss., December 11, from nephritis.

**James M. Ely, M.D.** Medical College of Indiana, Indianapolis, 1878; for more than 60 years a practitioner of Indiana; the oldest practitioner in Hancock County, died at his home in New Palestine, December 11, from senile debility, after an illness of nine months, aged 84.

**Joseph D. Searles, M.D.** County License (Huntington County, Ind.) 1897; secretary of the Huntington County Board of Health, and health officer of Huntington; for 43 years a practitioner of that city died suddenly at his home, December 2, from heart disease, aged 69.

**William Joshua Arnott, M.D., C.M.** Trinity Medical College, Toronto, 1893; surgeon to the Berlin and Waterloo (Ont.) hospitals; medical health officer of Berlin, and coroner of Waterloo County, died from meningitis at his home in Berlin, Ont., December 12, aged 43.

**Henry Irvin Jones, M.D.** University of Nashville Medical Department, 1904, a member of the Kentucky State Medical Society and the Monroe County Medical Society, died at his home near Martinsburg, Ky., from tuberculosis, after an illness of several months, aged 23.

**James E. Kelsey, M.D.** College of Physicians and Surgeons of Syracuse (N. Y.) University, 1873; for several years health officer of Theresa, N. Y., and at one time state health officer, died at his home in Theresa, December 10, from nephritis, after a long illness, aged 55.

**William Wallace Gardner, M.D.** New York University, New York City, 1865; for many years a member of the Massachusetts Medical Society; a veteran of the Mexican War, died at his home in Springfield, Mass., December 11, from senile debility, aged 79.

**James M. Waddick, M.D.** Miami Medical College, Cincinnati, 1868; a veteran of the Civil War; for many years connected with the Boys' Industrial Home, Toledo, Ohio, died suddenly at his home in that city, December 12, from heart disease, aged 68.

**J. M. Mitchell, M.D.** Memphis (Tenn.) Hospital Medical College, 1858; for four terms a member of the Tennessee legislature, and one of the most prominent practitioners of western Tennessee, died at his home in Michie, December 11, aged 72.

**Charles William Jones, M.D.** Cooper Medical College, San Francisco, 1891, formerly of Grass Valley, Cal., died in St. Luke's Hospital, San Francisco, from the effects of carbolic acid taken with suicidal intent, December 9, aged 36.

**Charles Herbert Osborne, M.D.** Bellevue Hospital Medical College, New York City, 1880, traveler and linguist, died at the residence of his sister in Newark, N. J., December 9, after an illness of ten days, from diabetes, aged 52.

**Thomas Gibson, M.D.** Medical College of Georgia, Augusta, 1840, one of the most widely known physicians of Georgia, died on his plantation in Twiggs County, near Macon, December 11, after an illness of several months, aged 86.

**Thomas J. Hourigan, M.D.** Kentucky School of Medicine, Louisville, 1898, of Gravel Switch, Ky., died at the Gray Street Infirmary, Louisville, December 12, four days after an operation for peritoneal tuberculosis, aged 40.

**Clarence E. Sturgeon, M.D.** College of Physicians and Surgeons of Chicago, 1905, interne at Hackley Hospital, Muskegon, Mich., died from mediastinal sarcoma, at his home in Clarion, Iowa, after an illness of nine weeks.



David O. Holmes, M.D. Memphis Hospital Medical College, 1890, formerly of Swan Lake, Ark., and Memphis, Tenn., died at Asheville, N. C., December 12, after a long illness, from tuberculosis, aged 36.

Charles W. Keyes, M.D. Howard University Medical Department, Washington, D. C., 1890, died at his home in Washington, D. C., December 19, from cerebral hemorrhage, after an illness of two days, aged 51.

Wellman M. Burbank, M.D. Castleton (Vt.) Medical College, 1844, one of the oldest practitioners of Chicago, died from senile debility at his home, December 20, after an illness of several weeks, aged 81.

George W. Ellinger, M.D. Jefferson Medical College, Philadelphia, 1878; once physician of Shawnee County, Kan., died at his home in Topeka, December 10, from paralysis, after an illness of several months.

B. F. Trabue, M.D. University of Louisville (Ky.) Medical Department, 1850, said to have been the oldest practitioner of Barren County, Ky., died suddenly at his home in Glasgow, November 29, aged 83.

William Wallace Senteny, M.D. Medical College of Ohio, Cincinnati, 1840, died at his home in Louisville, Ky., December 7, from senile debility, hastened by a fracture of the hip two years ago, aged 87.

Granville I. Leavitt, M.D. Toland Medical College, San Francisco, 1866, who had served in both houses of the Nevada legislature, died at his home in Mason Valley, the first week in December, aged 76.

William Postlethwaite, M.D. University of Louisville (Ky.) Medical Department, 1850, died at his home in Chanute, Kan., November 23, from senile debility, after an illness of three weeks, aged 87.

Alexander B. McKinnon, M.D. New York University, New York City, 1886, a member of the American Medical Association, died from diabetes at his home in Fairhaven, Bellingham, Wash., aged 58.

John M. Wilkins, M.D. University of Nashville (Tenn.) Medical Department, 1878, one of the oldest practitioners of Vermilion County, Ill., died at his home in Fairmount, December 1, aged 80.

T. A. York, M.D. Medical Department University of Tennessee, Nashville, 1886, died at his home in Greenbrier, Tenn., December 13, from paralysis, after an illness of more than a year, aged 59.

William Geddes Stark, M.D. College of Physicians and Surgeons of Ontario, Toronto, 1877, formerly a practitioner of Hamilton, Ont., died at his home in Philadelphia, December 12.

James B. Edge, M.D. Atlanta (Ga.) Medical College, 1880, a well-known practitioner of South Georgia, died in his apartment at Cordele, December 14, after a brief illness, aged 43.

Henry C. Bowen, M.D. Ohio, 1854, for more than half a century a practitioner of Cleveland, died at his home in that city, December 13, after an illness of three years, aged 86.

John J. Smythe, M.D. Trinity College, Dublin, 185—; a febian leader; some-time coroner of Luzerne County, Pa., died suddenly in Scranton, Pa., December 1, aged 73.

Euphrates W. Rudolph, M.D. University of Louisville (Ky.) Medical Department, 1890, died at his home in Tonkawa, Okla., November 24, from pneumonia, aged 40.

John J. Mullen, M.D. Dartmouth Medical School, Hanover, N. H., 1888, died at his home in Portsmouth, N. H., December 16, after an illness of several months, aged 42.

Moses M. Frye, M.D. Pennsylvania, 1870, of Auburn, N. Y., died at a sanitarium in Rochester, N. Y., from pulmonary tuberculosis, after a long illness, December 14.

Daniel Thurston Plumer, M.D. Harvard University Medical School, Boston, 1842, died at his home in Newburyport, Mass., December 3, from pneumonia, aged 86.

William H. Kinney, M.D. Detroit (Mich.) Medical College, 1879, of Detroit, died suddenly from cerebral hemorrhage in a coal office in Detroit, December 11, aged 52.

James E. Thomson, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1901, died at his home in Delhi, La., November 30, from appendicitis.

Maurice K. Dwinell, M.D. Massachusetts, 1883, formerly a practitioner of Waterville, Maine, died at the Maine Insane Hospital, Augusta, December 15, aged 46.

John S. M. Pride, M.D. University of Nashville Medical Department, 1862, died at his home in Culleoka, Tenn., December 2, after a protracted illness, aged 71.

F. Saxenberger, M.D. University of Leipzig, Germany, 1865, died at his home in Beatrice, Neb., from dropsy, December 15, after an illness of several years, aged 65.

Charles Ed Smith, M.D. Years of Practice, Illinois, 1887, one of the oldest practitioners of Macoupin County, Ill., died recently at his home in Palmyra, Ill.

Joseph C. Sparks, M.D. Medical College of Ohio, Cincinnati, 1853, was found dead in his home in Wyoming, Ohio, December 15, from heart disease, aged 77.

Andrew H. Gillmore, M.D. Medical College of Ohio, Cincinnati, 1855, of Terre Haute, Ind., died at the home of his daughter, in that city, December 10.

Benjamin Franklin Stevens, M.D. St. Louis, 1874, a veteran of the Civil War, died at his home in St. Jacob, Ill., December 9, from senile debility, aged 74.

Jerome Smith, M.D. Louisville Medical College, 1870, died at his home near Hodgenville, Ky., December 10, after an illness of several months, aged 74.

Sylvester Thompson, M.D. Rush Medical College, Chicago, 1885, died at his home in Galva, Ill., November 28, from pneumonia, after a short illness.

Daniel Walters, M.D. Long Island College Hospital, Brooklyn, 1897, died at his home in Wharton, N. J., December 11, from typhoid fever, aged 36.

Alfred W. Hayward, M.D. Missouri, 1894, died at his home in Mound City, Kan., December 13, from malarial fever, after an illness of a few weeks.

Philip B. Knight, M.D. Detroit (Mich.) College of Medicine, 1894, died at his home in Utica, Mich., December 18, from heart disease, aged 37.

Mary J. B. Paul, M.D. Northwestern University Woman's Medical School, Chicago, 1882, died at her home in Bryan, Ohio, November 27.

C. L. Summey, M.D. Atlanta, (Ga.) Medical College, 1876, died at his home in Stone Mountain, Ga., December 10, after a long illness.

Levi Saunders, M.D. Chicago, 1880, died recently at Brunson, Mich., from cerebral hemorrhage, after an illness of one week.

Palmer Wilbur, M.D. Cincinnati, 1872, died at his home in Alden, Mich., December 7, from heart disease, aged 72.

Otis G. Randall, M.D. Philadelphia, 1878, died suddenly at his home in Bridgewater, Mass., December 7, aged 58.

Charles A. Williams, M.D. Illinois, 1861, died at the Chicago Beach Hotel, Chicago, December 18, aged 66.

Charles B. Pillsbury, M.D. Illinois, 1879, died at his home in Duluth, Minn., March 1.

## Society Proceedings

### SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

*Eighteenth Annual Meeting, held in Louisville, Ky.,  
Dec. 12-14, 1905.*

(Continued from page 1977.)

#### Dangers from Scopolamin-Morphin Anesthesia.

DR. HORACE J. WHITACKER, Cincinnati, Ohio, based his conclusions on observations made in 40 cases of anesthesia induced by this method, on animal experimentation, and on a review of all deaths that have been reported in the literature up to the present time. The author concludes: 1, That scopolamin-morphin narcosis is not devoid of danger; 2, that the use of scopolamin-morphin alone for surgical narcosis is not justifiable, and in his experience is not practicable; 3, that a single dose two hours before operation lessens the discomforts attendant on the operative procedure to a high degree, and may obtain a definite place in surgical practice; 4, that four deaths have occurred in a series of 2,400 collected cases, which have been so definitely related to the use of this method of narcosis that they are probably scopolamin deaths; this, however, in the absence of autopsy demonstration; 5, that these deaths were reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as the direct cause of death; 6, that a fatty degeneration of the liver and kidney has been produced by repeated doses of scopolamin



alone, and of the scopolamin-morphin combination, in animals; 7, that this method of producing or assisting narcosis can not yet be recommended for use in general practice, in spite of the great advantage it seems to offer.

#### Scopolamin-Morphin-Ethyl Chlorid-Ether Anesthesia.

DR. H. A. ROYSTER, Raleigh, N. C., said that of all the combinations suggested for aiding and abetting these agents, that which forms the subject of his paper commends itself to him, because he believes, first, that ether is the safest general anesthetic; second, that ethyl chlorid secures the pleasantest primary narcosis; third, that the preliminary use of scopolamin with morphin increases the patient's mental resisting power and lessens the quantity of ether. In his opinion there can be no question of the superiority of ethyl chlorid over nitrous oxid gas as a preliminary to ether anesthesia. Its action is more certain and constant and equally agreeable, and he can not help feeling that it is safer. His experience in regard to the combination of morphin and scopolamin is confined solely to the use of these drugs prior to the administration of ether. Clinical tests have led him to conclude that scopolamin is not identical with hyoscin, and that it does something more than morphin alone, and that it is safe in proper doses. He warned against careless use of scopolamin, inasmuch as several deaths have followed its employment.

#### Fracture-Dislocation of Condyles of Femur, with Backward Luxation of Leg.

DR. GEORGE S. BROWN, Birmingham, Ala., reported the case of a patient, aged 14, who was injured in a football game, and who was treated for three months for sprained knee. A skiagraph revealed fracture-dislocation of the condyles. He walked for four months after this with bad valgus and flexion of the leg on the thigh before submitting to an operation. The limb and knee joint were restored to normal. There was bony union of the fragments in their dislocated position. Through a four-inch incision down the inner aspect of the femur, the lower end of which stopped short of the level of the knee joint, the periosteum was cut through and pushed downward, the union chiseled through, the broken surfaces resected, and the leg brought forward on the thigh without opening the joint. The fragments were wired and the internal lateral ligament closed with kangaroo tendons. The skin was closed with a subcuticular suture of silkworm gut. Owing to the first dressing being left too long, there was a superficial infection which did not interfere with the final good result.

#### Technic in Appendicitis Operations.

DR. W. P. CARR, Washington, D. C., said that in this disease it was apparent that no one method of operating will suit all cases. Surgeons must modify the technic to suit the case and the strength of the patient. In his first 100 cases he had 8 deaths. In his last 72 cases he has had but 2 deaths, and he believes the improvement in mortality is due to a fuller knowledge of the condition of the patients and a suitable adjustment of the technic to those conditions. The incision should always be either the gridiron or through the rectus muscle; otherwise hernia is very liable to follow. There is but one objection to the gridiron incision, namely, it can not be greatly enlarged without cutting across the fibers of the internal oblique and transversalis muscles. This, he thinks, should never be done. It is better to close the wound and open again through the rectus muscle if a very large opening becomes necessary. However, if this incision is well placed, it may be stretched with the fingers and a fairly large opening made through which any uncomplicated operation may be done. The stretching should never be excessive, as paralysis of the stretched muscle fibers may result, and hernia follow.

#### Neglected Appendicitis.

DR. CHARLES M. ROSSER, Dallas, Texas, concedes the safety of an acutely inflamed appendix if the pathology is limited to the structures of that viscus; but the serious mortality following cases not so treated justifies a classification of those passing the initial stage as being neglected, whether the delay is due to indifference, ignorance or cowardice, and whether the

responsibility is on the family, patient, or medical adviser. The safe time limit varies with the character of the attack, the skill of the operator, and the resistance of the individual. The author considered the question of whether to operate settled affirmatively; that the question of when to operate is agreed to, if early, but he proposes the question of, who shall operate, and what operation shall be done? While appendectomies are occasionally simple of performance, yet they are prospectively delicate, and the patient is entitled to the most skillful service available in each instance, and he thinks the geographical distribution of competent surgeons is sufficiently general that there is hardly an excuse for an emergency operation by the attending physician if he is not so equipped. He advises incision in all cases at all stages except those already moribund, and in which added insult to vitality will be immediately hazardous, and a class having reached adhesive protection in which a relaxed rectal orifice indicates early rupture and discharge by that route. After incision the surgeon must decide whether to remove the appendix alone, whether removal and drainage, or whether drainage alone should be the operation of election. But as exploration can best determine another indefinite pathologic progress, the patient should be given the benefit of the doubt.

#### Requirements and Qualifications for a Successful Career in Surgery.

The address of the president, DR. LEWIS C. BOSHER, Richmond, Va., will be published in THE JOURNAL.

#### Overlapping Aponeuroses in Closure of Abdominal Wounds.

DR. CHARLES P. NOBLE, Philadelphia, recommended a method of overlapping the aponeuroses which he has used with the utmost satisfaction for nine years. In but one case does he know of a postoperative hernia where the abdominal wound was closed by this method.

#### Starvation and Locked Bowels for About Two Weeks.

DR. HOWARD A. KELLY, Baltimore, Md., offers for a more extended trial in other fields as well a method of after-treatment which he has used in some 15 cases, for the most part in complete tears of the recto-vaginal septum. The treatment consists in two parts. First, a very limited diet for from 10 to 15 days; second, the locking up of the bowels during this period. The food is limited to albumin and water, giving nothing the day following operation, and but one dram every three hours on the second day, and increasing this a dram each day until the patient is taking four drams every three hours. In this way the patient is fed during a period of 10 days not quite three pints of albumin and absolutely no other food. One patient was continued on this diet for fifteen days without an evacuation. At least two very frail patients were treated in this way. When the evacuation takes place, two drams of licorice powder are given, and in some cases an oil enema, and the passage is secured with the patient lying on her side, so as to avoid any straining. In no case are there any scybala, or is there any difficulty with the evacuations. Dr. Kelly thinks this starvation plan of treatment should have a wider range of utility in treating dyspeptics and cases of hysteria, as well as in all kinds of plastic operations on the intestinal tract.

#### Surgical Treatment of Cancer of the Head and Neck.

DR. GEORGE W. CRILE, Cleveland, Ohio, presented general conclusions, that since the head and neck present an exposed field, cancer here, unlike that of the stomach, the intestines or even the breast, may be recognized at its very beginning. Every case is at some time curable by complete excision. The field of regional metastasis is exceptionally accessible; that cancer rarely penetrates beyond the extraordinary lymphatic collar of the neck; that the growth tends to remain here localized, and that by freely utilizing all the modern resources of surgery, and by applying the same comprehensive block dissection, as in the radical operation for breast cancer, the final outcome in the surgical treatment of cancer of the head and neck should be not only as good, but even better than that of almost any other portion of the body.



### Late Results in Treatment of Inoperable Sarcoma with Toxins of Erysipelas and Bacillus Prodigiosus.

DR. W. B. COLEY, New York City, has used these toxins since 1892. He has advocated the treatment only in inoperable sarcoma, but in view of the successful cases he believes it wise to use the injections in all cases after primary operation for sarcoma as a prophylactic against recurrence. In these cases the dose should be much smaller, just sufficient to produce a very slight reaction, and the treatment should be continued for two to three months. He also believes it wise, in practically all cases of sarcoma of the extremities, to give the patient the benefit of a trial with the mixed toxins before sacrificing the limb by amputation. This opinion is based on 12 such cases in which, as the result of this treatment, the tumor disappeared, and in 8 of the 12 cases the patients were well from three to six years afterward. Dr. Coley gave statistics showing the results in his own and others' experience.

(To be continued.)

### JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

Meeting held in Baltimore, Nov. 20, 1905.

The President, DR. W. G. MCCALLUM, in the Chair.

#### Adenocarcinoma of Stomach.

DR. SAUERS showed a man 43 years old, admitted to the hospital in June complaining of pain in the umbilical area, which had grown worse since Christmas. He had had discomfort for two years, and during the last year lost forty pounds in weight. He has had six attacks of vomiting after attacks of pain and not associated with eating. He quit work in December and took no solid food for three months. The patient's color was good; abdomen was scaphoid with pigmented areas over the epigastrium from plasters. Though weak, the patient felt good except when he had attacks of pain, which were brought on by taking any solid food, and were worse in the area of the umbilicus. The bowel felt firm in the region of the splenic colon, otherwise the abdominal examination was negative. Patient was operated on by Dr. Bloodgood, June 29, the peritoneal cavity being opened by a median incision extending from ensiform to below the umbilicus. A carcinomatous growth was found on the lesser curvature of a moderately dilated stomach 3 cm. below the pylorus. Practically all the lesser curvature was removed, together with an adjacent gland showing metastasis. All the fat was removed with the lesser curvature, and adhesions binding the stomach to the pancreas were broken up, showing an area of induration in the central portion of the pancreas. The duodenal and stomach ends were reinforced, a loop of the duodenum being anastomosed to the posterior wall of the stomach. The pancreas was left intact, an inflammatory induration of the pancreas, in cancer of the stomach, not indicating removal as a cancerous involvement would. Patient left the hospital on July 30, and has since gained 32 pounds in weight. He has had no vomiting or pain, and bowels are regular. After a test meal of 100 c.c., 12 c.c. were gotten an hour later. Pathologically the tumor, which was a large fungous mass on the lesser curvature of the stomach, reaching to within 3 c.c. of pylorus, was an adenocarcinoma.

#### Congenital Stenosis of the Pylorus.

DR. CHARLES S. SCUDDER, Boston, said that until recently cases of congenital stenosis of the pylorus have been seldom recognized. The disease has been almost universally fatal. The first case reported was by Beardsley of New Haven in 1788. A case was reported in 1841 and a case in 1842. These were the only two reported during the 100 years between Beardsley's report in 1788 and Kirschbaum's in 1888. Since 1888 there have been 35 autopsies, with findings both definite and constant. Dr. Scudder discussed in detail the clinical history and treatment of this affection.

#### Relation of Dilatation of the Duodenum to Gastric Disturbances.

DR. J. M. T. FINNEY said that five or six years ago on opening the abdomen for a variety of conditions, particularly conditions of the stomach, duodenum and gall bladder, a condition

was found which was not mentioned in the literature, i. e., a dilatation of the duodenum with a patent condition of the pylorus. At that time pyloroplasty was done for want of something better. The patients gave a history of indigestion for months or years, of nausea and vomiting, and symptoms that were indefinite but distressing. Most of the patients had had medical treatment without results. In all the cases there was Glenard's disease. The condition presented by the patients was unsatisfactory for operation. When these cases were first noticed gastroenterostomy was in its infancy. Nothing that was done seemed to benefit the condition. The nearest to a description of the condition was a paper read by A. J. Ochsner in San Francisco this year, in which he reports 14 cases. Mayo, in a recent article on stomach diseases, refers to this condition. He says it is associated with enteroptosis, but does not say what to do for it.

Autopsies on 46 postoperative cases, only one of which was recognized clinically, have been reported from Vienna. The duodenum passes behind the superior mesenteric vessels, the superior mesentery itself running down to the right iliac fossa. When the stomach is much dilated, filled with fluid and has descended to the pelvis, there is a dragging on the mesentery and vessels. This is apparently the obstruction. To the proximal side the intestine is dilated, and at the distal side it is collapsed. Rokitansky in the fifties suggested that this condition might happen. Glenard also suggests that dragging on the mesentery might obstruct the duodenum. In 4 of the 46 Vienna cases the stomach was not markedly dilated, though in most of the cases it had descended. The explanation is not satisfactory for the condition. The dilatation is the effect, not the cause, though it may be both. Two cases have been reported after operations other than abdominal, one being a breast removal and the other an operation on the elbow. Schnitzler suggests that it takes place after anesthetics, particularly after chloroform. Only one case was diagnosed before autopsy.

The treatment is postural. Put the patient in the knee-chest position for fifteen minutes every two hours or have her lie on the left side with hips elevated. Lavage has been tried with some success. The condition generally occurs in nervous patients who are not well nourished and who have enteroptosis. The condition is not necessarily a fatal one, though it has not been recognized. A jejunostomy is the operation to get below the obstruction. Diagnosis is made rather on the continuous vomiting. In some of the cases the obstruction has been near the pylorus, in others below the papilla of Vater, for the patient vomits great amounts of dark, bile-stained fluid. This condition, with both the anti-operative and postoperative types, is a definite entity. No other observer has noted the circular, muscular bands around the duodenum, which Ochsner noted, and who draws an analogy between the pylorospasm and a spasm at the ileocecal valve. Gastroenterostomy has been done several times and found wanting. In postoperative cases the postural method or jejunostomy, might be tried.

#### DISCUSSION.

DR. HEMMETER said that an "hour-glass stomach" had been brought to him which, on examination, showed no scar, and proved to be stomach and duodenum. There are three causes for dilatation in hollow muscular organs: First, abdominal fermentation; second, mechanical causes, such as the ring described by Ochsner, and the dragging of the mesentery; third, faults of innervation, Meltzer's reciprocal innervation theory, i. e., simultaneously as an impulse travels through and contracts the longitudinal fibers, the circular fibers relax, e. g., contraction of stomach and loosening of the pylorus. Boas has described infra-papilla and supra-papillar obstructions. In only the cases below the papilla of Vater is their pancreatic juice in the vomitus, hence the trypsin test may be of considerable diagnostic value.

DR. CUSHING agreed with Dr. Hemmeter that the trouble is in the thin-walled stomach and duodenum associated with Glenard's syndrome, and that the tenth nerve is a considerable factor. A division of the tenth nerve in an animal leads to incessant vomiting until death occurs. In the separation of adhesions around a pylorus and gall bladder, the fibers of the tenth nerve may be so injured as to throw out this area and allow dilatation. A case from private practice was a female-



57 years old. There was nothing in the past history that had any bearing on the symptoms, except that at 17 years she had had jaundice. She was a thin multipara, with the lower border of the stomach below the umbilicus. At operation a dilated stomach and duodenum were found with the scar of an old ulcer at the pylorus. A pyloroplasty could not be done on account of the sagging of the stomach, so he reversed the pyloroplasty, shortening the lesser curvature. Patient vomited for ten days incessantly, but gradually stopped and now is well. An operation of the same type as this modified pyloroplasty can be done at the ileocecum.

## Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns.]

### Local Treatment of Erysipelas.

The following combination is recommended by the *Medical Review of Reviews* as a local application in the treatment of erysipelas:

R. Guaiacol  
Tinct. iodii  
Spiritus rectificat.  
Essentiæ menth. pip., āā.....3ii 8

M. Sig.: Apply locally on gauze from two to four times a day.

### Gallstones.

A. Hechet, in an abstract in the *Monthly Cyclopedia of Medicine*, recommends in the treatment of gallstones, inasmuch as the preparations of nux vomica increase peristaltic action, and calomel increases the secretory flow, that this combination should serve a good purpose in the prevention of their formation. By this means sufficient peristalsis and biliary flow render it almost impossible for the stasis of bile, without which gallstone formation is improbable. The action of nux vomica also aids the prevention of gallstones by increasing the appetite, and thus exciting the formation of a large amount of bile. The mode of living must necessarily be regulated as well as the diet, in order to prevent infection of the bile tract. In the interval between the attacks of colic, the following combination is recommended by the author:

R. Hydrargyri chloridi mitis  
Extracti nucis vomicæ, āā.....gr. vi-viiss 40-50  
Extracti rhei.....gr. xx 1/30

M. Ft. capsule No. xxx. Sig.: Two to three capsules to be given daily.

This combination does not produce diarrhea or intestinal colic, and at the same time tends to increase the flow of bile. Gallstone colic requires the administration of morphin hypodermically, with a pill combined as follows:

R. Podophyllin .....gr. iii 20  
Hydrargyri chloridi mitis,.....gr. vi 40  
Ext. nucis vomicæ  
Ext. belladonnæ, āā.....gr. iiss 27

M. Ft. capsulæ No. xx. Sig.: One capsule every two hours until the patient is relieved, then one or two capsules a day.

### Treatment of Uremic Convulsions.

W. J. Wilson, in the *Therapeutic Gazette*, recommends in the treatment of uremic convulsions, which is the most dreaded complication in acute or chronic nephritis, and as a complication of pregnancy, that chloroform be first administered to control the convulsions. A thorough movement of the bowels should be secured by the administration of croton oil in 1 to 5 minim doses (.30), mixed with a little sweet oil and dropped on the tongue. As soon as it is possible to do so, the following combination should be administered:

R. Chloralis hydratis.....gr. x-xxx 65-2.00  
Sodii bromidi.....gr. xxx 2

M. Ft. pulvis. Sig.: To be administered in water by the mouth or by rectal injection.

He also recommends the employment of the tincture of veratrum viride in 4 minim (.25) doses every one or two hours until the pulse is reduced to normal or slightly below normal.

If the patient is plethoric, he recommends the withdrawal of from 12 to 30 ounces of blood by venesection.

In anemic patients, when such measures are employed, the amount of blood removed should be replaced by normal saline solution.

The patient should be placed in a hot pack or a dry hot air or vapor bath. The use of pilocarpin is not recommended by the author as being of such value as was formerly supposed. This outline of treatment is applicable in uremia following either kidney trouble or pregnancy. In cases of pregnancy, unless labor does not set in spontaneously, and the convulsions are not relieved by this treatment, either vaginal Cesarean section or other methods of emptying the uterus must be employed.

### Fissure Ani.

The following combination is recommended by *Bulletin Gen. de Therapeutics* as an ointment in the treatment of fissure of the anus:

R. Cocainæ hydrochloratis  
Ext. belladonnæ, āā.....gr. i 6  
Ichthyoli .....3iiss 6

M. Ft. unguentum. Sig.: Thoroughly cleanse the parts and apply locally two or three times daily.

### The Treatment of Burns.

After giving the ordinary classification of burns Ambrose McCoy, in *International Journal of Surgery*, states that the first thing to be done is to relieve the pain, and that this should be done promptly.

The important thing in the consideration of the local treatment is to completely exclude the air from the burned surfaces, if possible. The old combination of linseed oil and lime water may be used, but it is not used so much at present as formerly was the case. However, it relieves pain rather promptly and effectively. The disadvantage of this liniment is the difficulty of removing it when once applied and allowed to dry. Another objection the author brings out is that there is a tendency to suppuration after its use. Picric acid may be used in burns of the first and second degree by applying gauze wet with a saturated (5 per cent.) solution of this acid directly to the surface, and over this gauze a layer of absorbent cotton, over which a roller bandage should be firmly applied. The advantage of this application is that it relieves pain, it is a decided antiseptic, and it is not followed by suppuration. It is very easy to remove, as a rule, and the yellow stains which may follow the application of this acid can be easily removed by the application of alcohol. The best dressing, however, according to McCoy, is a combination of carbolic acid and glycerin in varying proportions; one part of carbolic acid to three, four or five parts of glycerin is the strength he recommends. Strips of gauze may be saturated in this mixture and applied to the raw surface. Over this the cotton and roller bandage may be placed, as previously mentioned. He mentions the local anesthetic effect, and the consequent relief of pain on the application of this mixture. It is also a very decided antiseptic. [When carbolic acid dressings are employed the kidneys should be carefully watched.] This treatment may be followed up for the first few days of the injury. If there is a tendency to suppuration after the acute symptoms have subsided, the ulcerating wound is treated in a general way. To aid in the formation of granulation tissue and in the healing process he recommends in this stage the use of ointments, such as carbolic salve, ointments of iodoform or oxid of zinc.

The danger of deformities in severe burns about the hand and wrist is mentioned, and the use of flat splints in such cases is advised. The same precautions should be taken in burns about the knee and elbow joints. In cases of long duration and slow healing, where the burns have extended over a large area, skin grafting may have to be employed. Contrary to the advice of most authorities that dressings should not be changed often, the writer recommends that in cases of burns he has made it a rule to dress the lesions as often or even



oftener than in disturbances to the skin produced in other ways. This is owing to the fact that there is a free discharge of serum, and in some cases a free discharge of pus, both of which will require frequent dressing. He, therefore, recommends redressing once or twice daily.

As internal treatment he recommends the maintenance of the free action of the kidneys by the administration of large amounts of water and other liquids.

## Medicolegal

### Validity of Law Forbidding Marriage of Epileptics.

In 1895 a statute was enacted in Connecticut of which the first section reads as follows: "No man or woman, either of whom is epileptic, imbecile, or feeble-minded, shall intermarry, or live together as husband and wife, when the woman is under 45 years of age. Any person violating or attempting to violate any of the provisions of this section shall be imprisoned in the state prison not less than three years." Was this statute a valid act of legislation? The Supreme Court of Errors of Connecticut considers this question, in the case of Gould vs. Gould, with reference to epileptics only, explaining that the provisions of the act are separable with respect to the different classes of persons with whom it deals, and, so far as this case was concerned, it was enough if it could be supported as to marriages contracted after its enactment by those in the condition of the defendant. It says that the constitution of the state guarantees to its people equality under the law in the rights to "life, liberty, and the pursuit of happiness." One of these is the right to contract marriage, but it is a right that can only be exercised under such reasonable conditions as the Legislature may see fit to impose. It is not possessed by those below a certain age. It is denied to those who stand within certain degrees of kinship. The mode of celebrating it is prescribed in strict and exclusive terms. The universal prohibition in all civilized countries of marriages between near kindred proceeds, in part, from the established fact that the issue of such marriages are often, though by no means always, of an inferior type of physical or mental development. That epilepsy is a disease of a peculiarly serious and revolting character, tending to weaken mental force, and often descending from parent to child, or entailing on the offspring of the sufferer some other grave form of nervous malady, is a matter of common knowledge, of which courts will take judicial notice. One mode of guarding against the perpetuation of epilepsy obviously is to forbid sexual intercourse with those afflicted by it, and to preclude such opportunities for sexual intercourse as marriage furnishes. To impose such a restriction on the right to contract marriage, if not intrinsically unreasonable, is no invasion of the equality of all men before the law, if it applies equally to all, under the same circumstances, who belong to a certain class of persons, which class can reasonably be regarded as one requiring special legislation either for their protection or for the protection from them of the community at large. It can not be pronounced by the judiciary to be intrinsically unreasonable if it should be regarded as a determination by the General Assembly that a law of this kind is necessary for the preservation of public health, and if there are substantial grounds for believing that such determination is supported by the facts on which it is apparent that it was based. There can be no doubt as to the opinion of the General Assembly, nor as to its resting on substantial foundations. The class of persons to whom the statute applies is not one arbitrarily formed to suit its purpose. It is certain and definite. It is a class capable of endangering the health of families and adding greatly to the sum of human suffering. Between the members of this class there is no discrimination, and the prohibitions of the statute cease to operate when, by the attainment of a certain age by one of those whom it affects, the occasion for the restriction is deemed to become less imperative. While Connecticut was the pioneer in this country with respect to legislation of this character, it no longer stands alone. Michigan, Minnesota, Kansas, and Ohio have, since 1895, acted in the same direction. Laws of this kind may be regarded as an ex-

pression of the conviction of modern society that disease is largely preventable by proper precautions, and that it is not unjust in certain cases to require the observation of these, even at the cost of narrowing what in former days was regarded as the proper domain of individual right. It follows that the statute in question was not invalid, as respects marriages contracted by epileptics, after it took effect. Furthermore, the court holds that the Superior Court has the power to pass a decree of divorce from the bonds of matrimony in favor of a party to a marriage, not an epileptic, who has been tricked into it by the other party, who was an epileptic, through his fraud in inducing a belief that he was legally and physically competent to enter into the marital relation and fulfill all its duties, when he knew that he was not. The fraud which makes the contract of marriage fraudulent, as that word is used in the statute of divorce, is a fraud in law and on the law. Such a fraud is accomplished whenever a person enters into that contract knowing that he is incapable of sexual intercourse, and yet, in order to induce the marriage, designedly and deceitfully concealing that fact from the other party, who is ignorant of it, and has no reason to suppose it to exist. Whether such incapacity proceeds from a physical or a merely legal cause is immaterial.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (\*) are abstracted below.

#### American Medicine, Philadelphia.

December 16.

- 1 Cause, Course, Prevention and Treatment of Beriberi. H. Wright.
- 2 \*Short Narcosis, the Short Incision and the Short Stay in Bed After Ideal Operations. B. Holmes, Chicago.
- 3 Intracorporeal Conjugation in the Malarial Plasmodia and Its Significance. C. F. Craig, Manila, P. I.
- 4 Subjective Ozena. J. Knott, Dublin, Ireland.
- 5 What is a Poison? R. G. Eccles, Brooklyn, N. Y.
- 6 \*Pinworms as a Cause of Appendicitis. D. F. Monash, Chicago.

2. Short Narcosis, Short Incision, and Short Stay in Bed After Ideal Operations.—Holmes believes that too much time is often spent by the patient on his back after operation, and too little by the surgeon at the bedside and in the laboratory before the operation. In order to make the stay of the patient short after surgical intervention, he should be studied in the hospital for days or even weeks before operation is undertaken. Holmes has found that patients can readily be kept anesthetized the necessary twenty minutes or half-hour by the employment of gas with only occasional resort to ether. In a few instances, on account of obesity, chloroform has been used to continue the anesthesia. The short incision is one of the dictates of good surgical judgment, as it inflicts the minimum amount of traumatism and gives adequate access to the field of operation. With the small incision, the complications which the protrusion of abdominal viscera add to the operation are unknown. Operators who have been accustomed to use incisions from 4 to 6 inches long are surprised to find that they are able to accomplish the same results more rapidly, with less traumatism and with fewer postoperative discomforts to the patient with an incision 1½ or 2 inches long. The duration of the operation is curtailed, the intoxication and the discomforts of the anesthetic are lessened, the danger of hernia is minimized, the necessity of a long stay in bed is obviated, and the chances of infection through the introduction of many stitches are diminished.

6. Pinworms as Cause of Appendicitis.—Monash states that pinworms are prone to invade the appendix from their habitat in the cecum. Pocketed in the appendix, they and their ova can not be dislodged, and by reinfecting the intestinal tract which has been thoroughly cleansed for relief of pinworms the disorder is obstinately continued. Accumulating in large numbers, they block the lumen and set up violent spasmodic contractions of the appendix in its efforts to expel the contents, thus coinciding with the clinical picture of appendicular colic. After a portion is expelled relief follows and the colicky attack is not repeated until the appendix is again distended by



large numbers of parasites. Repeated attacks are associated with pathologic changes in the mucosa as shown in cases reported. The sharp fine-pointed tail of the female worm which causes irritation of the colonic and rectal mucosa also produces catarrhal changes in the appendix, thereby paving the way for bacterial invasion of the deeper tissues. Anthelmintic treatment is useless, and in an acute attack even dangerous. Removal of the appendix relieves both affections. Two cases are cited.

#### Medical Record, New York.

December 16.

- 7 \*Inhibitory and Anesthetic Properties of Magnesium Salts. S. J. Meltzer, New York.
- 8 Treatment of Certain Affections Interesting Both the Physician and the Surgeon. C. A. McWilliams, New York.
- 9 \*Routine Procedure of the Clinic for the Treatment of Communicable Pulmonary Diseases of the Department of Health. J. S. Billings, Jr., New York.
- 10 Treatment of Bronchopneumonia. S. A. Visanska, Atlanta, Ga.
- 11 Circulatory Failure, Its Nature and Treatment. L. F. Bishop, New York.
- 12 Therapeutic Value of Static Electricity. M. C. Rice, Chicago.
- 13 \*Treatment of Chronic Constipation. J. A. Macmillan, Detroit.
- 14 Case of Fractured Tibia and Fibula; Delayed Union and Its Treatment. L. M. Kommel, New York.

7. Inhibitory and Anesthetic Properties of Magnesium Salts.—Meltzer reports the results of a number of experiments conducted by himself and John Auer at the Rockefeller Institute. Of the four main inorganic constituents of the animal body—sodium, potassium, calcium and magnesium—the effects on nerve and muscle of only the first three have been very carefully studied, those of magnesium for some reason having hardly been considered at all. In studying the action of various substances injected into the brain Meltzer found that magnesium produced paralysis rather than convulsions. Pursuing this lead, he found that this element with its salts invariably caused depression or inhibition of nervous and muscular action. In a few seconds after the injection of a small dose of the sulphate or the chlorid of magnesium respiration ceased and the animal would die without the struggle of asphyxia and without any sign of sensation unless artificial respiration was practiced for a long time. When injected rapidly, 0.1 of magnesium sulphate is profoundly toxic, but as much as 1.5 of the salt, if injected slowly in the course of an hour, will occasion no untoward symptoms. Herein is the probable explanation of the fact that the sulphate, when taken in the ordinary way, produces no poisonous symptoms; some absorption doubtless occurs, but it occurs so slowly as to be harmless. In another series of experiments it was ascertained that solutions of magnesium salts applied directly to a nerve trunk caused a complete block, abolishing conduction entirely. In a third series it was found that by means of subcutaneous injection of magnesium salts complete general anesthesia, with perfect relaxation of the muscles, but without impairment of the vital reflexes, was produced. In a fourth series of experiments the magnesium salts were injected into the subarachnoid space of the spinal cord, mostly by lumbar puncture. Monkeys were the animals experimented on. The injection of magnesium sulphate in a dose of about 0.06 per kilo of the animal's weight within a minute or two caused complete anesthesia and paralysis of the tail and hind legs. This discovery has been put to practical use in 12 operations performed under the influence of intraspinal injection of magnesium sulphate. The highest dose employed was 0.2 per kilo, or 15 drops of a 25 per cent. solution for each 20 pounds of body weight. In the first 8 cases some chloroform was used to supplement the effect, as the tentative doses of the salt were very small, but in the last 4 the magnesium alone sufficed. The best time for operating was found to be three or four hours after the spinal injection. As a precautionary measure the author insists that the Fell-O'Dwyer apparatus for artificial respiration be on hand whenever this magnesium anesthesia is employed. Finally Meltzer reports the cure of a case of tetanus at Roosevelt Hospital. After the employment of 115 c.c. of tetanus antitoxin without effect, the first injection of a solution of magnesium sulphate afforded great relief for thirty-six hours, and after a few more injections the patient was pronounced cured.

9. Treatment of Communicable Pulmonary Diseases.—Billings describes the routine procedure followed at the tuberculosis clinic of the New York City Department of Health.

13. Treatment of Chronic Constipation.—Macmillan has found the use of rectal tampons a very valuable method of treatment in chronic constipation, of the atonic variety. The tampon is made of absorbent cotton, cheese cloth, or lamb's wool, and should be sufficiently large to cause some distension of the bowel. It can be inserted through an ordinary proctoscope and packed into place by means of a long forceps. The best results are obtained when it is placed at the rectosigmoidal junction. The tampon is provided with a piece of string to facilitate withdrawal at the end of from two to six hours. At first the tampon is used every other day, and the interval between treatments is gradually lengthened as improvement follows.

#### Medical News, New York.

December 16.

- 15 Adaptation of the Public to the Principles and Practices of the Prevention of Tuberculosis. H. S. Anders, Philadelphia.
- 16 \*New Operative Procedure in Intestinal Anastomosis. B. L. Wright, U. S. N.
- 17 Detection of Functional Disturbances of Digestion by the Examination of the Feces. J. D. Steele, Philadelphia.
- 18 \*Amebic Infection of the Urinary Bladder Without Rectovesical Fistula. J. R. McDill and W. E. Musgrave, Manila, P. I.
- 19 \*Dissemination of Tuberculosis as Affected by Railway Travel. C. B. Dudley, Altoona, Pa.
- 20 General Consideration of the Contagious Diseases of the Scap and Skin Observed in Children of the Public Schools. J. Sobel, New York.
- 21 \*New Supporter and Pouch for the After-Treatment of Artificial Anus. J. H. Gleason, Manchester, N. H.
- 22 Centrifugal Urinary Analysis. A. L. Benedict, Buffalo, N. Y.
- 23 Use of Egg Albumin in the Technic of Staining the Capsules of Bacteria. A. A. Epstein, New York.

16. New Operative Procedure in Intestinal Anastomosis.—The cut ends of the intestine being in position for suturing, Wright introduces three temporary or stay sutures, which divide the circumference of the intestine into three parts. The first suture (they are all Lembert sutures) is introduced at the mesenteric attachment; the second, a third of the circumference of the bowel distant from the first; the third, similarly introduced, two-thirds the circumference of the bowel distant from the first suture. These sutures are left long, their free ends being tied together or secured by forceps. An assistant grasps the first and second sutures, one in each hand, and by firmly drawing these in opposite directions, the free edges of the gut are inverted and come into close approximation, forming a ridge raised above the general surface of the bowel, through which the permanent suture can readily be passed. The operator, with a straight needle threaded with the suture material he prefers, passes the needle through this ridge from side to side, and by continuous suturing the first third of the gut is closed by a continuous modified Lembert suture. The same procedure is carried on in the remaining two-thirds of the bowel circumference. The temporary stay sutures are then removed, or they may be tied and cut. The operation is completed by suturing the mesentery.

18. Amebic Infection of Intacted Urinary Bladder.—It appears that the bladder of Musgrave's patient was infected by a ward attendant who irrigated the bladder without having cleansed his hands after having given colonic irrigations to patients with amebic dysentery.

19. Dissemination of Tuberculosis by Railway Travel.—Dudley believes that experiments carried on by him indicate very clearly that the danger of infection from the upholstery in Pullman cars and coaches is very much less than from naked surfaces, and that the crusade against hangings and carpets and plush is not founded on careful experimental data.

21. Pouch for Artificial Anus.—Gleason has devised a supporter and pouch to be worn by patients on whom a temporary or a permanent artificial anus has been made. The pouch is made of thick, pliable rubber, with an opening  $2\frac{1}{4}$  inches in diameter. Surrounding the opening is a hard rubber (vulcanized) ring  $\frac{3}{4}$  inch in width and having a slightly convex articulating surface. Attached to this ring are two circular fixing and retaining body straps and two perineal straps. The length from the lower rim of the ring to the convexity of the pouch is 4 inches, the total length of rim and pouch being  $7\frac{3}{4}$  inches.



## Boston Medical and Surgical Journal.

December 14.

- 24 \*The Physician's Duty Toward Tuberculosis. A. T. Cabot, Boston.  
 25 \*Four Unusual Cases of Aneurism. E. A. Locke, L. I. H.  
 26 Some Reminiscences of the Harvard Medical School of Forty Years Ago. D. Coggin, Salem, Mass.

24. Physician's Duty Toward Tuberculosis.—Cabot urges the registration of all cases of tuberculosis; disinfection of the premises; instruction and sanitary inspection in case of patients who can not be separated from their homes; sanatoria for curable cases; hospitals for the isolation and care of the actively infectious and seemingly incurable cases; exclusion from schools of children with contagious forms of tuberculosis, and the isolation of tuberculous individuals in prisons and state reformatories.

25. Unusual Cases of Aneurism.—The first patient mentioned by Locke gave a history of having had syphilis in youth, tuberculosis of both hip joints of twenty-five years' duration; double inguinal hernia; marked arteriosclerosis; relative mitral insufficiency; tabes dorsalis; chronic interstitial nephritis; deformity of spine; aneurism of the left axillary artery, possibly following trauma, which reached an enormous size and finally ulcerated externally, with the death of the patient five days later. The second patient, also a victim of arteriosclerosis, had an aneurism of the transverse aorta, the first sign of which was a sudden attack of hematemesis. Nine days later he had a second attack which proved fatal after ten hours, from ulceration and hemorrhage into the esophagus at the level of the bifurcation of the trachea. The third patient, a syphilitic, had multiple saccular aneurisms of the aorta which ruptured into the retroperitoneal tissue with subsequent erosion of the vertebræ, hydrothorax and atrophy of the left kidney. The patient died four months after the onset of the symptoms. A fourth patient had multiple aneurisms of the abdominal aorta with ulceration into the third portion of the duodenum and hemorrhage into the stomach and intestines. Death occurred four days after the rupture.

## New York Medical Journal.

December 16.

- 27 Management of Abortion. A. F. Currier, Mount Vernon, N. Y.  
 28 Ventral Suspension. S. Chandler, Philadelphia.  
 29 Infective Sigmoid Sinus Thrombosis and Jugular Vein Infection of Otic Origin Without Apparent Mastoid Involvement in an Adult; Operation; Recovery. J. D. Richards, New York.  
 30 Contribution to the Surgery of the Prostate Gland. M. R. Barker, Chicago.  
 31 Etiology and Treatment of Constipation. H. A. Brav, Philadelphia.  
 32 Malformations of the Uterus. A. A. Kerr, Salt Lake City.  
 33 Infant Feeding in Summer, with a Partial Study of Economic and Sanitary Conditions. A. D. Smith, Brooklyn, N. Y.  
 34 Pathology of Paretic Dementia. H. A. Wright, Detroit, Mich.

## Lancet-Clinic, Cincinnati, Ohio.

December 16.

- 35 \*Prostatectomy. W. D. Haines, Cincinnati.  
 36 Prevalence, Pathology and Prevention of Gonorrhea. J. C. Larkin, Hillsboro, Ohio.  
 37 \*Surgical Dressing. C. E. Black, Jacksonville, Ill.

35.—See abstract in THE JOURNAL, Oct. 28, 1905, page 1353.

37. Id.—Oct. 21, 1905, page 1271.

## FOREIGN.

Titles marked with an asterisk (\*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

## British Medical Journal.

December 2.

- 1 Intracranial Tumors. J. Taylor.  
 2 Crystalline Lens in Health and in Cataract. W. J. Collins.  
 3 \*Human and Bovine Tuberculosis. H. Kossel.  
 4 Inflamed Retroperitoneal Hernia (So-called Duodenal). R. L. Knaggs.  
 5 Retroperitoneal Fibrolipoma; Operation; Recovery. R. J. Johnstone.  
 6 \*Rats in Relation to Plague. B. Skinner.

3. Human and Bovine Tuberculosis.—Kossel discusses this question in detail and summarizes his paper as follows:

1. By bacteriologic investigation of tuberculous lesions in human beings, cattle and swine, two types of tubercle bacilli can be detected which may provisionally be called *typus humanus* and *typus bovinus*. 2. The widespread tuberculosis of cattle is to be traced exclusively to infection with tubercle bacilli of the *typus bovinus*. 3. Swine are

susceptible in a high degree to the tubercle bacilli of the *typus bovinus*, in a lesser degree to those of the *typus humanus*. 4. The tuberculosis of human beings chiefly arises from infection with tubercle bacilli of the *typus humanus*, which is transmissible from man to man. 5. Tuberculous lesions in human beings can be produced by tubercle bacilli of the *typus bovinus*. 6. Tubercle bacilli of the *typus bovinus* can be transmitted to human beings by food derived from tuberculous animals, especially by milk of cows affected with tuberculosis of the udder. 7. The part played by infection from bovine sources in spreading tuberculosis in man is small in comparison to the danger threatening from a consumptive human being.

6.—See abstract in THE JOURNAL, Sept. 23, 1905, page 947.

## The Lancet, London.

December 2.

- 7 A Metastatic Mystery. W. R. Gowers.  
 8 Cerebellar Abscess Due to Infection Through the Internal Auditory Meatus. E. W. Roughton.  
 9 General Principles of the Therapeutic Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculous Infection. A. E. Wright.  
 10 \*Treatment of Tuberculosis by Tuberculin. W. Bulloch.  
 11 Comparative Study of the Lincoln, Maldstone and Worthing Epidemics of Typhoid Fever. C. Childs.  
 12 Descendants of the Tuberculous and Hereditary Predisposition. G. Ogilvie.  
 13 Diagnosis of Ocular Paralysis. A. S. Percival.  
 14 Condition of Patients After the Removal of the Vermiform Appendix. L. Jones.  
 15 De Senectute. S. Wilks.

10. Treatment of Tuberculosis by Tuberculin.—Bulloch cites the results obtained in the treatment of 11 patients, the majority of whom were regarded as incurable. There were 2 cases of genitourinary tuberculosis, 2 of gland tuberculosis and 7 of lupus. All the patients except one improved very much under this treatment, seven of them being apparently cured. The case in which there was no improvement was one of extensive abdominal tuberculosis. In one case of lupus the treatment had to be discontinued because, apparently, the inoculations could not be tolerated.

## Journal of Tropical Medicine, London.

November 15.

- 16 Notes from Angola. F. C. Wellman.  
 17 \*Rational Treatment of Dysentery. V. G. Desai.  
 18 Smallpox Inoculation in India (continued). G. H. Fink.

17. Treatment of Dysentery.—Desai urges the value of intestinal irrigation over internal medication in the treatment of dysentery. He uses a hot boric-acid solution, containing one dram of boric acid with a pinch of sodium carbonate to one ounce of water, massaging the abdomen gently during the irrigation. Internally he uses the bark of *Holarrhæna antidysenterica*, a small bushy plant very common in southern India, whose native name is pandarakorda. The bark of the root only is used. It is macerated in sour whey, one wineglassful of the solution being taken four times a day. Desai says that this solution is pleasant to the taste and is carminative and diuretic. This drug is far superior to ipecac and acts well in what he terms the "white" variety of dysentery. It also has marked febrifuge properties and produces diaphoresis. He states that ipecac, of value in the treatment of the "red" variety of dysentery, but that some nervous individuals can not take it. Castor oil, he states, invariably cures mild cases of dysentery, especially in children. It flushes out the intestine and removes irritating matter while it is astringent in its after effects. In plethoric patients he finds the following saline solution useful:

R. Sodii sulph.		
Magnesii sulph., aa.....	3i	4
Sodii chlor.....	gr. x	12
Aq. chloroformi .....	3i	30

Desai does not approve of giving bismuth or opium till after the intestinal tract has been cleansed of all irritating substances. As a diet he favors pure milk to which a little salt is added. He does not favor soups or albumin water.

## Deutsche medizinische Wochenschrift, Berlin and Leipsic.

- 19 (XXXI, No. 43.) Zur Diagnose, Prognose und Therapie der Paralysis agitans. H. Oppenheim. Clinical lecture.  
 20 \*Ueber die Spirochæte pallida. E. Hoffmann.  
 21 \*Die experimentelle Erzeugung von Aneurysmen (production). B. Fischer (Bonn).  
 22 \*Zur Technik der sofortigen Eröffnung einer Enterostomie und des Anus praeternaturalis. Offergeld.  
 23 Bullet Wound of Spine.—Fall von Schussverletzung der Brust-Wirbelsäule mit Brown-Sequard'scher Halb-Seitenlähmung und Klumpkescher Lähmung. Federmann.  
 24 \*Zur Heilung von Pseudarthrosen. P. Jotchkowitz.  
 25 Kasuistischer Beitrag zur Anencephalie und zur Geburt bei derselben. Durlacher.



20. *Spirochetes in Syphilis*.—Hoffmann's experience now includes 300 cases of syphilis in which the *Spirochæta pallida* was found. Its discovery in fresh, dubious lesions was always followed by the development of the lesions into the unmistakable syphilitic type. He has never found it in non-syphilitic affections, and doubts the accuracy of the technic in the few instances in which others claim to have found it in non-syphilitic lesions.

21. *Experimental Production of Aneurisms*.—By injection of blood-pressure-raising drugs, such as extract of the suprarenal glands, Fischer succeeded in causing aneurisms in rabbits, but not in dogs. The process was a primary necrosis of the musculature and elastic elements of the media, never arteriosclerosis. His experiments show that in a given affection the etiology is not the essential factor, but rather the organism itself. It reacts to very different toxins with one and the same clinical affection.

22. *Technic for Immediate Enterostomy and Artificial Anus*.—Offergeld expatiates on the advantages of safely making an opening into the intestine at once in certain conditions, and describes the technic which he has used repeatedly with very satisfactory results. The loop of intestine is brought out, a strip of gauze is passed under it, and it is sutured to the peritoneum and to the fascia. An opening is made in the loop with a trocar, and a Nélaton catheter with a plug in the handle is introduced into the hole thus made and worked through until its tip is in the loop above. A fold is then taken up in the intestine on each side of the catheter, and the two folds are brought together over the catheter and sutured to roof it in, forming a tunnel 5 or 6 cm. long. The escape of gases and fluid feces through the catheter can be controlled with the plug in the catheter to avoid too abrupt changes in the condition in the viscera. The rapidity with which this enterostomy can be done, and its absolute continence, are great points in its favor. After the tunnel has been made and it is desired to make an artificial anus later, the thermocautery can be applied over the opening into the intestine.

24. *Treatment of Pseudoarthrosis*.—Experience with 2 patients has convinced Jotzkowitz that local injection of tincture of iodine in and around the lesion is the best method of treatment. He injected 2 and 4 c.c. respectively, at a single sitting. The resulting pain was bearable, and the treatment resulted in a complete cure. The patients were a young woman with a fractured ankle and a man of 61 with a fractured leg. Tachard has reported similar success from injections of tincture of iodine in 2 cases, after failure of all other measures to induce firm, bony union.

#### Gazzetta degli Ospedali, Milan.

Last indexed page 1699.

- 26 (XXVI, No. 118.) Atassia acuta astasia abasia consecutive ad un'angina non ditterica. T. Silvestri.
- 27 Arterite diplococciche e gangrene delle estremità. G. Matirolo.
- 28 (No. 119.) \*Lo siero bivalente e battericida nella cura della ditterite. F. C. Constantini.
- 29 (No. 120.) \*La terapia nella pneumonite crupale. E. Gugnoni.
- 30 (No. 121.) Haedicke's theory that the Leucocytes are Parasites of the Vertebrate Animals.—Una nuova teoria intorno alla natura dei leucociti. A. Ceconi.
- 31 (No. 124.) Caso di pneumotorace subfrenico. G. Gasparini.
- 32 \*I riflessi addominali nell'ileotifo (abdominal reflexes in typhoid). C. Ortali.
- 33 Ascite da cirrosi epatica curata coll'operazione di Talma. F. Bindi. One successful case.
- 34 (No. 127.) \*Treatment of Rabies with Radium.—Ancora sulla cura della rabbia coi raggi del radio e sul loro meccanismo di azione. G. Tizzoni and A. Bongiovanni.
- 35 La pressione del sangue nei tubercolosi. E. Belliboni.
- 36 Suppurazioni dell'orecchio (of ear). A. De Blasi.
- 37 (No. 130.) Sopra alcune pleuriti metapneumoniche. Ghedini.
- 38 Elminti e febbre tifoide (helminths and typhoid). M. Vivaiddi.
- 39 \*Note cliniche all'etiologia e al decorso della tafe. G. Fratini.
- 40 \*Contributo sperimentale alla scelta degli antisettici (choice of antiseptics). N. Federici.
- 41 \*L'intervento chirurgico nelle peritoniti settiche diffuse. A. Montini.

28. *Bivalent Serum in Treatment of Diphtheria*.—A diphtheria antitoxin is produced in Italy which, it is said, not only neutralizes the toxins, but has a direct bactericidal action. Costantini reports that his experience with it has been very encouraging. In the mild cases, local applications of the serum proved sufficient without injection of the bivalent antitoxic serum. He continues the injections after all symptoms have subsided, thus hastening the final disappearance of the

bacilli from the throat. When mixed with a toluized gelatin, the serum adheres to the walls of the throat and thus seems to exert a more intense local action. Costantini has seen no paralytic complications since he has been using this combination of bivalent and bactericidal serums.

29. *Treatment of Croupous Pneumonia*.—Gugnoni expatiates on the advantages of giving digitalis in croupous pneumonia. It aids in placing the heart in the best possible condition to cope with the infection, strengthening it to resist the toxins of the pneumonia and to overcome the obstacle of the hepatization of the lungs. He gives an infusion of 2 or 3 gm. of digitalis leaves, with water of ammonia and anise, to be taken in twenty-four hours, regardless of whether the heart seems to need it or not. If the heart action is abnormal and does not respond favorably to the influence of the digitalis, the prognosis is almost inevitably bad, although other symptoms may not indicate this at the time. He has thus treated 21 patients.

32. *Abdominal Reflexes in Typhoid*.—Ortali's researches on 61 typhoid patients confirm Sicard's statement last year that the abdominal reflexes are abolished during the course of typhoid fever, but reappear promptly in convalescence. The stimulus transmitted to the peripheral terminations of the sympathetic nerve in the abdominal walls exerts an inhibiting influence on the reflex center. This center is probably exhausted by the intense and constant stimulation exerted on it by the inflammatory process in the ileum. When the inflammation subsides, this center soon recuperates.

34. *Treatment of Rabies with Radium*.—Tizzoni's previous communication on this subject was summarized in these columns on page 228. He announced then that the radium rays have a rapid destructive action on the fixed virus of rabies in the test-tube. After two hours of exposure it loses all its virulence. The radium rays, he claims, also deprive the virus of toxicity even after it has been injected into the animal. The action of the radium, he states, was most pronounced when the virus had been injected into the eye. There were no apparent disturbances in the tissues of the eye nor in the eyesight from the exposure to radium even for a period as long as twelve hours. He asserted, further, that fixed virus submitted to the action of the radium rays becomes transformed into an effectual vaccine. He found that one drop or a fraction of a drop of this vaccine injected into the eye induced stable immunity to virus which killed the controls in twenty days. He now reports researches aiming to apply these data to man. He used 2 cg. of radium bromid, representing 100,000 radioactive units, applying the radium in a fused tube inside a mica-topped box. The box was sewed to a cap fitting over the head and orbit, with a lead saucer as a background for the box. The radium was about .5 cm. from the surface of the cornea under the closed lids. This excluded all emanations from the radium, except on the part exposed. The absence of any by-effects was so striking that he asks whether they may not be due to the emanations alone, which were excluded in his work. Exposures of twelve hours failed to induce lesions of any kind in his comprehensive experience. His tests also demonstrated that the gamma rays have but a minimal share in the destructive action on the fixed virus, the principal effect being from the beta rays. He found it possible to cure rabbits by these radium exposures when the infection dated from two, three or four days before, and even after the fifth day—that is, when the disease had passed through four-fifths of its entire course. These experiments were with fixed virus, which invariably killed the controls the seventh day after the injection. The more fulminating the disease, the shorter the period, probably, in which the treatment is liable to prove effectual. He tabulates the results of other tests which show that in the rabbits cured when the disease had passed through four-fifths of its course, the fixed virus injected under the dura of the posterior brain had diffused through the other hemisphere, and had also invaded the medulla, the part causing the most serious symptoms in the disease in man. The minimal application that saved the rabbits was eight hours of exposure when the exposures were commenced immediately after the injection. On the other hand, eighteen hours' exposure was the minimum when the interval after the injection had been three days and



a half. The brain of the rabbits treated with the radium rays acquired pronounced radio-activity. Sections of the brains exposed showed that when this radio-activity was manifest the rays had been applied the proper length of time to cure the animal. Exposures of less than these minimal applications failed to induce manifest radio-activity. He states that the dose of the rays necessary to save the animal from the effects of the injection of virulent virus can be determined photographically in the individual case. The dosage of radiation will have to be proportional to the mass of the nerve substance to be acted on and to the length of the exposures and number of radio-active unities in the rays. He calculates, therefore, that, as 100,000 unities are enough to cure a rabbit weighing from 1.2 to 1.5 kilos, with the disease already under way, under the same conditions and for the same length of exposure, a man would require sixty to eighty times as much as the rabbit; that is, from 4,000,000 to 6,000,000 radio-active units.

**39. Diagnosis of Tabes.**—Fratini tabulates the details of 18 cases of tabes to sustain his assertions that the Argyll-Robertson symptom is not constant nor pathognomonic of tabes. It is most constant in the patients with unmistakable syphilitic antecedents. An acute onset of tabes generally is announced by acute paraplegia, which may subside later, to be substituted by simple ataxia. The initial paraplegia may be simulated by astasia-abasia in patients with a tendency to hysteria. In such there is probably an ascending neuritis. The peripheral sensory neuron is in a state of irritation similar to that induced by intoxication with strychnin. This "strychnism," as he calls it, is responsible for the zones of hyperalgesia, for the exaggeration of the tendon reflexes, and for the tendency to tetaniform and epileptiform contractions from repeated stimulation in the zones of hyperalgesia. These phenomena should not be confounded with the spastic phenomena which are induced by lesions of the central motor tracts. The latter are associated with paresis or paralysis and with Babinski's sign, and are due to the abolition of the inhibiting action of the cortex on the spinal reflexes. The phenomena of "strychnism" are characterized, further, by the fact that they are comparatively transient and are never complicated with permanent paralyses. Knowledge of these symptoms reduces the importance of Westphal's sign. There is no single symptom that can be regarded as constant and pathognomonic of tabes. Even the lightning pains may be substituted by mild paresthesia. Tabes should be regarded as a segmented sensory neuropathy, with symptoms due to lesions of the afferent neurospinal system, associated with the Argyll-Robertson symptom and sometimes with crises.

**40. Choice of Antiseptics.**—Federici's conclusions are in favor of corrosive sublimate as the most effectual and constant in its action of all the antiseptics in vogue. He uses it in a .5 to 2 per thousand solution. Carbolic acid comes next, but a 3 per cent. solution is required in order to obtain as good results.

**41. Operative Treatment of Diffuse Septic Peritonitis.**—Montini reviews the history of this subject and reports 9 cases in which he has operated. Five of his patients recovered, and he is convinced that others might possibly have been saved if the operation had been undertaken earlier. He affirms that a well-performed laparotomy does not in itself aggravate the prognosis.

Nordiskt Medicinskt Arkiv, Stockholm.

Last indexed page 1126.

- 42 (XXXVIII, Internal Medicine, No. 2.) \*Studien über die Pentosurie. K. Otto and af Klercker. (Concluded).
- 43 \*Studien über chronische Nephritis mit bes. Berücksichtigung des Stickstoffumsatzes (with special regard to transformation of nitrogen). H. Ernberg. (Concluded.)
- 44 (XXXVII, Surgery, No. 4.) Fall von isolierter Luxation des Calcaneums. G. Ekehorn.
- 45 Fall von enormer Dilatation des Magens und Duodenums von congenitalem-arterio-mesenterialem Ursprung (congenital dilatation of stomach and duodenum). Id.
- 46 Zur Pathologie der otogenen Gehirn-Abszesse (in brain). E. Schmiegelow (Copenhagen).
- 47 Fall von rechts-seitigem Chylothorax infolge Zerreißung des Ductus thoracicus. P. K. Lindstrom.
- 48 Recherches experimentales sur la perception d'ondes lumineuses de longueur différente (light waves of different lengths). A. E. Lidstrom.
- 49 \*Ueber Retroflexio. B. C. Vedeler.

**42. Pentosuria.**—Of the 16 cases of pentosuria which af Klercker has collected, only 4 were in women. The ages of the patients ranged from 18 to 65. The 2 cases he has personally

encountered were in Jews, brothers. The father and another brother were diabetics. A family tendency is also evident in the total 16 cases, as 7 of the patients were related in three families. The frequent coincidence of neurasthenic symptoms deserves attention. The prognosis probably is not so grave as in case of diabetes. No specific treatment for pentosuria has yet been found. Transitional conditions between pentosuria and diabetes are known, and the slight pentosuria sometimes noted in diabetes should be studied further, although it should not be classed with genuine pentosuria. It is possible that a family tendency to diabetes may be a factor in the origin of this condition. The proportion of pentose in the urine diminishes with insufficient food, although af Klercker does not think it probable that the mother substance of the pentose in the urine is derived from the carbohydrates. Neuberg's hypothesis in regard to galactose and his conception of the pentose in the urine as "r-arabinose" deserve further study. A bibliography of 130 articles is appended, giving the titles in full. The article is in German. In conclusion, af Klercker states that when the urine, even after fermentation, reduces Fehling's solution pentosuria should be suspected. He describes a simple test for it.

**43. Chronic Nephritis with Special Regard to Nitrogen Metabolism.**—Ernberg's article is based on considerable clinical experience, as well as on extensive experiments on healthy persons. His study of the time of elimination of nitrogen, after a test meal containing large proportions of albumin, showed that the normal curve of elimination is an easily determined standard from which pathologic conditions show characteristic variations. He thinks that this may prove to be an important and valuable aid in the diagnosis of nephritis and of its different forms. His research further shows that a diet with much diminished albumin content, and hence minimal albumin metabolism, is of advantage under certain circumstances. A diet leading rapidly to the minimal transformations of nitrogen seems rational in case of nephritis and worth trying. His "albumin test breakfast" was 150 gm. beef (weighed raw), 50 gm. bread, 20 gm. butter and 250 c.c. milk. The urine was collected every two hours during the following eight hours. On a "nitrogen-starvation diet" less urine-making substances are generated than on any other diet yet tried in nephritis. It lightens the work of the kidneys and relieves them to an astonishing extent as the albumin metabolism becomes reduced. If the albuminuria can be regarded in certain cases as an index of the irritable condition of the kidney, then these researches establish that diminishing the albumin transformations reduces at the same time the irritability of the kidneys. There is less thirst on the "nitrogen-starvation diet," which is an advantage in certain cases. The researches reported indicate further that the elimination of residual nitrogen in the kidneys and in the blood is materially promoted by the reduction in the albumin metabolism. This suggests the possible value of the "nitrogen-starvation diet" in incipient uremic conditions. He defines this diet as one with a minimal amount of nitrogenous substance, although providing amply for energy otherwise, kept up for periods of four or five days or longer, with comparative abundance of albumin in the intervals. Such a diet might comprise bread and cakes, potato purée, spinach, porridge with cream, sugar, butter, cream, cooked fruits and lemons, averaging at least 35 calories per kilo of body weight during the twenty-four hours for a person confined to bed.

**49. Retroflexion.**—Twenty years ago Vedeler published a review of 3,200 cases of retroflexion. At that time it was considered absolutely abnormal, while now it is considered only relatively so. It may exist without symptoms, although these are liable to develop at any time. He regards fixation of the uterus as contrary to the laws of anatomy and physiology. Pessary treatment conflicts with modern ideas of asepsis and infection. The diseased retroflexed uterus, he thinks, should be treated according to the same principles as the diseased anteverted organ. He found anteversion in 64 per cent. of 7,200 women, retroversion in 20 per cent., retroflexion in 9 per cent., and anteversion in 7 per cent. He observed in 62 cases the spontaneous transformation of retroflexion into anteversion, without morbid changes in the uterus.



# GENERAL INDEX.

All reading matter in THE JOURNAL from June to December, inclusive, 1905, is indexed here. (For Current Medical Literature Index see pages 2057 to 2083.) All societies, congresses, etc., are grouped under the general subject of "Societies" at the end of the letter "S." Similarly, all "Deaths" and all "Book Notices" are indexed under those titles at the ends of the letters "D" and "B", respectively. Matter pertaining to the Association is under "Association News." With the above exceptions, all matter is indexed under the most important word of the heading that was used in THE JOURNAL. It is, therefore, well to remember that in looking up a certain subject, related words should be consulted, for example, bone, osteitis, periosteitis, inflammation, etc. The letters used to explain in which department the matter indexed appeared are as follows: "E", editorial; "O", original article; "T", therapeutics; "P", pharmacology; "M", medico-legal; and "ab" denotes an abstract of an article that has appeared in full elsewhere.

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## SOCIETIES.

## Abbreviations:

*Acad.*—Academy.  
*Am*—American.  
*A.*—Association.  
*Coll.*—College.  
*Conf.*—Conference.  
*Cong.*—Congress.  
*Dist.*—District.  
*Hosp.*—Hospital.  
*Internat.*—International.  
*M.*—Medical, Medicine.  
*Nat.*—National.  
*Phys.*—Physicians  
*Ry.*—Railway.  
*S.*—Society.  
*Surg.*—Surgical, *S u r g e r y*,  
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# CURRENT MEDICAL LITERATURE

## INDEX OF TITLES

Explanation: The reading matter which appeared in THE JOURNAL is not indexed here, except the original articles and the abstracts of original articles. This index includes the titles and the subjects of original articles published in the leading medical journals of the world during the past six months. The titles and the names of the journals in which they appeared were published weekly in the Current Medical Literature Department, to which references are made. The figures in parentheses refer to the paragraph; the number following, to the page in THE JOURNAL. For instance, "Abdominal Symptoms, acute, (1) 222—ab" refers to page 222 of THE JOURNAL, on which is found opposite paragraph 1 the title of the paper and the name of the author, viz.: "Acute abdominal symptoms. W. W. Cheyne." This title is listed under the journal in which the article appeared, *British Medical Journal*, June 17. The "ab" indicates that an abstract of the article appeared in THE JOURNAL, which will be found below the title on page 222. Titles of articles which appeared in THE JOURNAL are indicated in the index below by an asterisk (\*) before the page number. Index to authors of all the articles below is on pages 2085 to 2096 of this index.

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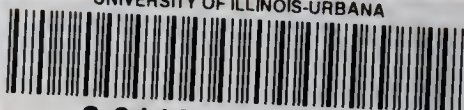








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